

59

Pneumatic & Electrical Tools

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1. Pneumatic Hand Tools

Pneumatic Impact Wrenches

Llaves de Impacto Neumáticas インパクトレンチ 气动扳手

Pneumatic power impact wrenches deliver extremely high power to fasten and loosen bolts or nuts for quick assembling and disassembling jobs.

The square drive size and capacity at which different types of handles are provided differ from manufacturer to manufacturer as shown in the pneumatic tools comparison table on page 59-9. Choose the most suitable model for the 13 mm to 76 mm sized bolt capacity. The specifications listed here are for your reference. If you wish to order impact wrenches from a specific manufacturer, please refer to the comparison table listing major international manufacturers and product model numbers on page 59-9.

Recommended air pressure is 0.59 MPa (6 kgf/cm²). Air hose nipple is furnished, but sockets and air hoses are sold separately.



Pistol Handle



Grip Handle



Side Handle

How to order: CODE

Impact wrench, pneumatic, SQUARE DRIVE, NOMINAL BOLT DIAM, TYPE of HANDLE, MODEL

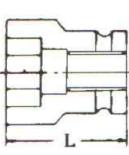
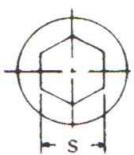
| CODE | Unit Per Set | | | | | | |
|----------|--------------|-------|-------------------|-------------------|--------------|---------------|---------------|
| | Square Drive | | Nom. Bolt Diam mm | Free Speed R.P.M. | Air Inlet PT | Air Hose Size | Net Weight kg |
| | mm | Inch | | | | | |
| 59 01 01 | 12.7 | 1/2 | 13.0 | 6,500 | 1/4 | 9.5 | 2.8 |
| 02 | 15.9 | 5/8 | 16.0 | 8,800 | 1/4 | 9.5 | 3.7 |
| 05 | 19.0 | 3/4 | 22.0 | 4,000 | 3/8 | 12.7 | 7.9 |
| 06 | 25.4 | 1 | 32.0 | 3,500 | 1/2 | 12.7 | 11.7 |
| 07 | 31.8 | 1-1/4 | 38.0 | 3,200 | 1/2 | 12.7 | 15.10 |
| 59 01 08 | 38.1 | 1-1/2 | 56.0 | 3,500 | 1 | 19.0 | 36.0 |
| 09 | 44.45 | 1-3/4 | 76.0 | 1,400 | 1 | 19.0 | 56.0 |

Note: Air hose nipple is furnished, but sockets and air hoses are an extra order.

Sockets for Impact Wrench

Vasos para Llave de Impacto インパクトレンチ用ソケット 套筒头子

Heavy duty six point square drive sockets for use with the impact wrench. Various sizes with different square drives are available.



How to order : CODE

Socket for impact wrench, SQUARE DRIVE, SOCKET SIZE

| CODE | Socket Size (S) (Opening) mm | Overall (L) Length mm | For Bolt Size | |
|--------------------------|---------------------------------|--------------------------|---------------|--------|
| | | | mm | Inch |
| 9.5 mm (3/8") SQ. Drive | | | | |
| 59 02 01 | 6 | 25 | M3.5 | |
| 02 | 7 | 25 | M4 | |
| 03 | 8 | 25 | M5 | |
| 04 | 9 | 25 | M5 | |
| 05 | 10 | 27 | M6 | W3/16 |
| 59 02 06 | 11 | 27 | M7 | |
| 07 | 13 | 27 | M8 | |
| 08 | 14 | 27 | M8 | |
| 09 | 17 | 27 | M10 | W3/8 |
| 10 | 19 | 30 | M12 | W7/16 |
| 59 02 11 | 21 | 35 | | W1/2 |
| 12 | 22 | 35 | M14 | |
| 12.7 mm (1/2") SQ. Drive | | | | |
| 59 02 13 | 10 | 38 | M6 | W3/16 |
| 14 | 11 | 38 | M7 | |
| 15 | 12 | 38 | | W1/4 |
| 16 | 13 | 38 | M8 | |
| 17 | 14 | 38 | M8 | |
| 59 02 18 | 17 | 40 | M10 | W3/8 |
| 19 | 19 | 40 | M12 | W7/16 |
| 20 | 21 | 40 | | W1/2 |
| 21 | 22 | 40 | M14 | |
| 22 | 23 | 40 | M14 | |
| 59 02 23 | 24 | 40 | M16 | |
| 24 | 26 | 42 | | W5/8 |
| 25 | 27 | 42 | M18 | |
| 26 | 29 | 50 | M18 | |
| 27 | 30 | 50 | M20 | |
| 59 02 28 | 32 | 50 | M22 | W3/4 |
| 19.0 mm (3/4") SQ. Drive | | | | |
| 59 02 29 | 17 | 48 | M10 | W3/8 |
| 30 | 19 | 48 | M12 | W7/16 |
| 31 | 21 | 48 | | W1/2 |
| 32 | 22 | 48 | M14 | |
| 33 | 23 | 50 | M14 | |
| 59 02 34 | 24 | 50 | M16 | |
| 35 | 26 | 50 | | W5/8 |
| 36 | 27 | 52 | M18 | |
| 37 | 29 | 52 | M18 | |
| 38 | 30 | 52 | M20 | |
| 59 02 39 | 32 | 52 | M22 | W3/4 |
| 40 | 35 | 55 | | W7/8 |
| 41 | 36 | 55 | M24 | |
| 42 | 38 | 55 | M24 | |
| 43 | 41 | 55 | M27 | W1 |
| 59 02 44 | 46 | 70 | M30 | W1-1/8 |
| 45 | 50 | 75 | M33 | W1-1/4 |
| 25.4 mm (1") SQ. Drive | | | | |
| 59 02 46 | 17 | 57 | M10 | W3/8 |
| 47 | 19 | 57 | M12 | W7/16 |
| 48 | 21 | 57 | | W1/2 |
| 49 | 22 | 57 | M14 | |
| 50 | 23 | 57 | | |
| 59 02 51 | 24 | 57 | M16 | |
| 52 | 26 | 57 | | W5/8 |
| 53 | 27 | 57 | M18 | |
| 54 | 29 | 57 | M18 | |
| 55 | 30 | 57 | M20 | |
| 59 02 56 | 32 | 57 | M22 | W3/4 |
| 57 | 35 | 62 | | W7/8 |
| 58 | 36 | 62 | M24 | |
| 59 | 38 | 68 | M24 | |
| 60 | 41 | 68 | M27 | W1 |
| 59 02 61 | 46 | 75 | M30 | W1-1/8 |
| 62 | 50 | 75 | M33 | W1-1/4 |
| 63 | 55 | 80 | M36 | |
| 64 | 58 | 80 | | W1-1/2 |
| 65 | 60 | 85 | M39 | |
| 59 02 66 | 63 | 85 | | W1-5/8 |

(to be continued)

| CODE | Socket Size (S) (Opening) mm | Overall (L) Length mm | Unit Per Pc. | |
|-----------------------------------|---------------------------------|--------------------------|---------------------|--------|
| | | | For Bolt Size mm | Inch |
| 38.1 mm (1-1/2") SQ. Drive | | | | |
| 59 02 67 | 46 | 94 | M30 | W1-1/8 |
| 68 | 50 | 100 | M33 | W1-1/4 |
| 69 | 54 | 100 | | W1-3/8 |
| 70 | 55 | 100 | M36 | |
| 71 | 58 | 105 | | W1-1/2 |
| 59 02 72 | 60 | 105 | M39 | |
| 73 | 63 | 110 | | W1-1/8 |
| 74 | 65 | 110 | M42 | |
| 75 | 67 | 110 | | W1-3/4 |
| 76 | 70 | 110 | M45 | |
| 59 02 77 | 71 | 115 | | W1-7/8 |
| 78 | 75 | 115 | M48 | |
| 79 | 77 | 115 | | W2 |
| 80 | 80 | 120 | M52 | |
| 81 | 85 | 120 | M56 | W2-1/4 |
| 59 02 82 | 90 | 125 | M60 | |
| 83 | 95 | 140 | M64 | |
| 84 | 100 | 140 | M68 | |
| 85 | 105 | 145 | M72 | |
| 86 | 110 | 147 | M76 | W3 |
| 59 02 87 | 115 | 150 | M80 | |

* Please write for if required size is not listed.

How to order: CODE

Angle grinder, pneumatic,
WHEEL SIZE (O.D. x THICKNESS x I.D.), MODEL

| CODE | Wheel Size O.D. x T x I.D. mm | Free Speed R.P.M. | Unit Per Set | | |
|----------|-------------------------------------|-------------------------|--------------------|-------------------|--------------|
| | | | Air Inlet PT | Air Hose mm | Weight kg |
| 59 03 05 | 58 x 3 x 9.6 | 19,000 | 1/4 | 9.0 | 0.6 |
| 01 | 100 x 6 x 15 | 13,000 | 3/8 | 9.0 | 1.6 |
| 04 | 115 x 6 x 22 | 13,000 | 3/8 | 9.0 | 1.6 |
| 50 | 125 x 6 x 22 | 12,000 | 3/8 | 9.0 | 2.2 |
| 02 | 180 x 6 x 22 | 7,600 | 3/8 | 13.0 | 2.5 |
| 03 | 230 x 7 x 22 | 5,900 | 3/8 | 12.7 | 4.0 |

Rubber Pads for Pneumatic Grinder

Plato de Goma Desbarbadora

ディスクグラインダー用ラバーパッド 气动角磨机备用橡皮垫

It is necessary to furnish the original type of rubber pad as the sizes of rubber pads differ from manufacturer to manufacturer. Please specify the manufacturer and model of the angle grinder you are currently using when ordering.



How to order: CODE

Rubber pad for pneumatic angle grinder, WHEEL DIAM,
APPLICABLE MODEL

| CODE | For Wheel Dia | Unit Per Pc. | |
|----------|---------------|--------------|---------------|
| | | CODE | For Wheel Dia |
| 59 03 56 | 58 mm | 59 03 60 | 125 mm |
| 16 | 100 mm | 17 | 180 mm |
| 40 | 115 mm | 21 | 230 mm |

Angle De-Scalers

Descamador para ángulos

アンダルディスケーラー 小型磨轮

A series of hand held mechanical scaling machines based on the patented rotating chain link system. It is ideal for spot scaling and more than ten times faster than a normal needle gun. Easy to operate, vibration-free and designed for operator comfort.

Pneumatic Type



033-3000

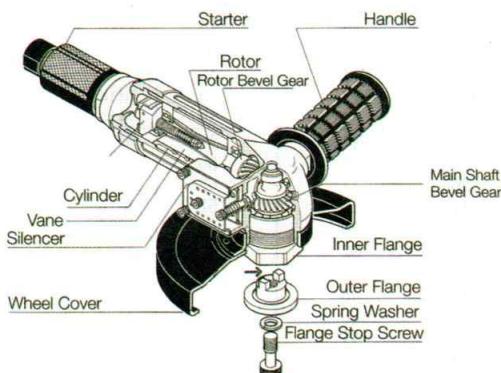
Unit Per Set

| CODE | 59 03 23 |
|-----------------|------------------------------------|
| Model | Rustibus 033-3000 |
| Working Width | 30 mm |
| Air Consumption | 230 ltr/min. (625 l/min full load) |
| Air Pressure | 6 bar / 90 psi |
| Result | St3++/SSPC-SP11 |
| Dimensions | L 450 x H 200 x W 145 mm |
| Weight | 3.4 kg |
| Name of Mfr. | Rustibus® |

Pneumatic Angle Grinders

Amoladora Angular Neumática

アングルディスクグラインダー 气动角磨机



A pneumatic angle (vertical) grinder has a speed rating suitable for sanding, rust removal, rough grinding and cutting applications.

A wide variety of models from various manufacturers is available. The specifications listed here are for your reference. If you wish to order Angle Grinders from a specific manufacturer, please refer to the comparison table listing major international manufacturers and product model numbers on page 59-9.

Recommended air pressure is 0.59 MPa (6 kgf / cm²). Air hose nipple and tools for wheel mounting are furnished as standard accessories. However, grinding wheels, sanding discs and wire brushes are extra.



59 03 05

59 03 01

39 03 50

59 03 02

Electrical Type

034-4000



032-2000

Unit Per Set

| CODE | 59 03 44 | 59 03 28 |
|---------------|---|------------------------------|
| Model | 034-4000 | 032-2000 |
| Working Width | 30 mm | |
| Power Source | AC 110-120V 60 Hz 10A | AC 220-240V 50/60 Hz 7.3A |
| Result | St3+++ (SSPC-SP11+++) | |
| Dimensions | L580 x H300 x W165 mm L450 x H220 x W130 mm | |
| Weight | 5.7 kg | 4.5 kg |
| Name of Mfr. | Rustibus® | |

**Replacement Chain Drums
for Rustibus Angle De-Scalers**

Disposable Chain Drum



Twisted Knot Wire Brush

For Pneumatic Model 033-3000

Unit Per Pcs.

| CODE | Items | Part No. |
|----------|---------------------------|----------|
| 59 03 22 | R33 chain drum, pack of 3 | 033-3356 |
| 25 | R33 wire brush | 033-3202 |
| 74 | R33 Air motor | 033-3001 |
| 75 | R33 Screen | 033-3010 |

For Electrical Models 034-4000 & 032-2000

Unit Per Pcs.

| Description | For model 034-4000 | | For model 032-2000 | |
|------------------------------------|--------------------|----------|--------------------|----------|
| | CODE | Part No | CODE | Part No |
| Disposable chain drum pack of 3 | 59 03 76 | 034-4356 | 59 03 37 | 032-2356 |
| Twisted knot wire brush | 59 03 77 | 034-4202 | 59 03 39 | 032-2202 |
| Motor | 59 03 78 | 034-4001 | 59 03 80 | 032-2001 |
| Screen | 59 03 79 | 034-4010 | 59 03 81 | 032-2010 |

Magno Rollers**for Rustibus® Angle De-Scaler**Rodillos Magno para Descamador para ángulos
マグノローラー 甲板除锈剂备用滚轮

Magno Rollers are a magnetised wheelbase for the Rustibus 30 series. They use a powerful magnet to support the entire Rustibus hand tool which makes them perfect for use on angled steel surfaces. It will enhance safety and operator comfort, and it will reduce operator strain in any working position.

Attached with
Angle De-Scaler

033-6300 for R33 Magno roller



034-6400 for R34 Magno Roller



032-6200 for R32 Magno roller

Unit Per Set

| CODE | 59 03 24 | 59 03 55 | 59 03 30 |
|------------------|----------|------------|----------|
| Model | 033-6300 | 034-6400 | 032-6200 |
| For Magno Roller | R33 | R34 | R32 |
| Weight kg (lbs) | 0.9 (2) | 0.82 (1.8) | 0.9 (2) |

Name of Mfr.: Rustibus®

Explosion-proof Angle De-ScalersDescamador para ángulos antiexplosiones
防爆型アングルデッキスケーラー

防爆型斜角式甲板除锈机

Specially designed and produced for use on tankers, gas carriers, oil tankers, FPSOs, rigs and platforms, or in on shore oil and gas refineries. In fact anywhere that you need to do maintenance on steel, in a potentially explosive atmosphere. After thorough and intensive testing, the machines received the final stamp of approval by DNV (Det Norske Veritas). Certified by DNV to meet EX/ATEX 94/9/EC directive.



Unit Per Set

| CODE | 59 03 35 |
|-----------------------------|------------------------------------|
| Model | X33 AIR (033-X3000) |
| Working Track mm (") | 25 (1) |
| Air Consumption L/min (CFM) | 625 (22) |
| Working Pressure bar (psi) | 6 (87) |
| rpm | 2,500 (Free speed) |
| Result | ST3 +++ (SSPC-SP11 +++) |
| Size mm (") | L 450 (17.5) x 200 (8) x 145 (5.5) |
| Weight kgs (lbs) | 3.7 (8) |

Name of Mfr.: Rustibus®

For spares see other Hand De-Scaler Models.

Pneumatic Die GrindersAmoladora de Dado Neumáticos
エア・ダイ・グラインダー 气动小型磨轮

Compact and easy to handle air tool designed for precision grinding, reshaping of machine parts, grinding small castings, removing welding



slags and sharpening and finishing wood, glass and plastics.

Recommended air pressure is 0.59 MPa (6 kgf/cm²) and the item is furnished with a hose nipple and tools for wheel mounting. The specifications listed here are for your reference. If you wish to order die grinders from a specific manufacturer, please order from the comparison table listing major international manufacturers and model numbers on page 59-9.

How to order: CODE

Die grinder, pneumatic, COLLET CHUCK SIZE, MODEL

Unit Per Set

| CODE | Collet Chuck Size mm | Free Speed R.P.M. | Air Inlet PT | Air Hose mm | Weight kg |
|----------|----------------------|-------------------|--------------|-------------|-----------|
| 59 03 26 | 6.0 | 25,000 | 1/4 | 9.5 | 0.53 |

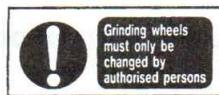
Pneumatic Straight Grinders

Amoladora Recta Neumática

ストレート・エア・グラインダー

气动直式磨轮

A pneumatic high speed straight (horizontal) grinder. Compact, lightweight, and easy to operate. Speed governors are built-in to control the spindle speed. Recommended air pressure is 0.59 MPa (6 kgf/cm²). Furnished with air hose nipple and tools for wheel mounting. Grinding wheels are sold separately.



The specifications listed here are for your reference. If you wish to order straight grinders from a specific manufacturer, please refer to the comparison table listing major international manufacturers and product model numbers on page 59-9~10.

How to order: CODE

Straight grinder, pneumatic, WHEEL SIZE (O.D. x THICKNESS x I.D.), MODEL

Unit Per Set

| CODE | Wheel Size O.D. x T x I.D. mm | Free Speed R.P.M. | Air Inlet PT | Air Hose mm | Weight kg |
|----------|-------------------------------|-------------------|--------------|-------------|-----------|
| 59 03 31 | 65 x 13 x 9.5 | 14,600 | 1/4 | 9.5 | 1.4 |
| 32 | 125 x 19 x 12.7 | 7,600 | 3/8 | 12.7 | 2.8 |
| 33 | 150 x 25 x 15.7 | 6,300 | 3/8 | 12.7 | 3.7 |
| 34 | 76 x 13 x 9.5 | 11,000 | 3/8 | 10.0 | 1.9 |

Pneumatic Hand De-Scalers

Descamador neumático manual

エアハンドディスクエラー

气动手持式除垢器

Easy to handle, light weight surface preparation tool with a lot of power. This versatile piece of equipment utilizes a variety of abrasives from wire brushes, coating removal discs to erasers for removal of adhesive products.



Unit Per Set

| CODE | 59 03 43 |
|-----------------|----------------------------------|
| Model | Rustibus® Mini Profiler 025-3000 |
| Working Width | 25 mm |
| Air Consumption | 113 ltr/min |
| Air Pressure | 6.3 bar / 90 psi |
| Result | St3++/SSPC-SP11 |
| Dimensions | L275 x H150 x W80 mm |
| Weight | 1.5 kg |

Name of Mfr.: Rustibus®

Accessories for Pneumatic Hand De-scaler



Hub Assembly



Steel Bent Belt



Wheel Assembly

Unit Per C.

| CODE | Items | Part No. |
|----------|------------------------------------|----------|
| 59 03 45 | R25 Hub assembly 23 mm | 025-0401 |
| 49 | R25 Steel bent belt, coarse | 025-0423 |
| 54 | R25 Coating removal wheel assembly | 025-0410 |

Pneumatic Derusting Brushes

Cepillo Neumático para Desherrumar

エア式錆落としブラシ 气动除锈刷

For removing rust; used in machine building, mould making and container construction, in steel construction and ship building as well as in foundries.



Model MAG-9000®

Quality

A sturdy, durable, slim and compact tool for derusting works, even in places that are difficult to reach.

Safety

Optimized speed for brushing applications.

Efficiency

Fatigue-free working thanks to excellent weight-power ratio and the motor's vibration-free support. The standardized chuck (available as M14 collet chuck) accepts all standard brushes. Fast and efficient brush maintenance thanks to compact built-in units.

| CODE | 59 20 71 |
|----------------------|---|
| Model | MAG-9000® |
| Power | 600 W |
| Speed | 9,000 min ⁻¹ |
| Chuck | M14 x 2 mm |
| Operating Pressure | 6.3 bar |
| Air Consumption | 13.3 ltr/sec |
| Air Connection | G 3/8" |
| Weight | 1.4 kg |
| Standard Accessories | Tool with chuck M14, quick-coupling nipple, hose nipple and assembly wrenches |

Name of Mfr.: Holger Clasen GmbH & Co. KG

Accessories for Derusting Brush MAG-9000®



Wire Cup Brush,
Plaited 80 mm dia



Wire Cup Brush,
Plaited 60 mm dia



Wire Cup Brush,
Crimped 80 mm dia

Conical Wheel Brush,
Plaited 100 mm dia

Protective Cover

Unit Per Pcs.

| CODE | Item | Description | Name |
|------|------|-------------|------|
|------|------|-------------|------|

Wire Cup Brush

| | | | |
|----------|--------------------------|--------------------------|--------------|
| 59 20 72 | Crimped | 80 mm dia for light rust | BT 80-M14 |
| 73 | Plaited | 80 mm dia for heavy rust | BT 80-K-M14 |
| 74 | Crimped, stainless steel | 80 mm dia for light rust | BT 80-VA-M14 |
| 79 | Crimped | 60 mm dia for light rust | BT 60-M14 |
| 75 | Plaited | 60 mm dia for heavy rust | BT 60-K-M14 |
| 80 | Crimped, stainless steel | 60 mm dia for light rust | BT 60-VA-M14 |

Conical Wheel Brush

| | | | |
|----------|--------------------------|---|-----------------|
| 59 20 76 | Plaited | 100 mm dia for heavy rust in indentations | BT 100 F-M14 |
| 77 | Plaited, stainless steel | | BT 100 F-VA-M14 |

Protective Cover

| | | |
|----------|--|-------------|
| 59 20 78 | For protection against removed material that is flying around when using conical wheel brushes | TB08772/115 |
|----------|--|-------------|

Model GG 30/54 & GG30/65

The compact design makes rust removal easy, even in places that are difficult to reach. Fatigue-free working thanks to excellent weight-power ratio and the motor's vibration-free support. The standardised chuck (available as 0.5 - 7 mm dia collet chuck) accepts all standard brushes. Fast and efficient brush maintenance thanks to compact built-in units.



Unit Per Set

| CODE | 59 20 81 | 59 20 91 |
|----------------------|---|---|
| Model | GG 30/54 | GG30/65 |
| Power | 300 W | 300 W |
| Speed | 5,400 min ⁻¹ | 6,500 min ⁻¹ |
| Chuck | 0.5 - 7 mm | 0.5 - 7 mm |
| Operating Pressure | 6.3 bar | 6.3 bar |
| Air Consumption | 9.0 ltr/sec | 9.0 ltr/sec |
| Air Connection | G 1/4" | G 1/4" |
| Weight | 0.5 kg | 0.5 kg |
| Standard Accessories | 6 mm dia standard chuck, Quick-coupling nipple, Assembly wrenches, Hanging device and second handle | 6 mm dia standard chuck, Quick-coupling nipple, Assembly wrenches, Hanging device and second handle |

Name of Mfr. : Holger Clasen GmbH & Co. KG

**Accessories for Derusting Brush
GG 30/54 & GG30/65**

Wire Brush with 6 mm Shank

| Unit Per Pcs. | | | |
|---------------|-------------|---------------|----------|
| CODE | Ferrule Dia | Wire Size Dia | Name |
| 59 20 82 | 20 mm | 0.15 mm | BP-30302 |
| 83 | 19 mm | 0.30 mm | BP-30304 |
| 84 | 19 mm | 0.35 mm | BP-30305 |
| 59 20 85 | 23 mm | 0.15 mm | BP-30308 |
| 86 | 22 mm | 0.25 mm | BP-30310 |
| 87 | 22 mm | 0.30 mm | BP-30311 |
| 88 | 23 mm | 0.50 mm | BP-30312 |
| 59 20 89 | 30 mm | 0.15 mm | BP-30314 |
| 90 | 30 mm | 0.26 mm | BP-30316 |

Model GG26/270 & GG28/370

GG26/270



GG28/370

The compact design makes rust removal easy, even in places that are difficult to reach. Fatigue-free working thanks to excellent weight-power ratio and the motor's vibration-free support. Fast and efficient brush maintenance thanks to compact built-in units.

Unit Per Set

| CODE | 59 20 92 | 59 20 93 |
|----------------------|--|--|
| Model | GG26/270 | GG28/370 |
| Power | 260 W | 280 W |
| Speed | 27,000 min ⁻¹ | 37,500 min ⁻¹ |
| Chuck | 6 mm | 6 mm |
| Operating Pressure | 6.3 bar | 6.3 bar |
| Air Consumption | 6.6 ltr/sec | 5.8 ltr/sec |
| Air Connection | G 1/4" | G 1/4" |
| Weight | 0.6 kg | 0.5 kg |
| Standard Accessories | 6 mm dia collet chuck, inlet and exhaust air hose, adapter, quick coupling nipple, assembly wrenches and locking pin | 6 mm dia collet chuck, inlet and exhaust air hose, adapter, quick coupling nipple, assembly wrenches and locking pin |

Accessories for Straight Grinder GG 26/270 & GG28/370

Grinding Pin



Tungsten Pin

| CODE | Description | Dimension | Model Number |
|----------|---|---|--|
| 59 20 94 | Diamond grinding pins, cylindrical shape | 4 x 20 mm 6 x 20 mm 8 x 20 mm | 101 99 055 101 99 056 101 99 057 |
| 59 20 97 | Grinding pin set | 10 different types, grade O, coarse grain | 101 99 150 |
| 59 20 98 | Tungsten carbide burr with long shaft, drill bit tip 135° | 6 x 19 mm | 101 99 026 |
| 59 20 99 | Tungsten carbide burr set | 5 different types, cut 3 PLUS | 101 99 040 |

Pneumatic Hand Drills

Taladros Neumáticos 小型エアドリル 气动手钻

For use on light and medium duty drilling. Power is controlled by a built-in air regulator located on the pistol or grip handle, for adjusting to different drilling surfaces. The types of handle differ from manufacturer to manufacturer. Recommended air pressure is 0.59 MPa (6 kgf/cm²).

Key chuck and air hose nipple are equipped as standard accessories. The specifications listed here are for your reference. If you wish to order hand drills from a specific manufacturer, please refer to the comparison table listing major international manufacturers and product model numbers on page 59-10.



Pistol Handle



Grip Handle

How to order: CODE

Hand drill, pneumatic, DRILLING CAPACITY mm, TYPE of HANDLE, MODEL

| Unit Per Set | | | | | | |
|--------------|----------------------|----------------------|-------------------|--------------|-------------|-----------|
| CODE | Drilling Capacity mm | Collet Chuck Size mm | Free Speed R.P.M. | Air Inlet PT | Air Hose mm | Weight kg |
| 59 03 41 | 6.5 | 6.5 | 2,900 | 1/4 | 9.5 | 0.75 |
| 42 | 9.5 | 10.0 | 1,400 | 3/8 | 9.0 | 1.4 |
| 46 | 8.0 | 8.0 | 1,500 | 1/4 | 9.5 | 1.2 |
| 47 | 13.0 | 13.0 | 700 | 3/4 | 9.5 | 2.3 |
| 48 | 16.0 | 16.0 | 400 | 1/4 | 9.5 | 2.9 |

Pneumatic Heavy Duty Rotary Drills

Taladros Neumáticos Industrial

中型・大型エアドリル 风动重载荷旋转钻机

Powerful rotary drills have a very smooth operation for accurate drilling, reaming, tapping and tube rolling. Side handled type will be supplied in standard. The air hose nipple is equipped as a standard accessory.



Recommended air pressure is 0.59 MPa (6 kgf/cm²). The specifications listed here are for your reference. If you wish to order heavy duty rotary drills from a specific manufacturer, please refer to the comparison table listing major international manufacturers and product model numbers on page 59-10.

How to order: CODE

Rotary drill, pneumatic, heavy duty, DRILLING CAPACITY mm

| Unit Per Set | | | | | | |
|--------------|----------------------|----------------------|-------------------|--------------|-------------|-----------|
| CODE | Drilling Capacity mm | Collet Chuck Size mm | Free Speed R.P.M. | Air Inlet PT | Air Hose mm | Weight kg |
| 59 03 51 | 22.0 | M.T. #2 | 600 | 3/8 | 12.7 | 5.8 |
| 52 | 32.0 | M.T. #3 | 380 | 1/2 | 12.7 | 14.0 |
| 53 | 50.0 | M.T. #4 | 160 | 1/2 | 19.0 | 18.7 |

Note: M.T. denotes Morse Taper.

Pneumatic Radial Chamfering Tools

Herramienta biseladora radial neumática

エアー式面取り機 气动倒角机

For radius chamfering on the scallop parts or holes of bridge members, or on steel materials used in seawater ballast tanks and double-side skin bulk carrier production. Dual cutting head with 4 radius surfaces per tip and a quick-change base. Meets or exceeds PSPC* requirements on surface preparation of steel materials prior to coating.



*PSPC stands for Performance Standard for Protective Coatings regulated by International Maritime Organization.

| Unit Per Set | |
|-----------------------------|---|
| CODE | 59 03 57 |
| Model | CBR-03 |
| Free Speed | 12,000 min ⁻¹ (rpm) |
| Chamfering Capacity | 3 mm radius |
| Minimum Workpiece Thickness | 6 mm |
| Air Pressure | 0.6 (6) MPa (kgf/cm ²) |
| Air Consumption (No-load) | 0.65 m ³ /min |
| Inlet Size | Rc 1/4 |
| Weight | 2 kg |
| Accessories included | 2 pieces of Indexable insert 12.7 R3 (Installed), 2 pieces of Indexable insert set screw (Installed), Indexable insert set screw, Spanner T-15D, Handle |

Name of Mfr.: Nitto Koki Co., Ltd.

Pneumatic Multi-Tools

Herramienta multiple neumática

エア・マルチツール 气动多功能工具

A pneumatic multi tools enable for use as grinding, sanding, drilling, milling, and brushing with one tool. Handy, light weight and can be used in small areas for small repairs.



| Unit Per Set | |
|----------------------|------------------------|
| CODE | 59 03 58 |
| Air Pressure | 6.3 bar |
| Disc Size Diameter | 100 x 16 mm |
| RPM | 5,000 – 1,500 rpm/min. |
| Power | 1.0 HP |
| Shaft | 3/8" x 24 UNF |
| Air Consumption | 3.6 CFM |
| Drilling Capacity | 6.0 mm |
| Flap Disc | 100 mm |
| Brush | 100 mm x 3/8" x 24 UNF |
| Burr/Grinding Stones | Max. 25 mm |
| Length | 234 mm |
| Weight | 1.1 kg |

Pneumatic Chipping Hammers

Cinceladores tipo Pistola (Neumático)

エアチッピングハンマー 气动敲锈榔头

Powerful hammers for billet chipping, general chipping and the removal of calking/weld flux, paint and rust in limited space. There are two kinds of shank types, round or hexagon, are available. When ordering, please specify which shank model is required.



Required air pressure is 0.59 MPa (6 kgf/cm²). The specifications listed here are for your reference. If you wish to order chipping hammers from a specific manufacturer, please refer to the comparison table listing major international manufacturers and product model numbers on page 59-10.

How to order: CODE

Chipping hammer, pneumatic, BLOW PER MINUTE, TYPE of SHANK, MODEL

Unit Per Set

| CODE | Type of shank | Blow per Minute | Piston Dia mm | Air Inlet PT | Air Hose mm | Weight kg |
|----------|---------------|-----------------|---------------|--------------|-------------|-----------|
| 59 03 61 | Round | 2,600 | 19.0 | 3/8 | 9.5 | 1.7 |
| 59 03 62 | Hexagon | 2,300 | 18.0 | 1/4 | 9.5 | 2.2 |



59 03 82

59 03 83

How to order: CODE

Scaling hammer, pneumatic, NUMBER of PISTONS, MODEL

Unit Per Set

| CODE | Number of Piston | Piston Dia mm | Stroke mm | Free Speed R.P.M. | Air Inlet PT | Air Hose mm | Weight kg |
|----------|------------------|---------------|-----------|-------------------|--------------|-------------|-----------|
| 59 03 82 | 1 | 30.0 | 15 | 8,000 | 3/8 | 9.5 | 2.1 |
| 83 | 3 | 22.0 | 10 | 7,000 | 3/8 | 12.7 | 3.2 |

Spare Hammer Heads

for Pneumatic Scaling Hammer

Pistones de Repuesto para Piquetas

スケーリングハンマー用ハンマー・ヘッド

风动敲锈锤用备用锤头



These hammer heads differ from manufacturer to manufacturer. When ordering, it is necessary to provide information about the manufacturer and model of the scaling hammer you are currently using.

Unit Per P.C.

| CODE | Number of Piston | CODE | Number of Piston |
|----------|------------------|----------|------------------|
| 59 03 87 | 1 | 59 03 88 | 3 |

Chisels for Pneumatic Chipping Hammer

Utiles para Martillos Cinfeladores

エアチッピングハンマー用ハガネ 气动敲锈榔头备用凿子

These chisels differ from manufacturer to manufacturer. When ordering, it is necessary to provide information about the manufacturer and model of the chipping hammer you are currently using.



Moil Point

Unit Per P.C.

| CODE | Description | Shank |
|----------|-------------------|-------|
| 59 03 66 | Flat chisel | Round |
| 67 | Moil point chisel | Round |

| CODE | Description | Shank |
|----------|-------------------|---------|
| 59 03 72 | Flat chisel | Hexagon |
| 73 | Moil point chisel | Hexagon |

Pneumatic Scaling Hammers

Piquetas Neumáticas (Desincrustadores)

スケーリングハンマー 风动敲锈锤

Suitable for the removal of old paint and rust. The specifications listed here are for your reference. If you wish to order scaling hammers from a specific manufacturer, please refer to the comparison table listing major international manufacturers and product model numbers on page 59-10.

Recommended air pressure is 0.59 MPa (6 kgf/cm²). The air hose nipple is furnished as a standard accessory. Due to slight differences in available models, please specify the manufacturer's name and model number when ordering spare hammers.

Scaling Hammers

SF Single and Triple Head

Martillos escaladores, SF Cabezal simple y triple

スケーリングハンマー, SF シングル & トリプルヘッド

缩放锤 SF 单头和三头

Highly effective for quick removal of heavy scale and coatings. The single head tools are perfect for smaller and "hard" to reach areas, being lightweight and easy to handle it's perfect for reaching behind structures and up against bulkheads. Options include ATEX approved, "non-spark" Beryllium Copper heads and Low vibration models, compliant with the strictest Health & Safety guidelines.



SF-1



Hammer Head

Single Head

Unit Per Set

| CODE | 59 02 88 | 59 02 89 | 59 02 90 | 59 03 84 |
|--|---|---|------------------------------|---|
| Model | | SF1 | | VLSF1 |
| Part No. | 151.5100 | 196.5110 | 151.5180 | 196.5095 |
| Head | Cruciform taper fit Tungsten Carbide head | Taper fit Beryllium Copper head, ATEX approved. | Cruciform single piece Steel | Cruciform taper fit, Low Vibration Model. |
| B.P.M. | | 3,000 | | |
| Air Consumption (Lps/cfm) | | 3.3/7 | | 4.25/9 |
| Noise Level (db(A)) | | 88.1 | | 90.9 |
| Vibration Level (Aeqm/s ²) | | 6.8 | | 4.4 |
| Length mm | | 485 | | 500 |
| Working Height mm | | 152.5 | | |
| Weight kg | | 2.5 | | |

Name of Mfr.: Trelawny SPT Ltd.

Triple Heads

Unit Per Set

| CODE | 59 02 91 | 59 03 59 | 59 03 64 |
|--|---|--|------------------------------|
| Model | SF3 | | |
| Part No. | 153.5300 | 153.5310 | 153.5380 |
| Head | Cruciform taper fit Tungsten Carbide head | Taper fit Beryllium Copper head. ATEX Approved | Cruciform single piece Steel |
| B.P.M. | 3,000 × 3 | | |
| Air Consumption (Lps/cfm) | 5.2/11 | | |
| Noise Level (db(A)) | 92.7 | | |
| Vibration Level (Aeqm/s ²) | 13.4 | | |
| Length mm | 485 | | |
| Working Height mm | 152.5 | | |
| Weight kg | 3.7 | | |

Name of Mfr.: Trelawny SPT Ltd.

Spare Heads**for Trelawny Scaling Hammer**

Cabeza de repuesto para martillo Trelawny Scaling Hammer

スケーリングハンマー用 スペアヘッド

备用锤头 用于 Trelawny Scaling Hammer

Unit Per Pcs.

| CODE | 59 03 85 | 59 03 89 | 59 03 65 |
|----------|------------------|-----------------------------|---------------------------|
| Item | Tungsten carbide | Beryllium copper, non-spark | Single piece steel piston |
| Part No. | 426.5351 | 606.5303 | 612.5305 |

Note : SF1 and SF3 spares are compatible with SF11 deck scaler.

Name of Mfr.: Trelawny SPT Ltd.

Scaling Piston Hammers**7 Piston Hammer**

Martillos de émbolo a escala, Martillo de pistón 7

スケーリング・ピストン・ハンマー, 7 ピストンハンマー

缩放活塞锤 7 活塞锤

Multipurpose tools that allow to create a natural and smooth roughening effect on all surfaces, quickly removes laitance, projections, encrustation, scale deposits, colour, smoothes roughening and much more. Applicable for processing concrete, stone and granite surfaces and intended for works on horizontal surfaces.



7 Piston Hammer



Spare Piston

Specifications

| | |
|-----------------------------|-----------------------|
| Model | DK7H |
| Air consumption | 1,120 l/min, 39.0 cfm |
| Max. permitted air pressure | 7 bar (100 psi) |
| Vibration value on handle | 8.3 m/s ² |
| Sound pressure level | ≤98.7 dB (A) |
| Acoustic power level | ≤108.2 dB (A) |
| Connection thread | G1" |
| Dimensions | 950 × 350 × 950 mm |
| Weight | 47 kg |

Name of Mfr.: Von Arx EOOD.

| CODE | Description | Model | Unit |
|----------|--|-------|------|
| 59 03 95 | Scaling piston hammer, pneumatic, 7 piston | DK7 | Set |
| 59 03 96 | Spare piston for 7 piston scaling hammer | | Set |

Comparison Table of Pneumatic ToolsTabla de Comparación de Herramientas Neumáticas
エアー工具主要モデル国際比較表 气动工具比较表

Products from a few manufacturers are listed below and the next two pages for your reference. If there is any question as to what model is most suitable, please ask for further information or brochures from the local manufacturer when ordering.

In the table below, the products for each manufacturer are listed vertically according to the (square drive size, wheel diameter, drill capacity, number of pistons, etc) which are listed in the left hand column.

When ordering: Impact wrenches

1. Select the square drive size required : 12.7 mm
2. Select a manufacturer from one of the columns to the right : Atlascopco
3. List the representative code for that size : 59 01 01
4. List the model number of the tool from that manufacturer : LMS 28HR – 13

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Impact Wrenches

| CODE | Square Drive | Atrascopco (Sweden) | INGERSOLL-RAND (U.S.A.) | ICO (Italy) | Holger Clasen (Germany) | CLECO (U.S.A.) | YOKOTA (Japan) | YUTANI (Japan) | URYU (Japan) | NPK (Japan) | OTHERS | FUJI (Japan) |
|----------|-------------------|--|-------------------------------|----------------------|-------------------------|------------------------------------|--------------------------------|------------------------------------|-------------------------------|------------------------------|--------|---------------------------------|
| 59 01 01 | 12.7 mm (1/2") | LMS 28HR-13 (8434128000) (Pistol) 9,500 r.p.m. | 2903 P1 (Pistol) 6,000 r.p.m. | A2 (Pistol) 10-16 mm | - | WP 421 D (Pistol) 7,000 r.p.m. | YW-14PRK (Pistol) 6,000 r.p.m. | 13WH2 (Pistol) 4,800 r.p.m. | UW-13SK (Pistol) 6,500 r.p.m. | NW-14H (Pistol) 5,500 r.p.m. | - | FW-14PH-2 (Pistol) 7,500 r.p.m. |
| 59 01 02 | 15.9 mm (5/8") | - | 2908 P1 (Pistol) 6,000 r.p.m. | - | - | WP 421 D-5/8 (Pistol) 7,000 r.p.m. | - | 16WPA (Pistol) 5,200 r.p.m. | - | - | - | FW-14PH-3 (Pistol) 7,500 r.p.m. |
| 59 01 05 | 19.0 mm (3/4") | LMS 58HR-20 (8434158001) (Pistol) 5,500 r.p.m. | 2920 B1 (Grip) 5,000 r.p.m. | A3 (Pistol) 12-22 mm | - | WP 2049-3/4 (Pistol) 6,200 r.p.m. | YW-26S (Grip) 5,500 r.p.m. | 22WB (Grip) 3,800 r.p.m. | UW-22S (Grip) 4,000 r.p.m. | NW-22A (Grip) 4,500 r.p.m. | - | FW-250P-2 (Pistol) 5,000 r.p.m. |
| 59 01 06 | 25.4 mm (1") | LMS 68HR-25 (8434168001) (Pistol) 5,000 r.p.m. | 2920 B3 (Grip) 5,000 r.p.m. | A4 (Grip) 16-28 mm | - | WP 2059-1 (Pistol) 4,000 r.p.m. | YW-32C (Grip) 4,200 r.p.m. | 32WH (Grip) 3,600 r.p.m. | UW-32SLA (Grip) 3,500 r.p.m. | NW-32 LA (Grip) 4,000 r.p.m. | - | FW-320P-1 (Pistol) 4,800 r.p.m. |
| 59 01 07 | 31.8mm (1-1/4") | - | - | A5 20-36 mm | - | - | - | 45WA (28.6 mm) (Side) 2,800 r.p.m. | UW-401 (Grip) 2,600 r.p.m. | - | - | FW-420-2 (Grip) 4,500 r.p.m. |
| 59 01 08 | 38.1 mm (1-1/2") | - | 5980 A1 (Side) 830 r.p.m. | A6-0 (Side) 27-45 mm | - | W-2119 (Grip) 3,300 r.p.m. | YW-50C (Side) 3,000 r.p.m. | 50WHA2 (Side) 2,500 r.p.m. | UW-550 (Side) 3,500 r.p.m. | NWH-500 (Side) 3,500 r.p.m. | - | FW-50-7 (Side) 4,000 r.p.m. |
| 59 01 09 | 44.45 mm (1-3/4") | - | - | A6-1 30-80 mm | - | - | - | 75WB (Side) 2,400 r.p.m. | UW-75S (Side) 1,400 r.p.m. | NWH-750 (Side) 2,200 r.p.m. | - | FW-75-7 (Side) 3,000 r.p.m. |

Angle Grinders

| CODE | Wheel Diam. | Atrascopco (Sweden) | INGERSOLL-RAND (U.S.A.) | Trelawny SPT Ltd. (U.K.) | ICO (Italy) | Holger Clasen (Germany) | CLECO (U.S.A.) | YOKOTA (Japan) | YUTANI (Japan) | URYU (Japan) | NPK (Japan) | NITTO KOHKI (Japan) | FUJI (Japan) |
|----------|-------------|--|---------------------------|--------------------------|---------------------------|----------------------------|-----------------------------|------------------------|-------------------------|----------------------------|-------------------------|--|------------------------|
| 59 03 05 | 58 mm | - | - | - | - | GW21A/190-1 19,000 r.p.m. | - | - | - | - | - | - | - |
| 59 03 01 | 100 mm | LSV29 ST12-100 (8423012745) (100 mm) 12,000 r.p.m. | TA 120 RP64 12,000 r.p.m. | 170.4050 12,000 r.p.m. | 3602-00-E-4 12,000 r.p.m. | DW104-1 13,000 r.p.m. | 116GLF 115RAW 11,500 r.p.m. | G4-SA 13,000 r.p.m. | YGS-4GS-2 13,600 r.p.m. | USG-40S 13,300 r.p.m. | NAG-400A 13,600 r.p.m. | (59 03 06) MG-40 (MAGW-40) 13,000 r.p.m. | FA-30-3 13,500 r.p.m. |
| 59 03 04 | 115 mm | LSV29 ST12-115 (8423012746) (115 mm) 12,000 r.p.m. | - | - | - | DW104/115-1 13,000 r.p.m. | - | - | - | - | - | - | - |
| 59 03 50 | 125 mm | LSV29 ST12-125 (8423012747) (125 mm) 12,000 r.p.m. | - | 170.4054 10,000 r.p.m. | - | DW110D/110-1 11,000 r.p.m. | - | - | - | - | - | - | - |
| 59 03 02 | 180 mm | LSV48 SA085-18 (8423013206) 8,500 rpm | 77A 75P 107M 7,500 r.p.m. | 170.4071 7,500 r.p.m. | 3602-00-E-7 7,000 r.p.m. | DW108-1 7,600 r.p.m. | 15GL-60RA 6,000 r.p.m. | G7-SA 7,500 r.p.m. | YGS-7GS-3 7,600 r.p.m. | USG-7S 7,400 r.p.m. | NAG-70A 7,600 r.p.m. | (59 03 08) MYG-70 7,600 r.p.m. | FA-6C-1 7,600 r.p.m. |
| 59 03 03 | 230 mm | LSS66 S060-23 (8423266009) 6,000 r.p.m. | 88V 60P 109M 6,000 r.p.m. | - | 3600-00-E 9 6,000 r.p.m. | - | 1945 VSL 4,500 r.p.m. | 7VC 6500F 6,500 r.p.m. | - | UVG-2300 SL59 5,900 r.p.m. | NVG-230SLW 5,900 r.p.m. | - | FV-9BH-1M 5,900 r.p.m. |

Die Grinders

| CODE | Chuck Size | Atrascopco (Sweden) | INGERSOLL-RAND (U.S.A.) | ICO (Italy) | Holger Clasen (Germany) | CLECO (U.S.A.) | YOKOTA (Japan) | YUTANI (Japan) | URYU (Japan) | NPK (Japan) | NITTO KOHKI (Japan) | FUJI (Japan) |
|----------|------------|---------------------------------------|--------------------------|-------------|-------------------------|-------------------------|--------------------|-----------------------|-----------------------|--|--------------------------------|----------------------------------|
| 59 03 26 | 6 mm | LSF29 S250 (8423012711) 25,000 r.p.m. | TD 250RG4M 25,000 r.p.m. | - | GG30/220K 22,000 r.p.m. | 116GLF-250 25,000r.p.m. | MG-0A 25,000r.p.m. | HG-38NB-2 22,000r.p.m | UG-25NA 23,500 r.p.m. | RG-383A-06 RG-383A-20 (6mm) (1/4") 25,000 r.p.m. | (59 04 31) L-25B 27,000 r.p.m. | FG-26H-1 FG-26H-1F 24,000 r.p.m. |

Straight Grinders

| CODE | Wheel Diam. | Atrascopco (Sweden) | INGERSOLL-RAND (U.S.A.) | ICO (Italy) | Holger Clasen (Germany) | CLECO (U.S.A.) | YOKOTA (Japan) | YUTANI (Japan) | URYU (Japan) | NPK (Japan) | OTHERS | FUJI (Japan) |
|----------|-------------|--|-------------------------|-------------|-------------------------|----------------|--------------------|-------------------------|----------------------|-------------------------|--------|-----------------------|
| 59 03 31 | 65 mm | - | - | - | - | - | GS-2 14,000 r.p.m. | HG-65GS 14,600 r.p.m. | UG-65S 14,300 r.p.m. | NHG-65DLW 14,600 r.p.m. | - | FG-3H-1 14,600 r.p.m. |
| 59 03 32 | 125 mm | LSR 64 S072-13 (8423164030) 7,200 r.p.m. | - | - | - | - | - | HG-120GS-2 7,600 r.p.m. | UG-125H 7,600 r.p.m. | NHG-125LW 7,500 r.p.m. | - | FG-5H-1 7,600 r.p.m. |

Straight Grinders

| CODE | Wheel Diam. | Atrascopco (Sweden) | INGERSOLL-RAND (U.S.A.) | ICO (Italy) | Holger Clasen (Germany) | CLECO (U.S.A.) | YOKOTA (Japan) | YUTANI (Japan) | URYU (Japan) | NPK (Japan) | OTHERS | FUJI (Japan) |
|----------|-------------|--|---------------------------|--------------------|-------------------------|-----------------------------|----------------|-------------------------|----------------------|------------------------|--------|-----------------------|
| 59 03 33 | 150 mm | LSR 64 S060-15 (8423164022) 6,000 r.p.m. | 88HL 60H 106 6,000 r.p.m. | 200-0 5,000 r.p.m. | - | 560 BSL 5/8 6,000 r.p.m. | - | HG-150GS-2 6,300 r.p.m. | UG-150H 6,300 r.p.m. | NHG-150LW 6,200 r.p.m. | - | FG-6H-1 6,300 r.p.m. |
| 59 03 34 | 76 mm | - | TXD 180RH63 18,000 r.p.m. | - | - | 15NGEL 180-WC 18,000 r.p.m. | - | HG-75GS 12,700 r.p.m. | - | - | - | FG-3H-2 12,700 r.p.m. |

Hand Drills

| CODE | Drill Capacity | Atrascopco (Sweden) | INGERSOLL-RAND (U.S.A.) | ICO (Italy) | Holger Clasen (Germany) | CLECO (U.S.A.) | YOKOTA (Japan) | YUTANI (Japan) | URYU (Japan) | NPK (Japan) | NITTO KOHKI (Japan) | FUJI (Japan) |
|----------|----------------|--|---------------------------------------|--|---------------------------------|---------------------------------|------------------------------|--|--------------------------------|---|-------------------------------|---------------------------------|
| 59 03 41 | 6.5 mm | LBB 16 EPX-033 (6.5 mm) (8421010832) (Pistol) 3,300 r.p.m. | 3 AJ1 (6.0 mm) (Pistol) 3,800 r.p.m. | - | DG30/290P (Pistol) 2,900 r.p.m. | 111DO-40B (Pistol) 4,000 r.p.m. | YRD-6N (Pistol) 2,800 r.p.m. | YBD-6 (6.3 mm) (Pistol) 3,600 r.p.m. | UD-50-45 (Pistol) 5,000 r.p.m. | NRD-6PB (Pistol) 2,400 r.p.m. | ADR-65 (Pistol) 2,900 r.p.m. | FRD-6PH-3 (Pistol) 2,800 r.p.m. |
| 59 03 42 | 9.5 mm | LBB 36 H026 (10 mm) (8421040833) (Pistol) 2,600 r.p.m. | 5 AN3 (10.0 mm) (Pistol) 1,000 r.p.m. | AR-X10 (10.0 mm) (Pistol) 2,000 r.p.m. | DG30/100P (Pistol) 1,000 r.p.m. | 111DO-14B (Pistol) 1,400 r.p.m. | YRD-8N (Pistol) 1,850 r.p.m. | YBD-10 (10.0 mm) (Pistol) 1,000 r.p.m. | UD-80-12 (Pistol) 1,500 r.p.m. | NRD-10P (10.0 mm) (Pistol) 2,000 r.p.m. | ADR-100 (Pistol) 2,000 r.p.m. | FRD-8PX-2 (Pistol) 1,300 r.p.m. |
| 59 03 46 | 8 mm | LBB26 EXP-045 (8421050012) (Pistol) 4,500 r.p.m. | 780 (Pistol) 350 r.p.m. | - | DG30/170P (Pistol) 1,700 r.p.m. | 111DO-28B (Pistol) 2,800 r.p.m. | - | YBD-8B (Pistol) 1,500 r.p.m. | UD-60-15 (Pistol) 1,600 r.p.m. | - | - | FRD-8PX-1 (Pistol) 2,600 r.p.m. |
| 59 03 47 | 13 mm | LBB 36 H007 (8421040807) (Pistol) 700 r.p.m. | 7806 (Pistol) 950 r.p.m. | AR-X13 (Pistol) 1,500 r.p.m. | DG40/80P (Pistol) 750 r.p.m. | 15DP-8B (Pistol) 800 r.p.m. | YRD-13N (Pistol) 700 r.p.m. | RD-13 (Grip) 1,200 r.p.m. | UD-80-07 (Pistol) 830 r.p.m. | NRD-12PA (Pistol) 1,500 r.p.m. | - | FRD-8PX-3 (Pistol) 900 r.p.m. |
| 59 03 48 | 16 mm | LBB 45H017 (8421050132) (Pistol) 1,700 r.p.m. | - | AR-X16 (Pistol) 900 r.p.m. | - | - | - | RD-16R (Side) 900 r.p.m. | UD-80-04 (Pistol) 460 r.p.m. | NRD-16R (Side) 900 r.p.m. | - | FRD-16Z-1 (Grip) 800 r.p.m. |
| 59 03 51 | 22 mm | - | 22 MA2 (Side) 350 r.p.m. | AR-X22 (Side) 600 r.p.m. | - | - | - | RD-23RL (Side) 570 r.p.m. | URD-22R (Side) 600 r.p.m. | NRD-22RLW (Side) 600 r.p.m. | - | FRD-23R-21 (Side) 480 r.p.m. |
| 59 03 52 | 32 mm | - | 33 SKA (Side) 300 r.p.m. | - | - | - | - | RD-32R (Side) 450 r.p.m. | URD-32LR (Side) 380 r.p.m. | NRD-32RLW (Side) 270 r.p.m. | - | FRD-32R-11 (Side) 380 r.p.m. |
| 59 03 53 | 50 mm | - | 44 SMA (51.0 mm) (Side) 155 r.p.m. | - | - | - | - | - | URD-500R (Side) 160 r.p.m. | - | - | FRD-50R-11 (Side) 150 r.p.m. |

Remark: (Pistol), (Grip) and (Side) are types of handles.

Chipping Hammers

| CODE | Type of Shank | Atrascopco (Sweden) | INGERSOLL-RAND (U.S.A.) | Trelawny SPT Ltd. (U.K.) | ICO (Italy) | Holger Clasen (Germany) | CLECO (U.S.A.) | YOKOTA (Japan) | YUTANI (Japan) | URYU (Japan) | NPK (Japan) | NITTO KOHKI (Japan) | FUJI (Japan) |
|----------|---------------|--|----------------------------------|--------------------------|-------------------------------|-------------------------|---------------------------------|-------------------------------|------------------------------------|----------------------------------|------------------------------------|-------------------------------|----------------------------------|
| 59 03 61 | Round | - | K2LA 2SA Bore 22 mm 3,600 b.p.m. | - | 850-0 P.D. 24 mm 2,000 b.p.m. | ACH-16 6,000 b.p.m. | CH-22 Bore 28.6 mm 3,500 b.p.m. | BRH-6 P.D. 20 mm 2,000 b.p.m. | PC-1S(R) P.D. 28.5 mm 3,000 b.p.m. | AA-00(R) P.D. 20 mm 2,700 b.p.m. | AA-00SP(R) P.D. 18 mm 3,800 b.p.m. | A-300 P.D. 19 mm 2,600 b.p.m. | FRH-6A-2 P.D. 20 mm 3,000 b.p.m. |
| 59 03 62 | Hexagon | RRC22F-01 (8425020222) P.D. 15 mm 3,700 b.p.m. | K2LA 1SA Bore 22 mm 3,600 b.p.m. | 160.6009 4,400 b.p.m. | - | MHA 2 3,000 b.p.m. | - | - | PC-1S(H) P.D. 28.5 mm 3,000 b.p.m. | AA-00(H) P.D. 20 mm 2,700 b.p.m. | AA-00SP(H) P.D. 18 mm 3,800 b.p.m. | - | FRH-6A-1 P.D. 20 mm 3,000 b.p.m. |

Remark: P. D. = Piston Diameter, B. P. M. = Blow per Minute.

Scaling Hammers

| CODE | No. of Piston | Atrascopco (Sweden) | INGERSOLL-RAND (U.S.A.) | ICO (Italy) | Holger Clasen (Germany) | CLECO (U.S.A.) | Trelawny SPT Ltd. (U.K.) | YOKOTA (Japan) | YUTANI (Japan) | URYU (Japan) | NPK (Japan) | FUJI (Japan) |
|----------|---------------|---------------------|-------------------------|--------------------|-------------------------|--------------------|--------------------------|-------------------|--------------------|--------------|--------------------|--------------------|
| 59 03 82 | 1 | - | - | 800-0 5,700 b.p.m. | S 21 3,900 b.p.m. | - | SF-1 3,000 b.p.m. | YK-2 8,000 b.p.m. | SCH-2 4,000 b.p.m. | - | S-2A 3,500 b.p.m. | FS-2A 8,000 b.p.m. |
| 59 03 83 | 3 | - | 3161 C1 3,800 b.p.m. | 797-0 7,000 b.p.m. | S 31 3,200 b.p.m. | SC-3A 5,200 b.p.m. | SF-3 3,000 b.p.m. | - | - | - | MS-30 7,000 b.p.m. | - |

Remark: B. P. M. is Blow per Minute.

2. Deck Scalers

Deck Scalers

Desincrustadores para Cubierta デッキスケーラー 甲板除锈机

For use in removing scales and surface paint from the ships deck. The scaler has a handle, allowing the operator to stand during use, relieving fatigue and protecting the eyes from dust and chipped metal or scale. Various types of scaling operation machines are available.

Required air pressure is 0.59 MPa (6 kgf/cm²).



Reciprocating Piston System



Rotary Scaling System

Pneumatic Powered

How to order: CODE

Deck scaler, pneumatic, SCALING SYSTEM, MODEL

| | | Unit Per Set |
|------------------------|-----------------------------|--------------|
| CODE | 59 04 01 | |
| Model | KC-100 | |
| Scaling System | Reciprocating Piston System | |
| Numbers of Piston Head | 11 pcs | |
| Piston Diam | 22 mm | |
| R. P. M. | 4,000 Blow/min | |
| Scaling Width | 300 mm | |
| Weight | 65 kg | |

Name of Mfr.: Kobe Cleaner

| | | Unit Per Set |
|-------------------------|---------------------------------|------------------------|
| CODE | 59 04 06 | 59 04 07 |
| Scaling System | Rotary Scaling System | |
| Numbers of Scaling Head | 84 pcs Striking chipping leaves | 44 pcs Striking wheels |
| R. P. M. | 3,000 | 2,000 |
| Scaling Width | 280 mm | 280 mm |
| Weight | 120 kg | 136 kg |

Engine Powered

How to order: CODE

Deck scaler, engine powered, rotary scaling head system, MODEL

| Unit Per Set | | |
|---------------------------|-------------------------|------------------------|
| CODE | 59 04 03 | 59 04 08 |
| Scaling System | Rotary Scaling System | |
| Numbers of Head and Shape | 30 cutter blades | 44 pcs striking wheels |
| Engine | 4-cycle gasoline engine | |
| R. P. M. | 3,400 | 2,000 |
| Scaling Width | 120 mm | 280 mm |
| Weight | 98 kg | 173 kg |

Electric Powered

How to order: CODE

Deck scaler, electric powered, rotary scaling system, POWER SOURCE VOLTAGE, MODEL

| Unit Per Set | | |
|---------------------------|---|-------------------------------------|
| CODE | 59 04 09 | 59 04 10 |
| Model | KC-120 | FR200 |
| Scaling System | Rotary Scaling System | |
| Numbers of head and shape | 84 pcs Striking blades or 25 pcs wire wheel brush | 76 pcs pentagonal cutters |
| Electrical Motor | AC 220 V or 440 V 3 phase 3 HP (2.2 kW) | AC 400 V, 50/60 Hz 3 HP (2.2 kW) |
| R. P. M. | 3,470 | - |
| Scaling Width | 300 mm | 200 mm |
| Weight | 120 kg | 62.8 kg |
| Name of Mfr. | Kobe Cleaner | Von Arx EOCD |

Replacement Heads for Deck Scaler

These replacement heads for deck scalers differ from manufacturer to manufacturer. When ordering, it is necessary to provide information about the manufacturer and model of the deck scaler you are currently using.



Piston Head



Cutter Blade Assembly



Cutter Drum Assembly

| CODE | Item | Model | Unit |
|------------------------------|-----------------------|--------|---------|
| For Pneumatic Powered | | | |
| 59 04 11 | Piston head | KC-100 | Pc. Set |
| 16 | Cutter blade assembly | - | Set |
| 19 | Cutter drum assembly | - | Set |
| For Engine Powered | | | |
| 59 04 13 | Cutter blade assembly | - | Set |
| 19 | Cutter drum assembly | - | Set |
| For Electric Powered | | | |
| 59 04 17 | Cutter blade assembly | KC-120 | Set |
| 18 | Wire wheel brush unit | KC-120 | Set |
| 19 | Cutter drum assembly | FR200 | Set |

Deck Scalers

Trelawny Scaleforce, Eleven Multi-Head Scaler

Desincrustadores para Cubierta デッキスケーラー 甲板除锈机

Large area corrosion control for all duties on-board ship and off-shore platforms. De-scaling/de-rusting, removal of paint and marine growth on all steel work. Removal of floor coatings paint/epoxy etc.

Features and benefits

- Unique Vibro-lo vibration damping system.
- Wear resistant Tungsten carbide-tipped cutter-heads (59 03 98).
- Non spark Beryllium Copper head available (59 03 99).
- Quick change replaceable scaling heads.
- Dust shroud fitted as standard.
- Spares compatible with Trelawny SF1 & SF3 handheld models.



| Unit Per Set | | |
|-----------------|---|---|
| CODE | 59 04 05 | 59 04 00 |
| Model | SF-11 | |
| Part No. | 159.5910 | 159.5930 |
| Machine | Fitted with tungsten carbide cruciform head | Fitted with non-spark beryllium copper non-spark head |
| Cutting Width | 250 mm | |
| BPM | 3,000 × 11 | |
| Air Consumption | 33 ltr/sec (70 cfm) | |
| Noise Level | 103.1 LpA dB(A) 113.1 LwA dB(A) | LwA 113.1 dB(A) |
| Vibration (AEQ) | 5.76 m/s ² | |
| Length | 1,295 mm (51.2") | |
| Head Dimensions | Width 285 mm Height 150 mm (6") Depth 150 mm (6") | |
| Weight | 36 kg (79.4 lbs) | |

Remark: LpA dB(A) – Sound Power Level
LwA dB(A) – Sound Pressure Level

Name of Mfr.: Trelawny SPT Ltd.

Replacement Heads for Trelawny Deck Scaler SF-11

| Unit Per Pcs. | | |
|---------------|------------------|------------------|
| CODE | 59 03 98 | 59 03 99 |
| Material | Tungsten carbide | Beryllium copper |
| Pt/No. | 426.5351 | 606.5303 |

Note: Beryllium copper head is Non-spark.

Name of Mfr.: Trelawny SPT Ltd.

Large Area Deck De-scalers

Trelawny TFP 200 Multi-Planer

Desincrustadores de cubiertas de gran superficie

大面积デッキデスケーラー 大面积甲板除鳞机

Scaling Width: 200 mm

Perfect for removing coatings and corrosion from ship decks, hatch covers and tank tops. Adjustable depth control and drum options allow for different surface finishes.



Air Powered

| Unit Per Set | | |
|--------------------|---|--|
| CODE | 59 22 31 | |
| Model | TFP200 | |
| Part No. | 320.2412T | |
| Working Width | 195 mm (7.7") | |
| Distance from Wall | 45 mm (1.8") | |
| Cutter Head Speed | 1,528 rpm | |
| Noise Level | 94.1 LpA dB(A) 107.1 LwA dB(A) | |
| Vibration (AEQ) | 10.3 m/s ² | |
| Size W × D × H | 350 × 800 × 1,000 mm (13.8" × 31.5" × 39.4") | |
| Weight | 45 kg (99 lbs) | |

Remark: LpA dB(A) – Sound Power Level

LwA dB(A) – Sound Pressure Level

Name of Mfr.: Trelawny SPT Ltd.

Electric Powered

| Unit Per Set | | | |
|--------------------|-------------------------------------|---------------|------------|
| CODE | 59 22 35 | 59 22 36 | 59 22 37 |
| Model | TFP200 | | |
| Part No. | 320.2416T | 320.2404T | 320.2406T |
| Voltage | 110 V | 220-240 V | 380-440V |
| Phase & Hz | 1 ph 60 Hz | 1 ph 50/60 Hz | 3 ph 60 Hz |
| Working Width | 195 mm (7.7") | | |
| Distance from Wall | 45 mm (1.8") | | |
| Cutter Head Speed | 1,650 rpm | | |
| Noise Level | 89.9 LpA dB (A) 102.9 LwA dB (A) | | |
| Vibration (AEQ) | 10.3 m/s ² | | |
| Size W×D×H | 350 × 900 × 900 mm | | |
| Weight | 68 kg (149.9 lbs) | | |

Remark: LpA dB(A) – Sound Power Level

LwA dB(A) – Sound Pressure Level

Name of Mfr.: Trelawny SPT Ltd.

Replacement Heads

for Large Area Deck De-Scaler TFP200

Cabezas de Repuesto para Desincrustador

デッキスケーラー用交換ヘッド

甲板除锈机备用头子

← Heavier Scaling



Tipped
Cutter



Star Cutter



Beam
Cutter

Lighter Burnishing →



Twisted Knot
Wire Brush



Crimped
Wire Brush

Applications

| | |
|-------------------------|---|
| Tipped cutter | Hard wearing tungsten tips for removing heavily corroded areas. |
| Star cutter | Removal of light corrosion and heavy coating build up. |
| Beam cutter | Removal of light rust, leaving less stress point lines. |
| Twisted knot wire brush | Heavy surface rust and light paint removal. |
| Crimped wire brush | For burnishing and light rust removal. |

| Unit Per Pcs. | | |
|---------------|---|----------|
| CODE | Item | Part No. |
| 59 22 41 | Tungsten carbide cutter - (x 80 required) | 320.5500 |
| 42 | Star cutter - (x 208 required) | 320.3658 |
| 43 | Beam cutter - (x 264 required) | 320.5120 |
| 44 | Crimped wire brush | 320.9610 |
| 45 | Twisted knot wire brush | 320.9620 |
| 50 | Spacer (x 88 required) - For TCT Drum | 320.4140 |

Name of Mfr.: Trelawny SPT Ltd.

Replacement Drum Head Assemblies

| Unit Per Pcs. | | |
|---------------|--|------------|
| CODE | Item | Part No. |
| 59 22 32 | Tungsten carbide tipped cutter drum head | 320.1020ST |
| 33 | Star cutter drum head | 320.1020SS |
| 38 | Beam cutter drum head | 320.1020SB |
| 39 | Crimped wire brush head | 320.9610 |
| 40 | Twisted knot wire brush head | 320.9620 |

Remark: LpA dB(A) – Sound Power Level

LwA dB(A) – Sound Pressure Level

Name of Mfr.: Trelawny SPT Ltd.

Heavy Duty Drums and Cutter Shafts for TFP200



Heavy Duty Drum



Cutter Shaft

| Unit Per Pcs. | | | | | |
|-----------------|---------------------|--------------|----------|----------|----------|
| CODE | With Shaft Diameter | Pt/No. | CODE | Diameter | Pt/No. |
| Heavy Duty Drum | | Cutter Shaft | | | |
| 59 22 47 | 12 mm | 320.002H | 59 22 49 | 12 mm | 320.0020 |

Diesel

Unit Per Set

| | |
|--------------------|----------------------------|
| CODE | 59 12 07 |
| Model | Rustibus® 2000 (200-2000) |
| Working Track | 200 mm |
| Power | 7.0 hp |
| RPM | 0 - 1,800 |
| Diesel Consumption | 2 ltr/hr |
| Motor | Yanmar L70 AE-S |
| Dimensions | L 1,320 × H 900 × W 420 mm |
| Weight | 90 kg |
| Name of Mfr. | Rustibus® |

Pneumatic (Standard)

Please specify on ordering, which model is required.
Standard model or LOW Model.

Unit Per Set

| | |
|-----------------|----------------------------|
| CODE | 59 12 08 |
| Model | Rustibus® 2000 (200-3000) |
| Working Track | 200 mm |
| Air Consumption | 6 m³/min. |
| BPM | 200 |
| Work Pressure | 6 - 8 ATO |
| Hose | 1" |
| Dimensions | L 1,320 × H 900 × W 420 mm |
| Weight | 90 kg |
| Name of Mfr. | Rustibus® |

Scaling Machines

Rustibus® Model 2000

Máquina Decapadora Rustibus® スケーリングマシン 刮除機

Designed to de-scale and power brush decks on ships and rigs without time consuming and costly ways. The use and fast replacement of specially prepared and patented chain links is the key to this quick and efficient surface treatment. To remove and gather dust, scales and debris, it can be connected to an ejector.



Electric (Standard)



Electric (Low)



Diesel



Pneumatic (Standard)



Pneumatic (Low)

Electric (Standard)

Please specify on ordering, which model is required.
Standard model or LOW Model.

| Unit Per Set | | |
|-----------------|----------------------------|----------|
| CODE | 59 12 05 | 59 12 06 |
| Model | Rustibus® 2000 (200-1000) | |
| Working Track | 200 mm | |
| Voltage | AC 220 V | AC 440 V |
| Phase | 3 | |
| Power | 21/12.2 amps | |
| RPM | 1,425/1,720 | |
| Power Frequency | 50/60 Hz | |
| Dimensions | L 1,320 × H 900 × W 420 mm | |
| Weight | 90 kg | |
| Name of Mfr. | Rustibus® | |

Replacement Heads

for Rustibus® 2000 Scaling Machine

Cabezas de repuesto para desincrustadora Rustibus® 2000

スケーリングマシン用交換用ヘッド

替换头 用于 Rustibus® 2000 除垢机



Disposable Chain Drum

Unit Per Pcs.

| CODE | Item | Part No. |
|----------|-----------------------|----------|
| 59 12 09 | Disposable chain drum | 200-0156 |

Scaling Machines

Rustibus® Model 2000ECO

Escaladoras, Rustibus® Modelo 2000ECO

スケーリングマシン Rustibus® 2000ECO

刻度机 Rustibus® 2000ECO 型



Designed to de-scale and power brush decks on ships and rigs without time consuming and costly ways. The use and fast replacement of specially prepared and Patented chain link method is the key to this quick and efficient surface treatment. To remove and gather dust, scales and debris, this top end model collects the waste as you use it. It can also be connected to an ejector.

Electric (Standard)

Unit Per Set

| CODE | 59 19 13 | 59 19 14 |
|-----------------|----------------------------------|----------|
| Model | Rustibus® 2000ECO (200-ECO-1000) | |
| Working Track | 200 mm | |
| Voltage | AC 220 V | AC 440 V |
| Phase | 3 | |
| Power | 21/12.2 amps | |
| RPM | 1,425/1,720 | |
| Power Frequency | 50/60 Hz | |
| Dimensions | L 1,320 × H 900 × W 420 mm | |
| Weight | 90 kg | |
| Name of Mfr. | Rustibus® | |

Electric

Unit Per Set

| CODE | 59 12 13 | 59 12 14 | 59 12 19 |
|-----------------|--------------------------|----------|----------|
| Model | Rustibus® 400 | | |
| Working Track | 40 mm | | |
| Voltage | AC 220 V | AC 440 V | |
| Phase | 1 | 3 | 3 |
| Power | 3.5/2 amps | | |
| RPM | 1,410/1,715 | | |
| Power Frequency | 50/60 Hz | | |
| Dimensions | L 950 × H 900 × W 280 mm | | |
| Weight | 18 kg | | |
| Name of Mfr. | Rustibus® | | |

Remark: AC110V type is available if required.

Scaling Machines**Rustibus® Model 1200 Electric**Escaladoras, Rustibus® Modelo 1200 Eléctrica
電動スケーリングマシン Rustibus® 1200
缩放机 Rustibus 1200 型电动

Developed for de-scaling smaller areas and spot scaling surfaces. This scaling machine uses a disposable chain drum system with specially prepared chain links that deliver 80,000 blows per minute and this is the key to its quick and efficient method of surface preparation. Capacity : 12 m²/120 ft² per hour.

Unit Per Set

| CODE | 59 12 10 | 59 12 11 | 59 12 12 |
|-----------------|--------------------------|----------|----------|
| Model | Rustibus® 1200 | | |
| Working Track | 120 mm | | |
| Voltage | AC 220 V | AC 440 V | |
| Phase | 1 | 3 | 3 |
| Power | 3.5/2 amps | | |
| RPM | 1,410/1,715 | | |
| Power Frequency | 50/60 Hz | | |
| Dimensions | L 950 × H 900 × W 280 mm | | |
| Weight | 18 kg | | |
| Name of Mfr. | Rustibus® | | |

Scaling Machines**Rustibus® Model 400**Escaladoras, Rustibus® Modelo 400
スケーリングマシン Rustibus® 400 缩放机 Rustibus® 400 型

Developed for de-scaling along edges, smaller areas and spot scaling surfaces. The use and fast replacement of specially prepared chain links is the key to this quick and efficient surface treatment. This machine uses a disposable chain drum system with specially prepared chain links that deliver 28,000 of blows per minute and this is the key to its quick and efficient method of surface preparation.



Electric

Pneumatic

Pneumatic

Unit Per Set

| CODE | 59 12 20 |
|-----------------|--------------------------|
| Model | Rustibus® 400 |
| Working Track | 40 mm |
| Air Consumption | 2,400 ltr/min. |
| Work Pressure | 6 – 8 ATO |
| Hose | 1/2" |
| Dimensions | L 950 × H 900 × W 240 mm |
| Weight | 24 kg |
| Name of Mfr. | Rustibus® |

Chain Drums & Wire Brushes for Scaling Machine Rustibus® 400Tambores de cadena y cepillos de alambre para caladora
スケーリングマシン用チェーンドラム & ワイヤーブラシ
用于除垢机的链条滚筒和钢丝刷

A disposable chain drum (patented) for one-time-use for Rustibus 400 scaling machine. It doesn't require any spares replacement.



Chain Drum



Wire Brush



Heavy Duty Wire Brush

| | | |
|----------|---|-----|
| 59 12 34 | Chain drum for scaling machine, Rustibus® 400, part no.040-0356, pack of 3 pcs. | Pc. |
| 59 18 01 | Wire Brush for scaling machine, Rustibus® 400 part no.040-0158 | Pc. |
| 59 19 17 | Heavy Duty Wire Brush for scaling machine, Rustibus® 400, part no.040-0151 | Pc. |

Scaling Machines**Rustibus® Model 1200 Air**Desincrustadoras, Rustibus® Modelo 1200 Aire
スケーリングマシン Rustibus® 1200 エアー
除鳞机 Rustibus® 1200 型气动

For de-scaling medium/large surfaces such as main deck, hatch covers, tank tops, etc. It can easily be transported around the vessel. The only consumable part is the patched disposable chain drum.



which are made for one-time-use only and do not require any spares replacement. Simply use them until they are destroyed and then replace the entire drum with a new one. One chain drum set normally lasts for approx. 200 – 225 m², all depending on the use and surface conditions.

Unit Per Set

| CODE | 59 12 33 |
|-----------------|--|
| Model | Rustibus® 1200 Air |
| Capacity/Hour | 18 m ² /194 ft ² |
| Working Track | 120 mm (5") |
| Drum RPM | 1,850 |
| Blow/min. | 80,000 |
| Air Consumption | 3.6 m ³ /min. (127 CFM) |
| Work Pressure | 6 – 8 bar (87 – 116 psi) |
| Hose | 19 mm (3/4") |
| Power | 4 hp/2.98 kw |
| Motor RPM | 1,900 |
| Size | L 950 × W 470 × H 900 mm |
| Weight | 47 kg |
| Accessories | Lubricator and filter are supplied |
| Mfr's Name | Rustibus® |

Remark: All Rustibus® Products are patented.

Chain Drums for Scaling Machine

Rustibus® 1200

Tambores de cadena para caladora

スケーリングマシン用チェーンドラム 除鳞机链条滚筒

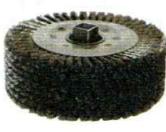
A disposable chain drum for one-time-use for Rustibus 1200 scaling machine. It doesn't require any spares replacement.



Chain Drum



Wire Brush



Heavy Duty Wire Brush

Scaling Machines

Chain Impact Type Rustbit 500

Máquina Decapadora Tipo Impacto de Cadena

スケーリングインパクト式スケーリングマシン

风动敲凿锤用备用锤头

The chain type electric motor driven deck scaling machine provides effective and quick rust removal performance with only one person. It can cover approx. 10m²/hour on flat areas (hatch, deck, etc). Three-linked chains made of tempered steel strike against decks & remove rusts, scales and old paints.



| CODE | 59 12 35 | 59 12 36 | Unit Per Set |
|------------------------|------------------------------------|----------|--------------|
| Model | Rustbit 500 | | |
| Working Capacity | 10 m ² /hour | | |
| Electric Motor Driven | AC 220 V | AC 440 V | |
| RPM | 0.75 kw, 3 ph, 60 Hz | | |
| Dimensions (L x W x H) | 1,400 × 390 × 1,050 mm | | |
| Net Weight | 47 kg | | |
| Name of Mfr. | BC Taechang Industrial Corporation | | |

Spare Parts for Chain Impact Scaling Machine Model Rustbit 500

| Parts No. | Description | Parts No. | Description |
|-----------|----------------------------|-----------|----------------------------|
| DS500-0 | Chain drum, Complete ass'y | WB700-0 | Wire brush, Complete ass'y |
| DS500-1 | Chain (25 pcs/set) | WB700-1 | Brush (3 pcs/set) |
| DS500-2 | Plate (5 pcs/set) | WB700-2 | Boss |
| DS500-3 | Bolt & nut (10 pcs/set) | WB700-3 | Cover |
| DS500-4 | Boss | WB700-4 | Bolt & nut (4 pcs/set) |
| DS500-5 | Collar (25 pcs/set) | WB700-5 | Cover bolt |

Scaling Machines

Aurand

Escaladoras, Aurand スケーリングマシン 缩放设备 奥兰

Featuring a 4-3/4" rotating head and heavy duty electric motor or gasoline drive. Designed with sturdy 42 inch handles and large rubber tires for easy maneuverability and stand-up operation. For cleaning any hard accumulation from concrete floors and walkways or for stripping painted lines from blacktop or concrete pavement. Also useful for removing the eggshell surface from new concrete to insure proper paint adhesion.



W1E



W1G

| CODE | 59 12 38 | 59 12 39 | 59 12 40 | Unit Per Set |
|---------------|---|--|--|--------------|
| Model | W1E | | | |
| Cleaning Area | 4-3/4" Wide | | | |
| Power Source | AC 115V 60Hz Single phase motor totally enclosed | AC 230V 60Hz Single phase motor totally enclosed | Gasoline Motor 5 HP, 4 cycle unit, 3,500 rpm | |
| Horse Power | 2 HP | 2 HP | 5 HP | |
| Remarks | Ball bearings lubricated with moisture resistant grease. 1) Ball bearing hand-pull starter. 2) Two quart fuel tank Uses regular gasoline | | | |
| Weight | 97 lbs | 115 lbs | 92 lbs | |
| Size | Height: 42" to top of handles Width: 12" to outside of wheels, 15" to outside of motor & guard Length: 48" | | | |
| | Height: 42" to top of handles Width: 12" to outside of wheels, 15" to outside of cutter housing & guard Length: 48" | | | |

Name of Mfr.: Aurand Manufacturing & Equipment Co., Inc.

Explosion-proof Deck Scalers

Rustibus® EX Series

Desincrustadores para cubiertas antiexplosiones

防爆型デッキスケーラー

防爆型甲板除锈机

Specially designed and produced for use on tankers, gas carriers, oil tankers, FPSOs, rigs and platforms, or in on shore oil and gas refineries. In fact anywhere that you need to do maintenance on steel, in a potentially explosive atmosphere. After thorough and intensive testing, the machines received the final stamp of approval by DNV (Det Norske Veritas). Certified by DNV to meet EX/ATEX 94/9/EC directive.



X400 AIR

X1200 AIR

X2000 AIR

X2000 AIR LOW

| | Unit Per Set | | | |
|---|--|---|---|---------------------------------|
| CODE | 59 12 47 | 59 12 48 | 59 12 49 | 59 12 50 |
| Model | X400 AIR (040-X3000) | X1200 AIR (120-X3000) | X2000 AIR (200-X3000) | X2000 AIR LOW (200-X9000) |
| Working Track mm (") | 40 (1.6) | 120 (5) | 200 (8) | |
| Capacity hour m ² (ft ²) | 6 (64) | 18 (194) | 83 (183) | 30 (320) |
| Blow/min. | 28,000 | 80,000 | 200,000 | |
| Air Consumption m ³ /min (CFM) | 2.4 (85) | 3.5 (127) | 6 (212) | |
| Working Pressure bar (psi) | 7 (101) | 7 (101) | 6.5 (94) | |
| Hose mm (") | 13 (1/2) | 19 (3/4) | 25 (1) | |
| Power hp (kW) | 2.5 (1.86) | 4 (3) | 8 (6) | |
| rpm | 1,900 | 1,900 | 1,850 | |
| Result | ST3 +++ (SSPC-SP11 +++) | | | |
| Size mm (") | L: 950 (37) H:900 (35) W:240 (9) | L: 950 (37) H:900 (35) W:470 (18) | L: 2,190 (85) H: 430 (17) W: 420 (16) | |
| Weight kg (lbs) | 24 (53) | 45 (100) | 83 (183) | 100 (220) |

Name of Mfr.: Rustibus®

Spare Parts for Rustibus® Deck Scaler

These spare parts can be applied to the scalers with same model numbers whatever the power source are different, or with/no explosion-proof type.

Unit Per Pcs.

| For Model 400 Series | | For Model 1200 Series | |
|--------------------------------|----------------------------------|--------------------------------|----------------------------------|
| 59 18 01 | 59 18 02 | 59 18 03 | 59 18 04 |
| | | | |
| Standard Wire Brush (040-0158) | Heavy Duty Wire Brush (040-0202) | Standard Wire Brush (120-0158) | Heavy Duty Wire Brush (120-0151) |

For Model 2000 Series

| 59 18 05 | 59 18 06 | 59 18 07 |
|--|---------------------------------|---------------------------------|
| | | |
| Chain Drum Assembly (200-0151) | Wire Brush Assembly (200-0155) | Wire Brush for R2000 (200-0158) |
| 59 18 08 | 59 18 09 | 59 18 10 |
| | | |
| R2000 17 mm & 20 mm Bearing Kit (200-0187) | Shaft for Chain Drum (200-2300) | Shaft for Chain Drum (200-2300) |

Name of Mfr.: Rustibus®

Electric Multi-Purpose Surface Machines

Máquina eléctrica multiusos para superficies

電動コータースケーリングマシン

防爆型甲板除锈机

Fitted with heavy duty grinder, direct-on-line starter and safety lever switch. They are designed in easy manoeuvre, lightweight, reduce long hours fatigue by squatting and the safety switch for cutting off power supply in case of emergency. Can use for grinding, cutting, removing light and heavy rusts, surface profile and polishing. They are good for corners, hard to reach areas and uneven surface as tools are fitted in front. It can use Velcro sanding disc pad with different grits.



Standard Accessories (1 each)

| | | |
|------------------------------|-----------------------|---------------------|
| | | |
| Twisted Cup Brush Double Row | Crimped Bevel Brush | Knotted Bevel Brush |
| | | |
| Cutting Grinding Disc | Sanding Disc Grit #36 | Velcro Backing Pad |

| CODE | 59 22 81 |
|-----------------|-----------------|
| Model | CEG-230 |
| Disc Size | 5" - 7" |
| Voltage | 220-240 V |
| Phase/Frequency | Single/50/60 Hz |
| Power/Ampères | 2,200 W/11A |
| Speed | 6,500 r/min |
| Max | 80 m/s |
| Size | 78 x 42 x 96 cm |
| Weight | 31 kg |

Name of Mfr.: Cobolt – KM Kinley

Spare Accessories for Electric Multi-purpose Surface Machine

| CODE | Description | Unit |
|----------|------------------------------------|------|
| 59 22 82 | Cup brush, twisted, double row, 5" | Pc. |
| 83 | Brush, crimped bevel, 5" | " |
| 84 | Brush, knotted bevel, 5" | " |
| 85 | Cutting/grinding disc, 7" | " |
| 86 | Sanding disc Grit #36, 7" | " |
| 59 22 87 | Velcro backing pad, 7" | Pc. |

Name of Mfr.: Cobolt – KM Kinley

Water Operated Surface Machines

Máquina de agua a presión para superficies

水圧式スケーリングマシン 水压式刮除机



Operated by deck line water pressure where there is no electricity and air available on deck. Available scaling width in 200 mm and 300 mm. Fitted with 2" Nakajima type water hose coupling for water inlet and outlet. Please advise type of water hose coupling and size in use if you need other type or size of coupling.

| CODE | 59 24 01 | 59 24 02 | Unit Per Set |
|----------------------|-----------------------------------|-----------------|--------------|
| Model | COW-200 | COW-300 | |
| Scaling Width | 200 mm | 300 mm | |
| Water Inlet/Outlet | Nakajima Type 2" | | |
| Max. Water Supply | 70 m ³ /hr at 10.5 bar | | |
| Size | 85 x 40 x 92 cm | 85 x 52 x 92 cm | |
| Weight | 62 kg | 70 kg | |
| Standard Accessories | Hammer cutters assembly | | |

Name of Mfr.: Cobolt – KM Kinley

Spare Assemblies for Water Operated Surface Machine

Conjuntos de repuesto para máquina de superficie accionada por agua

水上サーフェスマシン用スペアアセンブリ

备用组件 用于水上操作平面机

Spare Assemblies

| | |
|-----------------------------|-----------------------------------|
| | |
| Beam Cutters Assembly | Star Cutters Assembly |
| | |
| Hammer Cutters Assembly | Tungsten Carbide Cutters Assembly |
| | |
| HD Star Cutters Assembly | Crimped Wire Wheel Assembly |
| | |
| Twisted Wire Wheel Assembly | |

| CODE | Description | Unit |
|----------------|---|----------|
| 59 24 03 04 | Beam cutters assembly, " 200 mm " 300 mm | Pc. " |
| 59 24 05 06 | Star cutters assembly, " 200 mm " 300 mm | Pc. " |
| 59 24 07 08 | Hammer cutters assembly, " 200 mm " 300 mm | Pc. " |
| 59 24 09 10 | Tungsten carbide cutters assembly, 200 mm " 300 mm | Pc. " |
| 59 24 11 12 | HD star cutters assembly, " 200 mm " 300 mm | Pc. " |
| 59 24 13 14 | Crimped wire wheel assembly, " 200 mm " 300 mm | Pc. " |
| 59 24 15 16 | Twisted wire wheel assembly, " 200 mm " 300 mm | Pc. " |

Name of Mfr.: Cobolt – KM Kinley

Rust Removal and Surface Cleaning Machines

Mammut IV

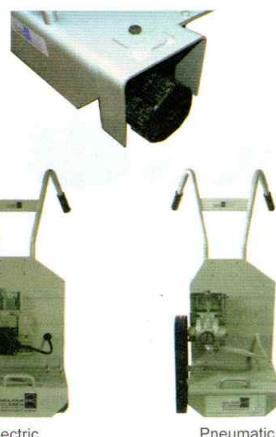
Máquinas limpiadoras de herrumbre y de superficies

デッキスケーラー 甲板除锈机

Rust removal machines for removing rust, paint or slag on big-sized surfaces in corrosion protection, ship building, machine building and shipyards.

Delivery includes:

Tool with milling wheel roller MR260, 10m cable without plug (or compressed air connection and pneumatic maintenance unit), assembly tool set.



Quality

Perfect for removing heavy rust, rust on plates and light rust. Sturdy support rollers ensure perfect and quiet working conditions.

Safety

Two-hand operation ensures a controlled, steady working position. Durable spray protection prevents removed material from flying around.

Efficiency

Quickly removes rust from large surface areas with little effort. Working up to the edge with the optional available edge grinder RR45.

Electric Model

Unit Per Set

| CODE | 59 24 51 | 59 24 52 | 59 24 53 |
|-------------------------|-------------------------|-------------------------|--------------------|
| Model | MAMMUT IV 115 V | MAMMUT IV 230 V | MAMMUT IV 400 V |
| Voltage | AC 115V Single Phase | AC 230V Single Phase | AC 400 3 Phase |
| Frequency | 50/60 Hz | | |
| Speed min ⁻¹ | 1,500 | | |
| Power | 1.5 kW | | |

Name of Mfr.: Holger Clasen GmbH & Co. KG

Pneumatic Model

Unit Per Set

| CODE | 59 24 54 |
|-------------------------|--------------|
| Model | Mammut IV DL |
| Operating Pressure | 6 bar |
| Speed min ⁻¹ | 2,000 |
| Power | 1.5 kW |

Name of Mfr.: Holger Clasen GmbH & Co. KG

Accessories for Rust Removal and Surface Cleaning Machine

MR 260 Milling Wheel Roller



ML 260 Impact Hammer Roller



MEB 120 Brush Roller



MEBK 120 Brush Roller



Edge Grinder & Edge Grinder w/Protective Cover



Spare Parts Case

| CODE | Item | Name | Description | Unit Per Pcs. |
|----------|------------------------------------|---------------|---|---------------|
| 59 24 55 | Milling wheel roller | MR 260 | With 42 milling wheels, 260 mm working width / For heavy rust and paint coats. | |
| 56 | Impact hammer roller | ML 260 | With 63 curved impact hammers / For medium-thick rust and paint. | |
| 59 24 57 | Brush roller | MEB 120 | Crimped wire Ø150 mm, 250 mm working width, for light rust plated wire, Ø150 mm, 250 mm working width, strong brushing effect, for heavy rust films or paint coats. | |
| 58 | Brush roller | MEBK 120 | | |
| 59 24 59 | Edge grinder | RR 45 | For working vertical surfaces (e.g., bulwarks and superstructures) / Extends working width by approx. 100 mm / With 15 milling wheels | |
| 60 | Edge grinder with protective cover | KWZG + Schutz | RR 45 edge grinder, with extra protection cover. | |
| 59 24 61 | Spare part case | Mammut-ETK-FR | Spare part case with wear and spare parts for 3 sets milling wheel roller MR260. | |

Electric Power Edgers

Canteadora Eléctrica

電動エッジヤー 电动刨边机

Lightweight portable edger for edging in tight area due to advantage of swivelling handle bar and detachable auxiliary grip. Suitable for preparing of small surfaces, surface treatment in narrow trenches, and working on stairs and balconies.



Unit Per Set

| CODE | 59 22 02 |
|----------------------|--------------------------------------|
| Model | VA 10 L |
| Electric Power | AC 230V 50 Hz |
| Working Width | 100 mm |
| Distance to Wall | 20 mm |
| Wattage/HP | 2.2 kW |
| Sound Pressure Level | <79.3 dB (A) |
| Production/h | 600-650 f/h, 20-25 m ² /h |
| Standard Accessories | Drum with pentagonal cutters |
| Dimensions | 330 × 360 × 1,320 mm |
| Weight | 24 kg |

Name of Mfr.: Von Arx EOOD

Tools for Electric Power Edger VA10L

59 22 03



59 22 09



59 22 10



59 22 11



59 22 12



59 22 13



59 22 14



59 22 15



59 22 16

| CODE | Name | Size | PT/No. |
|--|--|---|--|
| 59 22 03 04 | Drum Complete Drum only | 110×113 mm, W:100 mm 110×113 mm, W:100 mm, 1.3 kg | Specify the type |
| 59 22 09 10 | Brush, steel wire Brush, steel wire | Fine, 2,093 grm Coarse, 2,654 grm | 700981 700982 |
| 59 22 11 12 13 14 15 16 | Cutter, hexagonal Cutter, pentagonal Cutter, milling Cutter, milling Cutter, beam Cutter, VHM-milling | 44 × 15 × 6 mm 42 × 16 × 6 mm 40 × 15 × 11 mm 40 × 15 × 22 mm 42 × 15 × 2 mm 40 × 15 × 11 mm | 701928 701027 701031 701030 701028 707529 |

Name of Mfr.: Von Arx EOOD

Electric Scaling Machines

Desincrustadores/Piqueta Eléctrica

電動スケールマシン 电动除锈机

A rugged but lightweight electric scaling machine for continuous heavy duty use. An ideal unit for derusting and descaling jobs. Portable, fitted with wheels. Furnishable for use with a 110 volt or 220 volt AC power supply.



| Specifications | | | | | |
|----------------|------|------|----------------------|-----------|--------------|
| Model | H.P. | kW | No Load Speed R.P.M. | Weight kg | Name of Mfr. |
| KC-50 | 3/4 | 0.55 | 3,700 | 48 | Kobe Cleaner |

How to order: CODE

Scaling machine, electric, POWER SOURCE VOLTAGE, MODEL

Unit Per Set

| CODE | Voltage | CODE | Voltage |
|----------|---------|----------|---------|
| 59 12 17 | AC 100V | 59 12 18 | AC 220V |

De-Scaling Machines**Original Trident Neptune Machine from Trelawny - Electric or Air Model**

Máquinas descaladoras スケーリング・マシン 除垢仪

Features and Benefits

- 25% lighter than other models
- Compact – easy to use

Machines supplied with electric motor on skid base with 3 mtr cable to overload protection on motor. OR machines supplied with air motor on swivel base.

All machines supplied with

- 3,000 rpm electric motor, skid mounted,
- 3 metres cable
- Flexible shaft, 3 mm (9") x 16 mm (5/8") diameter
- Heavy duty leaf scaling head
- 6-cutter scaling head
- 6" diameter power brush
- Spanner set
- Hand guard

**Electric Powered**

Unit Per Set

| CODE | 59 12 41 | 59 12 42 |
|---------------|--------------|----------|
| Voltage | AC 110V | AC 220V |
| H.P. | 3/4 | |
| Kw | 0.55 | |
| No Load Speed | 3,000 R.P.M. | |
| Weight | 31 kg | |

Name of Mfr.: Trelawny SPT Ltd.

Air Powered

Unit Per Set

| CODE | Max. Air Consumption | No Load Speed | Weight |
|----------|----------------------|---------------|--------|
| 59 12 81 | 1.87 m³/min. | 3,000 R.P.M. | 30 kg |

Name of Mfr.: Trelawny SPT Ltd.

Accessories for Trident Neptune Scaling Machine

Hand Guard



Flexible Shaft

| CODE | Description | Unit |
|----------------|--|----------|
| 59 12 98 99 | Hand guard, durable rubber Flexible shaft | Pc. " |

Name of Mfr.: Trelawny SPT Ltd.

Accessories for Trelawny Scaling Machine**Heavy Duty Scaling Head**

| CODE | 59 12 75 | 59 12 76 | 59 12 77 |
|----------|-------------------------|------------------------|-------------|
| Name | Heavy Duty Scaling Head | Side Plates (Set of 2) | Centre Bolt |
| Part No. | 340.550 | 340.551/2 | 340.552 |
| Unit | Set | Pc. | Pc. |
| Images | | | |

| CODE | 59 12 78 | 59 12 79 | 59 12 80 |
|----------|---------------------------|---------------------|--------------------|
| Name | Spring Washer (Set of 50) | Chipping Leaf | Cutter Pin |
| Part No. | 340.584/50 | 340.437 | 340.553 |
| Unit | Pc. | Pc. (x 12 required) | Pc. (x 3 required) |
| Images | | | |

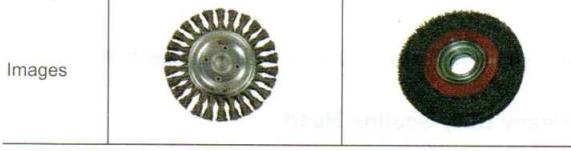
6 Cutter Scaling Head

| CODE | 59 12 86 | 59 12 87 | 59 12 88 |
|----------|-------------------------|------------------------|-------------|
| Name | Six Cutter Scaling Head | Side Plates (Set of 2) | Centre Bolt |
| Part No. | 340.581 | 340.575/2 | 340.581/A |
| Unit | Set | Pc. | Pc. |
| Images | | | |

| CODE | 59 12 89 | 59 12 90 |
|----------|--------------------|--------------------|
| Name | Cutter Wheel | Cutter Pin |
| Part No. | 340.332 | 340.583 |
| Unit | Pc. (x 6 required) | Pc. (x 6 required) |
| Images | | |

Wire Brushes

| CODE | 59 12 91 | 59 12 93 |
|----------|-----------------------|----------------|
| Name | 6" Twisted Knot Brush | 6" Power Brush |
| Part No. | 340.163 | 340.160 |
| Unit | Pc. | Pc. |



| CODE | 59 12 95 | 59 12 97 |
|----------|------------------------|------------------------|
| Name | Twisted Knot Cup Brush | Crimped Wire Cup Brush |
| Part No. | 340.167 | 340.166 |
| Unit | Pc. | Pc. |

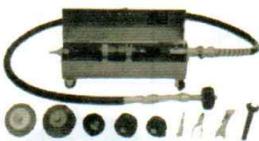
**Brush Centre Bolts**

| CODE | 59 12 92 | 59 12 94 | 59 12 96 |
|----------|---------------------------------------|--------------------------------|--|
| Name | Centre Bolt for 6" Twisted Knot Brush | Centre Bolt for 6" Power Brush | Centre Bolt for Crimped or Twisted Cup Brush |
| Part No. | 340.559 | 340.558 | 340.557 |
| Unit | Pc. | Pc. | Pc. |

**Pneumatic Scaling Machines**

Desincrustadoras/Piguela Neumática
エアスケーリングマシン 空气除鳞机

A light and easy to handle, but rigidly constructed tool for efficient heavy duty scaling. Required air pressure is 0.59 MPa (6 kgf/cm²).



Unit Per Set

| CODE | Model | Max. Air Consumption m ³ /min. | No Load Speed R.P.M. | Weight Kg | Name of Mfr. |
|----------|-------|---|----------------------|-----------|--------------|
| 59 12 51 | KC-60 | 0.8 | 5,000 | 40 | Kobe Cleaner |

Accessories for Scaling Machine

These accessories differ from manufacturer to manufacturer. When ordering, it is necessary to provide information about the manufacturer and model of scaling machine you are currently using.

How to order: 59 12 -
NAME of PART, for SCALING MACHINE MODEL

For KC-50 Electric Scaling Machine or KC-60 Pneumatic Scaling Machine

Unit Per Pcs.

| CODE | 59 12 55 | 59 12 56 | 59 12 57 | 59 12 58 |
|---------------|--------------|---------------|-----------------|--------------------------|
| Part No. Name | No.1 HD Tool | No.1-1 Cutter | No.1-2 Disc Pin | No.1-3 Center Bolt & Nut |



| Application | Heavy Rusting | For HD Tool | For HD Tool | For HD Tool |
|-------------|---------------|-------------|-------------|-------------|
|-------------|---------------|-------------|-------------|-------------|

| CODE | 59 12 59 | 59 12 60 | 59 12 61 | 59 12 62 |
|---------------|-------------|---------------|-----------------|-----------------|
| Part No. Name | No.1-4 Disc | No.2 LG Brush | No.2-1 LG Blade | No.2-2 Disc Pin |



| Application | For HD Tool | Light Rusting | For LG Brush | For LG Brush |
|-------------|-------------|---------------|--------------|--------------|
|-------------|-------------|---------------|--------------|--------------|

| CODE | 59 12 63 | 59 12 64 | 59 12 65 | 59 12 66 |
|---------------|--------------------------|-------------|----------------|------------------|
| Part No. Name | No.2-3 Center Bolt & Nut | No.2-4 Disc | No.3 Cup Brush | No.4 Hammer Head |



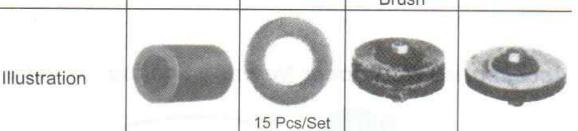
| Application | For LG Brush | For LG Brush | Light Rusting | Wide Rusting |
|-------------|--------------|--------------|---------------|--------------|
|-------------|--------------|--------------|---------------|--------------|

| CODE | 59 12 67 | 59 12 68 | 59 12 69 | 59 12 70 |
|---------------|---------------------|-----------------|--------------------------|-------------|
| Part No. Name | No.4-1 Hammer Blade | No.4-2 Disc Pin | No.4-3 Center Bolt & Nut | No.4-4 Disc |



| Application | For Hammer Head | For Hammer Head | For Hammer Head | For Hammer Head |
|-------------|-----------------|-----------------|-----------------|-----------------|
|-------------|-----------------|-----------------|-----------------|-----------------|

| CODE | 59 12 71 | 59 12 72 | 59 12 73 | 59 12 74 |
|---------------|---------------|---------------|-----------------------|------------------|
| Part No. Name | No.4-5 Collar | No.4-6 Washer | No.5 Wire Wheel Brush | No.6 Grind Stone |



| Application | For Hammer Head | For Hammer Head | Finishing | Grinding |
|-------------|-----------------|-----------------|-----------|----------|
|-------------|-----------------|-----------------|-----------|----------|

Flexible Shafts and Flexible Tubes

for Scaling Machine

Latiguillos para Piqueta

スケーリングマシン用フレキシブルシャフト・チューブ

除锈机的挠性轴及管

When ordering, please specify the manufacturer's name and the model number of scaling machine.



Flexible Shaft & Tube



Flexible Shaft Only

How to order: 59 - 12 - 53 (for Shaft & Tube)
59 - 12 - 54 (for Shaft only)
 for scaling machine, MODEL

Handheld Deck Scalers

Aurand

Herramienta Preparativa para Despegar

ハンドデッキスケーラー 刮除工具

For removing paint, rust and adhesives from iron, steel, brick, concrete and asphalt. A cutting teeth bite right through tough accumulations on any hard surface, and quickly peels off buildup paint, rust and scale. Adjustable depth shoe that the operator sets to limit the impact of the cutters. This not only protects the surface being cleaned but also insures uniform cleaning action and prevent excessive wear on the cutters.

Cast aluminium housings that offer the user a tough, durable tool that is still lightweight and easy to handle. Separate handle, safety guard, cutter bundles, motor housing, and front head assembly to make repair or replacement easier and less expensive.

Pneumatic Model:

Feature rotary type air motors, free from toggles, pistons or reciprocating parts to eliminate vibration. Tool operate on 70 to 100 p.s.i. air pressure.

Electrical Model:

Available in 115 and 230 volt models with AC/DC universal motors. 15 feet of three-conductor cable included.

Pneumatic



KP-5



MP-6

| Unit Per Pc. | | | | |
|--------------|-------|---------------|------------|------------|
| CODE | Model | Cleaning Area | Hose Power | Weight lbs |
| 59 22 61 | KP5 | 5" wide | 3/4 | 6 |
| 62 | KP5-E | 8" wide | 3/4 | 9 |
| 63 | MP6 | 8" wide | 2-1/2 | 17 |
| 64 | MP6-E | 12" wide | 2-1/2 | 23 |

Name of Mfr.: Aurand Manufacturing & Equipment Co.

Remark: Model MP6-E is furnished with a 48" detachable aluminium handle.

Electrical



K7



M5

| Unit Per Pc. | | | | |
|----------------|-------|---------------|------------|------------|
| CODE | Model | Cleaning Area | Hose Power | Weight lbs |
| AC 115V | | | | |
| 59 22 71 | K7-1 | 5" wide | 1/4 | 9 |
| 72 | K7-1E | 8" wide | 1/4 | 11 |
| 73 | M5-1 | 8" wide | 1/2 | 21 |
| 74 | M5-1E | 12" wide | 1/2 | 27 |
| AC 230V | | | | |
| 59 22 75 | K7-2 | 5" wide | 1/4 | 9 |
| 76 | K7-2E | 8" wide | 1/4 | 11 |
| 77 | M5-2 | 8" wide | 1/2 | 21 |
| 78 | M5-2E | 12" wide | 1/2 | 27 |

Name of Mfr.: Aurand Manufacturing & Equipment Co.

Remark: Model M5-1E and M5-2E are furnished with a 48" detachable aluminium handle.

Rust Removal and Surface Cleaning Machines

Record

Máquinas limpiadoras de herrumbre y de superficies

デッキスケーラー 甲板除锈机

Rust removal machines for medium size surfaces, removing rust films and rust on plates, cleaning concrete and stone, removing slag and paint. There are two types of hand piece available, 5/8" external thread type and M14 external thread type. Please specify the type of hand piece on ordering.



Delivery includes: Motor with flexible shaft, connection, motor base, carrying handle, shaft protective case, switch, grease for flexible shaft, assembly tool, and 3 mtr cable (without plug).

Quality

The splash-proof, sturdy special motor is especially suited for rough operating conditions. Sturdy support spirals prevent the ends of the flexible shaft from bending. The open carrying handle with a rotary circuit breaker and cable or a TG coupling in the compressed air version allows the user to move around more freely.

Safety

The flexible shaft with a core diameter of 15 mm is designed for high speeds. The motor base prevents the tool from unintended tipping. It comes with four attachment holes for increased safety. The standard delivery package includes a light-weight protective case made of cast aluminium.

Efficiency

Alternative connections are available for various attachments so that the user can use the right tool required for a specific application. Hand pieces are available as 5/8" external thread and M14.

Electric Model

Unit Per Set

| CODE | 59 24 71 | 59 24 72 | 59 24 73 |
|-------------------------|-------------------------|-------------------------|-----------------------|
| Model | Record "C" 115-5/8 | Record "C" 230-5/8 | Record "C" 400-5/8 |
| Voltage | AC 115V Single Phase | AC 230V Single Phase | AC 400V 3 Phase |
| Hand Piece | 5/8" external thread | | |
| Frequency | 50/60 Hz | | |
| Speed min ⁻¹ | 2,750 | | |
| Power | 0.75 kW | | |

Name of Mfr.: Holger Clasen GmbH & Co. KG

Unit Per Set

| CODE | 59 24 67 | 59 24 68 | 59 24 69 |
|-------------------------|-------------------------|-------------------------|-----------------------|
| Model | Record "C" 115-M14 | Record "C" 230-M14 | Record "C" 400-M14 |
| Voltage | AC 115V Single Phase | AC 230V Single Phase | AC 400V 3 Phase |
| Hand piece | M14 external thread | | |
| Frequency | 50/60 Hz | | |
| Speed min ⁻¹ | 2,750 | | |
| Power | 0.75 kW | | |

Name of Mfr.: Holger Clasen GmbH & Co. KG

Pneumatic Model

Unit Per Set

| CODE | 59 24 74 | 59 24 70 |
|-------------------------|----------------------|---------------------|
| Model | Record "DL" 5/8 | Record "DL" M14 |
| Hand Piede | 5/8" external thread | M14 external thread |
| Operating Pressure | 6 bar | |
| Speed min ⁻¹ | 2,500 | |
| Power | 3.5 kW | |

Name of Mfr.: Holger Clasen GmbH & Co. KG

Accessories for Rust Removal and Surface Cleaning Machine

| | | | | |
|--|---|---|---|---|
| PNAG 15 Complete Flexible Shaft | RR 45 Milling Tool | RR 30 Milling Tool | RL 7/15 Impact Tool | RL 7/9 Impact Tool |
|  |  |  |  |  |
| EB 150 Round Brush | EBK 150 Round Brush | EBT 100 Cup Brush | EBTK 100 Cup Brush | RW Tool Holder |

| CODE | Item | Item No. | Unit Per Pcs. |
|----------|---------------------------|--------------------|--|
| 59 24 75 | Complete flexible shaft | RNAG 15 / 5/8" / C | 3,000 mm long, 15 mm core dia / Durable support spirals on both ends / Insulating coupling built-in on motor side / Hand piece with a 5/8" external thread or M14 |
| 76 | Complete flexible shaft | RNAG 15 / M14 / C | |
| 59 24 77 | Milling tool | RR 45 / 5/8" | With 15 milling wheels / Used to remove heavy rust gently |
| 78 | Milling tool | RR 45 / M14 | |
| 59 24 79 | Milling tool | RR 30 / 5/8" | With 10 milling wheels / Used to remove heavy rust gently, small version |
| 80 | Milling tool | RR 30 / M14 | |
| 59 24 81 | Impact tool | RL 7/15 / 5/8" | With 15 curved impact hammers / Used to remove medium-thick rust |
| 82 | Impact tool | RL 7/15 / M14 | |
| 59 24 83 | Impact tool | RL 7/9 / 5/8" | With 9 curved impact hammers / Used to remove medium-thick rust, small version |
| 84 | Impact tool | RL 7/9 / M14 | |
| 59 24 85 | Round brush | EB 150 | Special crimped wire, 150 mm dia. |
| 59 24 86 | Round brush | EBK 150 | Extra strong, plaited for strong brushing effect, 150 mm dia. |
| 59 24 87 | Cup brush | EBT 100 | Special crimped wire, 100 mm dia |
| 59 24 88 | Cup brush | EBTK 100 | Plaited for strong brushing effect, 100 mm dia. |
| 59 24 90 | Tool holder chuck | RW M14 / 45 | For attaching brushes |
| 59 24 91 | Tool holder chuck | RW 5/8" / 45 | For attaching brushes |
| 59 24 92 | Protective cover | RSU | Made of cast aluminium (included in the delivery) |
| 59 24 93 | Wrench set | RS | For assembling and disassembling the flexible shaft |
| 59 24 94 | Grease for flexible shaft | RF | Cartridge 0.5 kg |
| 59 24 95 | Tool set | WZGS-R-5/8" | 1 x RR 45 (5/8"), 1 x RL 7/15 (5/8"), 1 x EB 150 (5/8"), 1 x RW (5/8") |
| 59 24 98 | Tool set | WZGS-R-M14 | 1 x RR 45 (M14), 1 x RL 7/15 (M14), 1 x EB 150 (M14), 1 x RW (M14) |
| 59 24 96 | Spare part case | Record- ETK-5/8" | 1 x RR45 (5/8"), 1 x RL 7/15 (5/8"), 1 x EB150 (5/8"), 1 x EBK150 (5/8"), Tools holder and wear parts for milling and impact tools |
| 59 24 97 | Spare part case | Record- ETK-M14 | 1 x RR45 (M14), 1 x RL 7/15 (M14), 1 x EB150 (M14), 1 x EBK150 (M14), Tools holder and wear parts for milling and impact tools |

Portable Laser Rust Remover

Eliminador láser portátil de óxido

ポータブル・レーザー錆除去機

便携式激光除锈器

A high-tech, new generation of handheld laser rust remover for descaling work. It is easy to install, auto-focusing, easy to operate without chemical reagents, media, dust and water. It is compact, fast speed, high precision, good in stability, and high in surface cleanliness for descaling, which can remove resin, oil, dirt, rust spots, plating, paint on the surface of metal objects of various shapes, as well as the adhesion on the surface of stone sculptures and the residue of rubber molds.

Especially suitable for the daily rust removal requirement on board.



Unit Per Set

| CODE | 59 24 99 |
|-------------------------------|-----------------|
| Model | LR1064 |
| Laser source type | Pulsed laser |
| Laser power | 50 - 100 Watt |
| Cooling way | Air Cooling |
| Laser wavelength | 1,064 nm |
| Power supply | AC 220 V |
| Maximum kVA | 400 W |
| Working temperature | 5 - 40°C |
| Fiber length | 3 mtr |
| Dimensions (mm) | 390 × 180 × 280 |
| Weight of complete set | 15 kg |
| Weight of handheld laser head | 1 kg |

3. Hand Scalers

Pneumatic Auto Files

Limas Neumáticas 自動ヤスリ 风动自动锉刀

An ultra-small, lightweight auto file. For use on filing, grinding, polishing and other jobs on steel, glass, brass, aluminium, wood and other materials without vibration or noise.



Required air pressure is 0.6 MPa (6 kgf/cm²).

Unit Per Set

| CODE | 59 04 21 |
|---------------|-------------------------|
| Model | SH-100A |
| Stroke Length | 9 mm |
| Stroke Speed | 3,700 min ⁻¹ |
| Length | 177 mm |
| Weight | 1.1 kg |
| Name of Mfr | Nitto Kohki Co., Ltd |

Spare Files for Pneumatic Auto File

These spare files differ from manufacturer to manufacturer. When ordering, it is necessary to provide information about the manufacturer and model of the auto file you are currently using.

Unit Per Pcs.

| CODE | Type | No. | Appearance |
|----------|-----------------------|-------|------------|
| 59 04 22 | Flat File | SF-13 | |
| 59 04 23 | Rat Tail File | SF-10 | |
| 59 04 24 | Triangular Taper File | SF-11 | |
| 59 04 25 | Half Round File | SF-12 | |
| 59 04 26 | Rubber Pad Ass'y | | |
| 59 03 97 | Supporter Ass'y | | |

Pneumatic Long Handle Scrapers

Cinceladores Neumáticos de Mango Largo

長柄エアスクレーバー 氣力式除锈机刀

Long reach air driven auto scraper for derusting, etc. Required air pressure is 0.6 MPa (6 kgf/cm²). One 38 mm width bit (No. 2005) is attached as a standard accessory.



Unit Per Set

| CODE | Model | Blow/min. | Overall length | Weight kg |
|----------|--------|-----------|----------------|-----------|
| 59 04 41 | S-250 | | 630 mm | 4.1 |
| 42 | S-500 | 2,500 | 890 | 4.7 |
| 43 | S-1000 | | 1,470 | 6.1 |

Name of Mfr.: Nitto Kohki Co., Ltd.

Spare Chisels for Long Handle Scraper

Unit Per Pcs.

| CODE | Shape | Blade Width | No. |
|----------|---------|-------------|------|
| 59 04 46 | Flat | 38 mm | 2002 |
| 47 | " | 60 | 2001 |
| 48 | Concave | 60 | 2004 |
| 49 | Blank | ø16 | 2003 |
| 59 25 31 | Bend | 38 | 2005 |

Long Reach Scalers

Trelawny

Desincrustadores con Largo Alcance

ロングリーチスケーラー 远距离除锈机

Powerful pneumatic long-reach scalers for the removal of paint and corrosion. Perfect for use in hard to access areas and overhead applications. Supplied without chisel or scraper - the customer can choose from the selection listed. Fast interchangeability between chisels/scrapers/needle attachments. Aluminium light weight version makes overhead work effortless.

Steel Body

| CODE | 59 04 51 | 59 04 52 | 59 04 53 | 59 04 54 | Unit Per Set |
|-----------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------|
| Model | LR2 | LR4 | LR5 | LR6 | |
| Part No. | 136.3200 | 136.3400 | 136.3500 | 136.3600 | |
| BPM | | 2,200 | | | |
| Air Consumption | | 2.1 ltr/sec (4.5 cfm) | | | |
| Noise Level | | | | | |
| LpA dB (A) | 81.3 | 80.5 | 103 | 84.3 | |
| LwA dB (A) | 94.3 | 93.5 | 116 | - | |
| Vibration (AEQ) | 10.5 m/s ² | 9.1 m/s ² | 13.6 m/s ² | 10.3 m/s ² | |
| Length | 740 mm (29") | 1,100 mm (43") | 1,400 mm (55") | 1,710 mm (67") | |
| Weight | 4.6 kg (8.2 lbs) | 5.2 kg (11.51 lbs) | 5.8 kg (12.9 lbs) | 6.3 kg (13.9 lbs) | |

Name of Mfr.: Trelawny SPT Ltd.

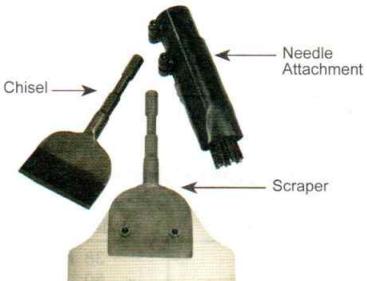
Light Weight - Aluminium Body

| CODE | 59 04 50 | 59 04 59 | 59 04 60 | Unit Per Set |
|-----------------|-----------------------|-----------------------|---------------------|--------------|
| Model | LR4 | LR5 | LR6 | |
| Part No. | 136.3498 | 136.3598 | 136.3698 | |
| BPM | | 2,200 | | |
| Air Consumption | | 2.1 ltr/sec (4.5 cfm) | | |
| Noise Level | | | | |
| LpA dB (A) | 85.8 | 81.2 | 84.2 | |
| LwA dB (A) | 98.8 | - | - | |
| Vibration (AEQ) | 21.4 m/s ² | | 20 m/s ² | |
| Length | 1,100 mm (43") | 1,400 mm (55") | 1,710 mm (67") | |
| Weight | 3.0 kg (6.61 lbs) | 3.4 kg (7.5 lbs) | 3.8 kg (8.4 lbs) | |

Name of Mfr.: Trelawny SPT Ltd.

Spare Chisels/Scrapers/Needle Attachments**for Long Reach Scaler**

Cinceles y Raspadores de Repuesto para Desincrustadores Largo Alcance
ロングリーチスケーラー用チゼル / スクラーバー / 針ホルダー
远距离除锈机的备用凿子和刮刀



Unit Per Pcs.

| Chisels | | | Scrapers | | |
|--|-------------|----------|---|-----------------------|----------|
| For removal of heavy corrosion and paint | | | Scraping loose rust and paint/ removing coverings/spillages/ material build ups | | |
| CODE | Blade Width | Part No. | CODE | Blade Width | Part No. |
| 59 25 21 | 25 mm (1") | 705.1101 | 59 25 25 | 102 mm (4") Bevelled | 431.3904 |
| 59 04 55 | 50 mm (2") | 705.1106 | 59 25 26 | 203 mm (8") Bevelled | 431.3908 |
| 59 04 56 | 100 mm (4") | 705.1102 | 59 25 27 | 305 mm (12") Bevelled | 431.3912 |
| Non-spark aluminium bronze | | | Needle attachment | | |
| 59 04 30 | 100 mm (4") | 705.1112 | 59 04 85 | - | 415.3532 |

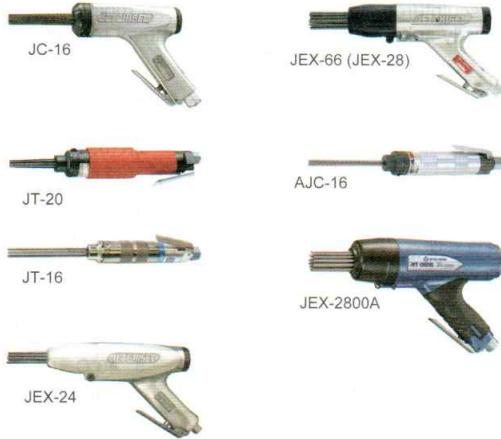
Name of Mfr.: Trelawny SPT Ltd.

Pneumatic Jet Chisels

Martilletas de Aguja, JET ジェットタガネ 风动喷射凿子

For chiseling or smoothing welds, castings and other materials. Never skip a blow, cleans and descales all jobs fast. Jet chisel needles adjust to the contour of any surface automatically.

The chisel can reach into corners, curvatures, and uneven surfaces, making it a tool no shop should be without. Thanks to the unprecedented original air operated needle return mechanism, no springs to break, no irregular power and the advantage of low air consumption. A normal short hose and quick coupler are attached as standard accessories.

**Application**

| | |
|------------------------------|--|
| JC-16: For light duty | JEX-66: For heavy duty (JEX-28) |
| JT-16: Small and lightweight | AJC-16: Slim and light weight |
| JT-20: For general duty | JEX-2800A: Powerful and low vibration. Built-in shock absorbing system minimizes operator fatigue. No special tools are required for needle replacement. |
| JEX-24: For all purposes | |

| CODE | Model | O.A. Length mm | Needles mm | Unit Per Set | |
|----------|--------------------|----------------------|--|--------------|------------------------------------|
| | | | | Air Inlet | Consumption m ³ /min |
| 59 04 61 | JC-16 | 158 | 2ø x 29 pcs. | 3/8" | 0.15 |
| 59 25 11 | JT-16 | 172 | 3ø x 6 pcs. | 3/8" | 0.16 |
| 59 04 62 | JT-20 | 245 | 2ø x 29 pcs. 3ø x 12 pcs. | 3/8" | 0.2 |
| 59 04 63 | JEX-24 | 237 | 2ø x 53 pcs. 3ø x 23 pcs. | 3/8" | 0.27 |
| 59 04 64 | JEX-66 (JEX-28) | 264 | 2ø x 66 pcs. 3ø x 28 pcs. 4ø x 14 pcs. | 3/8" | 0.35 |
| 59 04 65 | AJC-16 | 190 | 2ø x 7 pcs. 3ø x 3 pcs. | 3/8" | 0.07 |
| 59 04 70 | JEX-2800A | 247 | 2ø x 66 pcs. 3ø x 28 pcs. 4ø x 14 pcs. | 3/8" | 0.43 |

Name of Mfr.: Nitto Kohki Co., Ltd.

Remark: JEX-66 is Japanese domestic model name of JEX-28.

Spare Needles for Jet Chisel

Agujas de Repuesto para Martilleta JET

ジェットタガネ用針 喷射凿子的备用针



| CODE | Needle Diam x Lgth mm | Per box | CODE | Needle Diam x Lgth mm | Per box | Unit Per Box | |
|----------|-----------------------------|------------|----------|-----------------------------|------------|-----------------|--|
| | | | | | | Material: Steel | |
| 59 04 66 | 2ø x 150 | 100 | | | | | |
| 67 | 2ø x 180 | 100 | | | | | |
| 93 | 2ø x 300 | 50 | 59 25 12 | 2ø x 180 | 30 | | |
| 94 | 2ø x 500 | 50 | | | | | |
| 59 04 68 | 3ø x 180 | 100 | | | | | |
| 95 | 3ø x 300 | 50 | 59 25 13 | 3ø x 180 | 30 | | |
| 96 | 3ø x 500 | 50 | | | | | |
| 97 | 3ø x 800 | 50 | | | | | |
| 59 04 69 | 4ø x 180 | 50 | | | | | |
| 98 | 4ø x 300 | 50 | | | | | |
| 99 | 4ø x 500 | 50 | | | | | |

Spare Needle Supporters for Jet Chisel

Soportes de Aguja para Martilleta JEX

ジェットタガネ用ニードルサポーター

气动喷射机用铲刀支架

Unit Per Pcs.

| CODE | P/N | Size | Model |
|----------|---------|------|-----------------------------|
| 59 04 71 | TP00290 | | JC-16 |
| 59 25 14 | TQ15316 | | JT-16 |
| 59 04 72 | TP00338 | | JT-20 |
| 73 | TP02244 | | JEX-24 |
| 74 | TP01499 | | JEX-66 (JEX-28) / JEX-2800A |
| 79 | TQ05210 | | AJC-16 |
| 59 25 15 | TQ15315 | 2 mm | JT-16 |
| 59 04 75 | TP00337 | | JT-20 |
| 76 | TP02245 | | JEX-24 |
| 77 | TP01461 | | JEX-66 (JEX-28) / JEX-2800A |
| 80 | TQ04554 | | AJC-16 |
| 59 04 78 | TP01462 | 4 mm | JEX-66 (JEX-28) / JEX-2800A |

Spare Throttle Anvils for Jet Chisel

Anillos de acelerador de repuesto para cincel de chorro

ジェットタガネ用スロットルアンビル

喷射凿子的备用节气门铁砧

Unit Per Pcs.

| CODE | P/N | Model |
|----------|---------|-----------------------------|
| 59 05 20 | TP00289 | JC-16 |
| 32 | TP00336 | JT-20 |
| 39 | TP02243 | JEX-24 |
| 40 | TP00399 | JEX-66 (JEX-28) / JEX-2800A |
| 50 | TQ04562 | AJC-16 |

Spare Pistons for Jet Chisel

Pistones de repuesto para Jet Chisel

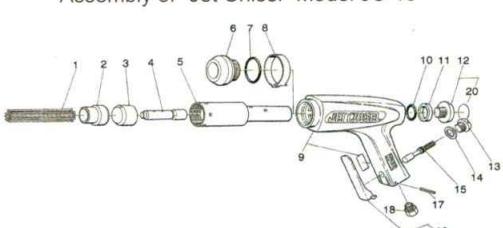
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Unit Per Pcs.

| CODE | P/N | Model |
|----------|---------|-----------------------------|
| 59 05 68 | TP00288 | JC-16 |
| 69 | TP00332 | JT-20 |
| 70 | TP02242 | JEX-24 |
| 72 | TP00395 | JEX-66 (JEX-28) / JEX-2800A |
| 59 06 00 | TQ03427 | AJC-16 |

Parts List for Jet Chisel JC-16

Assembly of "Jet Chisel" Model JC-16

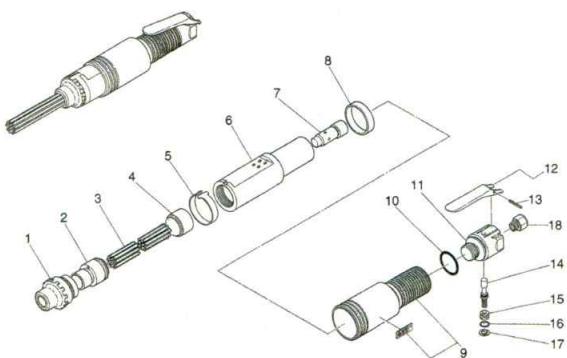


| No. | Parts No. | Parts Name | Quantity |
|-----|-----------|-----------------------------------|----------|
| 1 | 59 04 66 | Needle ø 2 x 150 mm | 29 |
| 2 | 59 04 71 | Needle supporter ø 2 mm (TP00290) | 1 |
| 3 | 59 05 20 | Throttle anvil (TP00289) | 1 |
| 4 | 59 05 68 | Piston (TP00288) | 1 |
| 5 | TP00287 | Cylinder | 1 |
| 6 | TP00292 | Lock ring | 1 |
| 7 | TP11987 | O ring KS-24 | 1 |
| 8 | TP00295 | Safety band (Lock band) | 1 |
| 9 | TB08709 | Housing sub ass'y | 1 |
| 10 | TP11986 | O ring KS-19 | 1 |
| 11 | TP03336 | Rear washer | 1 |
| 12 | TA93271 | Rear bolt ass'y | 1 |
| 13 | TP00389 | Valve cap | 1 |
| 14 | TP00388 | Valve packing | 1 |
| 15 | TA90037 | Throttle valve ass'y | 1 |
| 16 | TP00328 | Throttle lever | 1 |
| 17 | TQ00563 | Spring pin 3 x 20 | 1 |
| 18 | TQ02349 | Reducer bushing M16 x Rc 3/8" | 1 |
| acc | TQ02350 | Bushing R 3/8" x NPT 3/8" | 1 |
| acc | TQ03262 | Hose nipple R 3/8" x 3/8" | 1 |

Remark: acc denotes accessory.

Parts List for Jet Chisel JT-20

Assembly of "Jet Chisel" Model JT-20

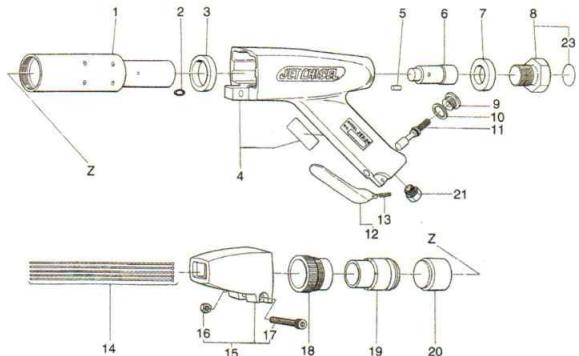


| No. | Parts No. | Parts Name | Quantity |
|-----|-----------|-----------------------------------|----------|
| 1 | TP14689 | Lock ring | 1 |
| 2 | 59 04 75 | Needle supporter ø 3 mm (TP00337) | 1 |
| 3 | 59 04 68 | Needle ø 3 x 180 mm | 12 |
| 4 | 59 05 32 | Throttle anvil (TP00336) | 1 |
| 5 | TP14593 | Safety band (Lock band) | 1 |
| 6 | TA99176 | Cylinder ass'y | 1 |
| 7 | 59 05 69 | Piston (TP00332) | 1 |
| 8 | TQ14320 | Stopper | 1 |
| 9 | TB08850 | Cover ass'y | 1 |
| 10 | LP12795 | O ring G-30 | 1 |
| 11 | TP15230 | Valve body | 1 |
| 12 | TP00328 | Throttle lever | 1 |
| 13 | TP00327 | Spring pin 3 x 25 | 1 |
| 14 | TA98983 | Throttle valve ass'y | 1 |
| 15 | TP14601 | Spring seat (Valve cap) | 1 |
| 16 | TP14604 | O ring S-10 | 1 |
| 17 | TP03695 | Retaining ring C-12 | 1 |
| 18 | TQ02349 | Reducer bushing M16 x Rc 3/8" | 1 |
| acc | TQ02350 | Bushing R 3/8" x NPT 3/8" | 1 |
| acc | TQ03262 | Hose nipple R 3/8" x 3/8" | 1 |

Remark: acc denotes accessory.

Parts List for Jet Chisel JEX-24

Assembly of "Jet Chisel" Model JEX-24

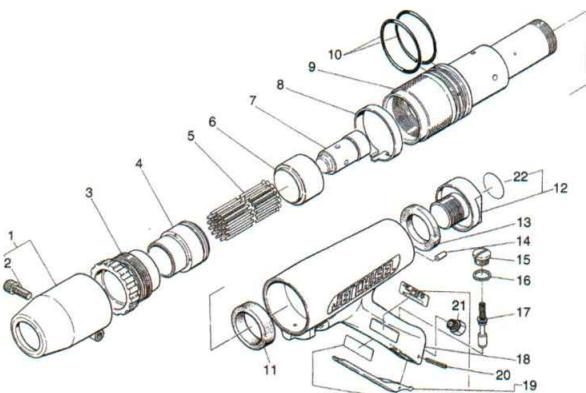


| No. | Parts No. | Parts Name | Quantity |
|-----|-----------|-----------------------------------|----------|
| 1 | TP02241 | Cylinder | 1 |
| 2 | TP11992 | O ring KS-9 | 1 |
| 3 | TP02250 | Front washer | 1 |
| 4 | TB08714 | Housing sub ass'y | 1 |
| 5 | TP01478 | Cylinder lock pin | 1 |
| 6 | 59 05 70 | Piston (TP02242) | 1 |
| 7 | TP02249 | Rear washer | 1 |
| 8 | TB08715 | Rear bolt ass'y | 1 |
| 9 | TP00389 | Valve cap | 1 |
| 10 | TP00388 | Valve packing | 1 |
| 11 | TA90037 | Throttle valve ass'y | 1 |
| 12 | TP01557 | Throttle lever | 1 |
| 13 | TQ00563 | Spring pin 3 x 20 | 1 |
| 14 | 59 04 68 | Needle ø 3 x 180 mm | 23 |
| 15 | TA93189 | Needle guide ass'y | 1 |
| 16 | (TQ01484) | Small hex. nut M8 | 1 |
| 17 | (TP16284) | Hex socket head bolt 8 x 45 | 1 |
| 18 | TP02246 | Lock ring | 1 |
| 19 | 59 04 76 | Needle supporter ø 3 mm (TP02245) | 1 |
| 20 | 59 05 39 | Throttle anvil (TP02243) | 1 |
| 21 | TQ02349 | Reducer bushing M16 x Rc 3/8" | 1 |
| acc | TP00170 | Hex wrench key 6 | 1 |
| acc | TQ02350 | Bushing R 3/8" x NPT 3/8" | 1 |
| acc | TQ03262 | Hose nipple R 3/8" x 3/8" | 1 |

Remark: No. 15 includes No. 16 and 17.
acc denotes accessory.

Parts List for Jet Chisel JEX-66 (JEX-28)

Assembly of "Jet Chisel" Model JEX-28

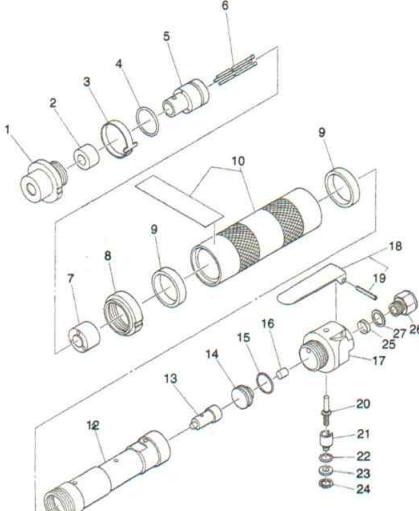


| No. | Parts No. | Parts Name | Quantity |
|-----|-----------|--------------------------------------|----------|
| 1 | TA93365 | Round needle guide ass'y | 1 |
| 2 | (TP00045) | Hex. socket head bolt 8 x 25 | 1 |
| 3 | TP01464 | Lock ring | 1 |
| 4 | 59 04 77 | Needle supporter ø 3 mm (TP01461) | 1 |
| 5 | 59 04 68 | Needle ø 3 x 180 mm | 28 |
| 6 | 59 05 40 | Throttle anvil (TP00399) | 1 |
| 7 | 59 05 72 | Piston (TP00395) | 1 |
| 8 | TP01466 | Lock band | 1 |
| 9 | TP01463 | Cylinder | 1 |
| 10 | TP11993 | O ring | 1 |
| 11 | TP01474 | Front washer | 1 |
| 12 | TB08717 | Rear bolt ass'y | 1 |
| 13 | TP01475 | Rear washer | 1 |
| 14 | TP01478 | Cylinder lock pin | 1 |
| 15 | TP00389 | Valve cap | 1 |
| 16 | TP00388 | Valve packing | 1 |
| 17 | TA90037 | Throttle valve ass'y | 1 |
| 18 | TB08716 | Housing sub ass'y | 1 |
| 19 | TP01557 | Throttle lever | 1 |
| 20 | TQ00563 | Spring pin 3 x 20 | 1 |
| 21 | TQ02349 | Reducer bushing M16 x Rc 3/8" | 1 |
| acc | TP00170 | Hex wrench key 6 | 1 |
| acc | 59 04 69 | Needle ø 4 x 180 mm | 14 |
| acc | 59 04 78 | Needle supporter ø 4 mm (TP01462) | 1 |
| acc | TQ02350 | Bushing R 3/8" x NPT 3/8" | 1 |
| acc | TQ03262 | Hose nipple R 3/8" x 3/8" | 1 |

Remark: No. 15 includes No. 16 and 17.
acc denotes accessory.

Parts List for Jet Chisel AJC-16

Assembly of "Jet Chisel" Model AJC-16



| No. | Parts No. | Parts Name | Quantity |
|-----|-----------|-----------------------------------|----------|
| 1 | TQ04558 | Lock ring | 1 |
| 2 | TQ04559 | Muffler | 1 |
| 3 | TQ03429 | Lock band | 1 |
| 4 | CP01453 | O ring P-22A | 1 |
| 5 | 59 04 80 | Needle supporter ø 3 mm (TQ04554) | 1 |
| 6 | 59 04 68 | Needle ø 3 x 180 mm | 3 |
| 7 | 59 05 50 | Throttle anvil (TQ04562) | 1 |
| 8 | TQ04557 | Lock nut | 1 |
| 9 | TQ04556 | Urethane washer 30 x 34 x 6 | 2 |
| 10 | TB08708 | Cover ass'y | 1 |
| 12 | TQ04563 | Cylinder | 1 |
| 13 | 59 06 00 | Piston (TQ03427) | 1 |
| 14 | TQ04553 | End plate | 1 |
| 15 | TP13275 | O ring P-16 | 1 |
| 16 | TQ04564 | Cushion | 1 |

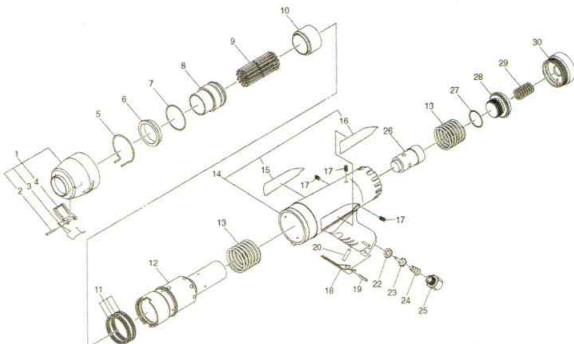
(to be continued)

| No. | Parts No. | Parts Name | Quantity |
|-----|-----------|-------------------------------|----------|
| 17 | TQ04966 | Valve body | 1 |
| 18 | TB03788 | Lever ass'y | 1 |
| 19 | (TP00460) | Spring pin 3 x 22 AW | 1 |
| 20 | TA93070 | Valve stem ass'y | 1 |
| 21 | TP06325 | Adjust valve | 1 |
| 22 | TP11997 | O ring KS-7 | 1 |
| 23 | TP06326 | Spacer 6 x 12 x 1.2 | 1 |
| 24 | TP03695 | Internal retaining ring C-12 | 1 |
| 25 | TQ04929 | Filter | 1 |
| 26 | TQ02349 | Reducer bushing M16 x Rc 3/8" | 1 |
| 27 | TQ05564 | Washer 16.2 x 21 x 1 | 1 |
| acc | TQ02350 | Bushing R 3/8" x NPT 3/8" | 1 |
| acc | TQ03262 | Hose nipple R 3/8" x 3/8" | 1 |

Remark: No.18 includes No. 19.
acc denotes accessory.

Parts List for Jet Chisel JEX-2800A

Assembly of "Jet Chisel" Model JEX-2800A



| No. | Parts No. | Parts Name | Quantity |
|-----|-----------|--------------------------------------|----------|
| 1 | TB05957 | Needle guide ass'y | 1 |
| 2 | (TP13893) | Spring pin 3 x 22 | 1 |
| 3 | (TQ10583) | Clamp spring | 1 |
| 4 | (TQ10555) | Clamp lever | 1 |
| 5 | TQ10246 | Snap ring | 1 |
| 6 | TQ10247 | Lock ring | 1 |
| 7 | TQ10562 | O ring | 1 |
| 8 | 59 04 77 | Needle supporter ø 3 mm (TP01461) | 1 |
| 9 | 59 04 68 | Needle ø 3 x 180 mm | 28 |
| 10 | 59 05 40 | Throttle anvil (TP00399) | 1 |
| 11 | TQ10241 | Back up ring | 4 |
| 12 | TQ10240 | Cylinder | 1 |
| 13 | TQ10239 | Spring 3.5 x 44 x 38 | 2 |
| 14 | TB08624 | Housing ass'y A | 1 |
| 17 | TP08684 | Hex. socket screw 4 x 8 | 3 |
| 18 | TP01557 | Throttle lever | 1 |
| 19 | TP01802 | Spring pin 3 x 28 | 1 |
| 20 | TQ10450 | Parallel pin 5 x 35 | 1 |
| 22 | TQ04671 | Seal sheet 9 x 13.9 x 2 | 1 |
| 23 | TQ04664 | Valve | 1 |
| 24 | TQ04665 | Conical spring | 1 |
| 25 | TQ10236 | Reducer bushing M16 x Rc 3/8" | 1 |
| 26 | 59 05 72 | Piston (TP00395) | 1 |
| 27 | CP21603 | O ring | 1 |
| 28 | TQ11251 | Rear bolt | 1 |
| 29 | TQ10238 | Spring 2.6 x 14.3 x 24 | 1 |
| 30 | TQ11250 | Rear cap | 1 |
| acc | TQ02350 | Bushing R 3/8" x NPT 3/8" | 1 |
| acc | TQ03262 | Hose nipple R 3/8" x 3/8" | 1 |
| acc | 59 04 69 | Needle ø 4 x 180 mm | 14 |
| acc | 59 04 78 | Needle supporter ø 4 mm (TP01462) | 1 |

Remark: No.1 includes No. 2, 3 and 4.
acc denotes accessory.

Conversion Table of Force

| N | kgf | lbf |
|--------|---------|---------|
| 1 | 0.1020 | 0.2248 |
| 9.807 | 1 | 2.205 |
| 9.448 | 0.4536 | 1 |
| 0.1383 | 0.01410 | 0.03108 |

Conversion Table of Pressure

| MPa | kgf/cm ² | lbf/in ² (PSI) |
|----------|---------------------|---------------------------|
| 1 | 10.20 | 145.0 |
| 0.09807 | 1 | 14.22 |
| 0.006895 | 0.07031 | 1 |
| 0.1013 | 1.033 | 14.70 |
| 0.1333 | 1.360 | 19.34 |
| 0.003386 | 0.03453 | 0.4912 |
| 0.009806 | 0.1 | 1.422 |
| 0.022989 | 0.03048 | 0.4335 |

Anti-Vibration Plug Hose

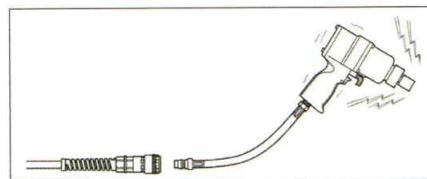
Manguera de Conexión Anti-Vibrante
耐振プラグホース 附接頭防震動軟管

Plug set with rubber hose for vibrating and impact pneumatic tools.



Stabilizes coupling life and prevents wear caused by vibration by absorbing strong shocks from vibration tools and prevents unnoticed flow restriction due to couplings wear from vibration.

Overall length is 310 mm.



Unit Per Pk.

| CODE | Model | Size | | Working Pressure MPa (kgf/cm ²) |
|----------|----------|------------|----------|--|
| | | Thread End | Plug End | |
| 59 05 26 | SHA-3-2R | R1/4 Male | 30PH | 1.5 (15) |
| 27 | SHA-3-3R | R3/8 Male | | |

Name of Mfr.: Nitto Kohki Co.,Ltd.

Applicable socket type : 20 series : 20SH, 20SM, 20SF
30 series : 30SH, 30SM, 30SF
40 series : 40SH, 40SM, 40SF

Pneumatic Needle Scalers Trelawny

Martilletas de Aguja Neumática

エア・ニードル・スケーラー 风动针束除锈机

Also known as Needle Guns and De-rusting/De-scaling pistols for removing rust, corrosion and heavy scale from all metal surfaces - needles adjust to surface contours to descale all irregular surfaces. All tools can be converted into chisel scalers for maximum versatility - two tools in one.



2B

2BPG

3BPG

Application

2B : For light duty
2BPG : For intermediate duty
3BPG : For general duty

| Unit Per Set | | | |
|---------------------------|------------------------|------------------------|------------------------|
| CODE | 59 04 81 | 59 04 82 | 59 04 83 |
| Model | 2B | 2BPG | 3BPG |
| Part No. | 121.2000 | 123.2100 | 133.3100 |
| Type | Inline | Pistol grip | |
| BPM | 3,000 | 3,000 | 2,200 |
| Air Consumption (lps/sec) | 2.6 (5.5 cfm) | 2.6 (5.5 cfm) | 3.8 (8 cfm) |
| Noise Level | | | |
| LpA dB (A) | 100.3 | 100.3 | 101.5 |
| LwA dB (A) | 113.3 | 113.3 | 114.5 |
| Vibration (AEQ) | 9.3 m/s ² | 12.3 m/s ² | 18.9 m/s ² |
| Air Inlet Size | BSP 1/4" or NPT 1/4" | | |
| Length | 375 mm (14.7") | 315 mm (12.4") | 342 mm (13.5") |
| Weight | 2.6 kg (5.8 lbs) | 2.6 kg (5.7 lbs) | 3.7 kg (8.2 lbs) |
| Needles | 51 × 2 mm 19 × 3 mm | 51 × 2 mm 19 × 3 mm | 65 × 2 mm 28 × 3 mm |

Remark : LpA dB(A) – Sound Power Level

LwA dB(A) – Sound Pressure Level

Name of Mfr. : Trelawny SPT Ltd

59

Parts List for Trelawny Pneumatic Needle Scaler**Model: 2B**

| No. | Part No. | Description | Quantity |
|-----|----------|------------------------------|----------|
| 1 | 615.3021 | Cap Valve | 1 |
| 2 | 809.0139 | O'Ring 10.8 x 1.78 Valve Cap | 1 |
| 3 | 712.3022 | Spring Valve Universal | 1 |
| 4 | 618.3022 | Valve Stem | 1 |
| 5 | 809.0089 | O'Ring Square Section V/Seat | 1 |
| 6 | 423.2021 | Valve S/A 2B | 1 |
| 7 | 716.3000 | Throttle Lever Universal | 1 |
| 8 | 813.0108 | Spring Pin 1/8" x 1" Long | 1 |
| 9 | 612.2001 | Piston 2B & 2BPG | 1 |
| 13 | 411.2002 | 2B Cylinder c/w Sleeve Ass'y | 1 |
| 17 | 809.5179 | O'Ring 36.3 x 1.78 2B | 1 |
| 24 | 610.2001 | Anvil 2B & 2BPG Scaler | 1 |
| 25 | 601.2003 | Needle Holder 3mm 2B | 1 |
| 27 | 712.2001 | Spring Return 2B Scaler | 1 |
| 28 | 416.2032 | Tube Intermediate 2B | 1 |
| 29 | 417.2032 | Tube Straight Front 2B | 1 |
| 30 | 806.0830 | Cap Head Screw - M8x30 | 1 |

Model : 2BPG

| No. | Part No. | Description | Quantity |
|-----|----------|--------------------------------|----------|
| 1 | 615.3021 | Cap Valve | 1 |
| 2 | 809.0139 | O'Ring 10.8 x 1.78 Valve Cap | 1 |
| 3 | 712.3022 | Spring Valve Universal | 1 |
| 4 | 618.3022 | Valve Stem | 1 |
| 5 | 809.0089 | O'Ring Square Section V/Seat | 1 |
| 6 | 423.3021 | Valve S/A 3B/4B & all PG range | 1 |
| 7 | 716.3000 | Throttle Lever Universal | 1 |
| 8 | 813.0108 | Spring Pin 1/8" x 1" Long | 1 |
| 9 | 612.2001 | Piston 2B & 2BPG | 1 |
| 10 | 613.2101 | Cylinder 2BPG | 1 |
| 11 | 809.0249 | O'Ring 28.3 x 1.78 1B/2BPG | 1 |
| 12 | 809.0269 | O'Ring 31.5 x 1.78 2BPG/3B | 1 |

(to be continued)

| | | | |
|----|----------|-------------------------|---|
| 14 | 425.2100 | Cover S/A 2BPG | 1 |
| 18 | 717.3101 | Grip Rubber 2BPG & 3BPG | 1 |
| 24 | 610.2001 | Anvil 2B & 2BPG Scaler | 1 |
| 25 | 601.2003 | Needle Holder 3 mm 2B | 1 |
| 27 | 712.2001 | Spring Return 2B Scaler | 1 |
| 28 | 416.2032 | Tube Intermediate 2B | 1 |
| 29 | 417.2032 | Tube Straight Front 2B | 1 |
| 30 | 806.0830 | Cap Head Screw - M8x30 | 1 |

Model : 3BPG

| No. | Part No. | Description | Quantity |
|-----|----------|--------------------------------|----------|
| 1 | 615.3021 | Cap Valve | 1 |
| 2 | 809.0139 | O'Ring 10.8 x 1.78 Valve Cap | 1 |
| 3 | 712.3022 | Spring Valve Universal | 1 |
| 4 | 618.3022 | Valve Stem | 1 |
| 5 | 809.0089 | O'Ring Square Section V/Seat | 1 |
| 6 | 423.3021 | Valve S/A 3B/4B & all PG range | 1 |
| 7 | 716.3000 | Throttle Lever Universal | 1 |
| 8 | 813.0108 | Spring Pin 1/8" x 1" Long | 1 |
| 9 | 612.3001 | Piston 3B | 1 |
| 10 | 613.3101 | Cylinder 3BPG & 3BLR | 1 |
| 11 | 809.0289 | O'Ring 34.6 x 1.78 3BPG/3BLR | 1 |
| 12 | 809.0299 | O'Ring 37.8 x 1.78 3BPG/3BLR | 1 |
| 14 | 425.3100 | Cover S/A 3BPG | 1 |
| 18 | 717.3101 | Grip Rubber 2BPG & 3BPG | 1 |
| 24 | 610.3001 | Anvil 3B & 3BPG Scaler | 1 |
| 25 | 601.3003 | Needle Holder 3 mm 3B | 1 |
| 27 | 712.3001 | Spring Return 3B Scaler | 1 |
| 28 | 416.3132 | Tube Intermediate 3BPG | 1 |
| 29 | 417.3032 | Tube Straight Front 3B | 1 |
| 30 | 806.0830 | Cap Head Screw - M8x30 | 1 |

Low-Vibration Needle Scalers

Raspadores de aguja de baja vibración

低振動ニードルスケーラー 低振动针式刻度机

The heavy duty scaler for toughest applications, ideal for removing the hardest marine growth and corrosion.



| Unit Per Set | | | |
|---------------------------|-----------------------|-----------------------|-------------------------------------|
| CODE | 59 05 18 | 59 05 00 | 59 05 10 |
| Model | VL223 | VL203 | VL303 |
| Part No. | 196.2103 | 196.2003 | 196.3003 |
| Type | In-line | Pistol Grip | |
| BPM | 2,400 | 2,400 | 3,000 |
| Air Consumption (lps/sec) | 1.89 (4 cfm) | 1.89 (4 cfm) | 4.0 (8.5 cfm) |
| Noise Level | | | |
| LpA dB (A) | LwA 90.7 | LwA 90.7 | 95.0 |
| LwA dB (A) | | | 109.5 |
| Vibration (AEQ) | 2.56 m/s ² | 2.75 m/s ² | 2.3 m/s ² |
| Air Inlet Size | BSP 1/4" or NPT 1/4" | | |
| Length | 370 mm (14.5") | 340 mm (13.4") | 370 mm (14.5") |
| Weight | 2.35 kg (5.18 lbs) | 2.7 kg (6.0 lbs) | 3.5 kg (7.7 lbs) |
| Needles | 19 × 3 mm | 19 × 3 mm | 65 × 2 mm 28 × 3 mm 19 × 4 mm |

Remark : LpA dB(A) – Sound Power Level

LwA dB(A) – Sound Pressure Level

Name of Mfr. : Trelawny SPT Ltd

Parts List

**for Trelawny Heavy Duty Needle Scaler
(Low Vibration)**

Model: VL223

| No. | Part No. | Description | Quantity |
|-----|-----------|--------------------------------|----------|
| 1 | 615.3021 | Cap Valve | 1 |
| 2 | 809.0139 | O'Ring 10.8 x 1.78 Valve Cap | 1 |
| 3 | 712.3022 | Spring Valve Universal | 1 |
| 4 | 618.3022 | Valve Stem | 1 |
| 5 | 809.0089 | O'Ring Square Section V/Seat | 1 |
| 7 | 716.3000 | Throttle Lever Universal | 1 |
| 8 | 813.0108 | Spring Pin 1/8" x 1" Long | 1 |
| 10 | 423.2023 | VL223 Valve Body/Cover | 1 |
| 12 | 652.2003 | Guide Plate VL203/223 | 1 |
| 13 | 829.2003 | Guide Plate Seal | 1 |
| 14 | 809.0299 | O'Ring 37.8 x 1.78 3BPG/3BLR | 1 |
| 15 | 428.2003 | Cylinder VL203 | 1 |
| 17 | 816.3003 | 6 mm dia Plastic Ball | 1 |
| 18 | 809.0080 | O'Ring 4.47 x 1.78 VR 3BPG | 1 |
| 19 | 809.2004 | Piston Cushion VL203/223 50 mm | 1 |
| 22 | 622.2031 | Intermediate Tube VL203/223 | 1 |
| 23 | 721.2003 | Int/Tube Outer Sleeve (Black) | 1 |
| 25 | 809.0299 | O'Ring 37.8 x 1.78 3BPG/3BLR | 1 |
| 26 | 612.2003 | Piston VL203/223 | 1 |
| 28 | 636.3003 | Valve Pin | 1 |
| 29 | 829.2002 | Piston Ring VL203 | 1 |
| 30 | 601.2030 | Needle Holder 3 mm VL203/223 | 1 |
| 32 | 712.2003 | Front Spring VL203/223 | 1 |
| 33 | 620.2003 | Front Tube Insert | 1 |
| 33a | 620.2003A | Front Tube Spacer | 1 |
| 34 | 622.2030 | Front Tube VL203/223 | 1 |
| 35 | 809.3005 | Cylinder Stem Reaction Ring | 1 |

Model : VL203

| No. | Part No. | Description | Quantity |
|-----|-----------|--------------------------------|----------|
| 1 | 615.3021 | Cap Valve | 1 |
| 2 | 809.0139 | O'Ring 10.8 x 1.78 Valve Cap | 1 |
| 3 | 712.3022 | Spring Valve Universal | 1 |
| 4 | 618.3022 | Valve Stem | 1 |
| 5 | 809.0089 | O'Ring Square Section V/Seat | 1 |
| 6 | 423.3021 | Valve S/A 3B/4B & all PG range | 1 |
| 7 | 716.3000 | Throttle Lever Universal | 1 |
| 8 | 813.0108 | Spring Pin 1/8" x 1" Long | 1 |
| 10 | 425.2003 | Cover Assembly VL203 | 1 |
| 12 | 652.2003 | Guide Plate VL203/223 | 1 |
| 13 | 829.2003 | Guide Plate Seal | 1 |
| 14 | 809.0299 | O'Ring 37.8 x 1.78 3BPG/3BLR | 1 |
| 15 | 428.2003 | Cylinder VL203 | 1 |
| 17 | 816.3003 | 6mm dia Plastic Ball | 1 |
| 18 | 809.0080 | O'Ring 4.47 x 1.78 VR 3BPG | 1 |
| 19 | 809.2004 | Piston Cushion VL203/223 50 mm | 1 |
| 22 | 622.2031 | Intermediate Tube VL203/223 | 1 |
| 23 | 721.2003 | Int/Tube Outer Sleeve (Black) | 1 |
| 25 | 809.0299 | O'Ring 37.8 x 1.78 3BPG/3BLR | 1 |
| 26 | 612.2003 | Piston VL203/223 | 1 |
| 28 | 636.3003 | Valve Pin | 1 |
| 29 | 829.2002 | Piston Ring VL203 | 1 |
| 30 | 601.2030 | Needle Holder 3 mm VL203/223 | 1 |
| 32 | 712.2003 | Front Spring VL203/223 | 1 |
| 33 | 620.2003 | Front Tube Insert | 1 |
| 33A | 620.2003A | Front Tube Spacer | 1 |
| 34 | 622.2030 | Front Tube VL203/223 | 1 |
| 35 | 809.3005 | Cylinder Stem Reaction Ring | 1 |

Model : VL303

| No. | Part No. | Description | Quantity |
|-----|-----------|--------------------------------|----------|
| 1 | 615.3021 | Cap Valve | 1 |
| 2 | 809.0139 | O'Ring 10.8 x 1.78 Valve Cap | 1 |
| 3 | 712.3022 | Spring Valve Universal | 1 |
| 4 | 618.3022 | Valve Stem | 1 |
| 5 | 809.0089 | O'Ring Square Section V/Seat | 1 |
| 6 | 423.3021 | Valve S/A 3B/4B & all PG range | 1 |
| 7 | 716.3000 | Throttle Lever Universal | 1 |
| 8 | 813.0108 | Spring Pin 1/8" x 1" Long | 1 |
| 9 | 717.3050 | Grip 2/3BPG Trelawny Logo | 1 |
| 10 | 425.3003 | Cover Assembly VL303 | 1 |
| 12 | 652.3003 | Guide Plate | 1 |
| 13 | 829.3003 | Guide Plate Seal | 1 |
| 14 | 809.0299 | O'Ring 37.8 x 1.78 3BPG | 1 |
| 15 | 428.3003A | VL303 Cyl Kit inc 729.3003 | 1 |
| 17 | 816.3003 | 6 mm dia Plastic Ball | 1 |
| 18 | 809.0080 | O'Ring 4.47 x 1.78 VR 3BPG | 1 |
| 19 | 809.3004 | Piston Cushion 85 mm long | 1 |
| 22 | 622.3031 | Intermediate Tube | 1 |
| 23 | 721.3003 | Intermediate Tube Outer Sleeve | 1 |
| 24 | 814.3003 | Circlip (Spring Seat Location) | 1 |
| 25 | 809.0299 | O'Ring 37.8 x 1.78 3BPG | 1 |
| 26 | 612.3003 | Piston VL303 | 1 |
| 28 | 636.3003 | Valve Pin | 1 |
| 29 | 829.3002 | Piston Ring | 1 |
| 30 | 601.3030 | Needle Holder 3 mm VL303 | 1 |
| 32 | 712.3003 | Front Spring | 1 |
| 33 | 620.3003 | Front Tube Insert VL303 | 1 |
| 34 | 622.3030 | Front Tube VL303 | 1 |
| 35 | 729.3003 | Cylinder Stem Reaction Ring | 1 |

Spare Needles
for Pneumatic Needle Scaler

Agujas de Repuesto para Martilleta de Aguja Neumática
ニードルスケーラー用スペアニードル
气动针束除锈机备用针

| CODE | Size | Shape of Tip | Unit Per Pcs. |
|----------|------|---------------------------------------|---------------|
| 59 04 86 | 2 mm | Flat tip | |
| 59 04 87 | 3 mm | Chisel tip Pointed tip Flat tip | |
| 59 04 92 | 4 mm | Flat tip | |

Name of Mfr.: Trelawny SPT Ltd.

Needle Supporters
for Pneumatic Needle Scaler

Soportes de Aguja para Martillata de Aguja Neumática
ニードルスケーラー用ニードルサポーター
风动针束除锈机用针架

| CODE | Size | For Model | Part No. | Unit Per Pcs. |
|----------|------|-----------|----------|---------------|
| 59 05 01 | 2 mm | 2 B | 601/2002 | |
| 02 | | 2 BPG | 601/2002 | |
| 03 | | 3 BPG | 601/3002 | |
| 59 05 04 | 3 mm | 2 B | 601/2003 | |
| 05 | | 2 BPG | 601/2003 | |
| 06 | | 3 BPG | 601/3003 | |
| 59 05 08 | 4 mm | 3 BPG | 601/3004 | |

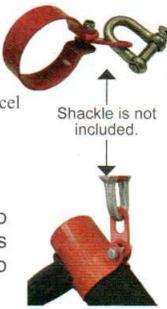
Name of Mfr.: Trelawny SPT Ltd.

Fall Arresters

for Trelawny Needle Scaler
and Chisel Scaler

Sujeción para martilletas de aguja y martilletas de cincel
スケーラー用落下防止装置
除锈工具跌落 / 損坏防止装置

Developed for securing the scaler onto a belt or safety cable ensuring the tool is not dropped, damaged, or causes harm to other members of the crew.



Unit Per PC.

| CODE | For Needle/Chisel Scaler | Part No. |
|----------|--------------------------|----------|
| 59 05 98 | VL203 / VL223 | 720.2003 |
| 99 | VL303 | 720.3003 |

Name of Mfr.: Trelawny SPT Limited.

Pneumatic Hand Scalers

Manuales Neumáticos エアハンドスケーラー 手用风动除锈机

Lightweight and ideal for removing rust, mill scale, old paint, etc. Please note that the tools for the pneumatic hand scaler listed below are included with model 59 05 12, but not included with model 59 05 11.



59 05 11



59 05 12

How to order: CODE

Hand scaler, pneumatic, NO LOAD SPEED R.P.M., MODEL

Unit Per Set

| CODE | 59 05 11 | 59 05 12 |
|-------------------------|-------------|--------------|
| Model | YBD-2X | KC-20 |
| Free Speed | 3,000 | 5,000 |
| No Load Air Consumption | 0.7 m³/min. | |
| Air Hose Size | 12.7 mm | |
| Air Pressure | 6 kgf/cm² | |
| Overall Length | 318 mm | 400 mm |
| Weight | 2.5 kg | 5 kg |
| Name of Mfr. | Yokota | Kobe Cleaner |

Tools for Pneumatic Hand Scaler

Herramientas para Descarrilladora Neumática

エアハンドスケーラー用アクセサリー

气动手提式除锈机用品



Wire Wheel Brush



LG Tool Assembly



HH Tool Assembly



Hammer Head



Grind Stone

| CODE | Description | Unit |
|------------------------------------|------------------|------|
| For Model YBD-2X (59 05 11) | | |
| 59 05 15 | Wire wheel brush | Pc. |
| 16 | LG tool assembly | Set |
| 17 | HH tool assembly | " |
| For Model KC-20 (59 05 12) | | |
| 59 05 21 | Wire wheel brush | Pc. |
| 22 | LG tool assembly | Set |
| 23 | HD tool assembly | " |
| 24 | Hammer head | " |
| 25 | Grind stone | Pc. |

Pneumatic Needle/Chisel Scalers

Rustibus® 20

Decapadora de Aguja/Cincel Rustibus 20
エアー式ニードルチゼルスケーラー[®]
氣動除鏽針 / 鑿

This handheld, pneumatic de-scaling machine is ideal for use on those awkward hard to reach corners, pipe joints and those few other areas that the other scaling tools have difficulty reaching. Equipped with a 18 cm (7") Flat chisel and fitted with 13 cm (5") needles. Two machines in one.



Unit Per Set

| CODE | 59 05 28 |
|-----------------|--|
| Model | Rustibus® 20 |
| Stroke | 2.85 cm (1-1/8") |
| BPM | 4,600 |
| Air Consumption | 339.8 Cu.Ltr/min (12 CFM) |
| Bore | 2.54 cm (1") |
| Inlet | 0.635 NPT (1/4" NPT) |
| Min Hose Size | 0.79 cmb (5/16") |
| Length | 43 cm w/13 cm needles (17" w/5" needles) 48 cm w/18 cm needles (19" w/7" needles) |
| Weight | 2.9 kg (6.4 lbs) |

Name of Mfr.: Rustibus®

Vacuum Systems for Scaler

Rustibus® 20

Sistema de Vacio para Limpiadores Rustibus 20

スケーラー用バキュームシステム

刮除器用真空系統

Available for the Rustibus® 20 Needle / Chisel descaler has a flexible nose piece that allows the user to get into every corner. This vacuum system also allows the tool to exhaust into the vacuum stream. Requires only 87 CFM / 2.5 M³ vacuum flow and 90 psi / 6.2 bar operating pressure.



N.B. To use this vacuum system, your Rustibus® 20 needs to be fitted with 18 cm (7") needles. Includes: vacuum attachment, connection hoses and clamps.

| | | |
|----------|--|-----|
| 59 05 29 | Vacuum system, Rustibus® 20, item no. 020-00VT for needle/chisel scaler | Set |
|----------|--|-----|

Pneumatic Flux Chippers

Cincelador Recto Neumático

エアフラックスチッパー 风动焊剂切片机

For scaling and chipping
rust and cleaning metal
surfaces.

Unit Per Set

| CODE | 59 05 31 |
|----------------------|---|
| Model | CH-24 |
| Stroke Speed | 4,000/min |
| Rated Air Pressure | 0.6 MPa (6 kgf/cm ²) |
| Air Consumption | 0.2 m ³ /min |
| Overall Length | 184 mm |
| Weight | 1.7 kg |
| Standard Accessories | * 1 pc Curved flat chisel (59 05 33) * 1 pc Reducer R 3/8" x NPT3/8" * 1 pc Hose nipple R 3/8" x 3/8" |

Name of Mfr.: Nitto Kohki Co.,Ltd.

Spare Chisels for Pneumatic Flux Chipper

Cortafrio de Recambio para Descantilladora Neumática

エアフラックスチッパー用チゼル

气动焊剂剥离备用品



Curved

Straight

Flat

Unit Per Pcs.

| CODE | Type | Size Blade Width x Length |
|----------|----------------------|------------------------------|
| 59 05 33 | Curved flat chisel | 25 x 155 mm |
| 34 | Straight flat chisel | 12.7 x 165 mm |
| 35 | Flat chisel | 25 x 155 mm |

Hand-Held Deck Scalers

Escaladoras manuales de cubiertas

ハンドスケール剥離工具 手动剥线工具

Specialist surface preparation tool designed for applications where open blasting may not be possible. A fast economical way of effectively carrying out surface preparation in small or remote areas. Ideal for preparing flat or large vertical surfaces such as beams, girders, and tanks. When fitted with abrasive flaps this tool can achieve up to a 100-micron anchor profile, perfect for the reapplication of coatings.



with Flaps

with Cutters

Unit Per Set

| CODE | Model | Part No. | Production Rate/Hour M ² (ft ²) | Average Cutter Life Hours | Weight kg (lbs) |
|--------------------------------|-----------------|----------|--|---------------------------|-----------------|
| Air Powered | | | | | |
| 59 22 51 | 2" with flaps | 194.0205 | 17.3 (186.3) | 40 | 3.4 (7.5) |
| 52 | 4" with flaps | 194.0405 | 34.6 (372.6) | 40 | 4.1 (9.0) |
| 53 | 2" with cutters | 194.C205 | 10.6 (113.9) | 15 | 5.2 (11.5) |
| 54 | 4" with cutters | 194.C405 | 21.2 (227.8) | 15 | 6.4 (14.0) |
| Electric Powered - 230V | | | | | |
| 59 22 55 | 2" with cutters | 195.C221 | 17.3 (186.3) | 40 | 4.4 (9.7) |

Name of Mfr.: Trelawny SPT Ltd.

Replacement Hub Assemblies and Heads

Cabezas de Repuesto para Herramienta Preparativa para Despegar

剥離工具用交換ヘッド 錘鍛除锈工具交換頭

Hubs



Hub for Cutters



Hub for C Flaps

Unit Per Pcs.

| CODE | For | Part No. |
|----------|---------------------|----------|
| 59 22 91 | 2" (50 mm) cutters | 438.0209 |
| | 4" (100 mm) cutters | 438.0409 |
| 59 22 93 | 2" (50 mm) C flaps | 438.0205 |
| | 4" (100 mm) C flaps | 438.0405 |

Heads



Star Cutter



Beam Cutter



C Flap

← Heavier Scaling Lighter Burnishing →

Unit Per Pcs.

| CODE | Item | Part No. | Applications |
|----------|-------------|----------|--|
| 59 22 56 | Star cutter | 312.S200 | Aggressive removal of thick coatings. |
| 57 | Beam cutter | 312.R200 | Removal of light coatings, and surface rust. |
| 58 | C flap | 312.MRPC | Removal of light paint and rust. |

Name of mfr.: Trelawny SPT Ltd.

Pneumatic Belt Sanders

Lijadora Neumática de Cinta

エアーベルトサンダー 气动砂带磨光机

Compact and lightweight belt sander to be suitable for sanding jobs in narrow spaces, recessed corners or on curved surfaces. Available 3 models of belt width: 10 mm, 20 mm and 30 mm, and in addition to above models extra light model of 10 mm belt width is also available.



Unit Per Set

| CODE | 59 03 92 | 59 03 93 | 59 03 94 |
|---|----------|----------|----------|
| Model | B-10CL | B-20CL | B-30CL |
| Belt Width | 10 mm | 20 mm | 30 mm |
| Air Consumption m ³ /min | 0.4 | 0.48 | 0.82 |
| Motor Free Speed min ⁻¹ (rpm) | 17,000 | 18,000 | 15,000 |
| Belt Speed m/min | 1,120 | 2,770 | 2,310 |
| Hose Size | | 1/4 | |
| Rated Air Pressure MPa (kgf/cm ²) | | 0.6 (6) | |
| Weight kg | 0.9 | 1.6 | 2.4 |

Standard Accessories

| | |
|--------------|----------------------------------|
| Model B-10CL | 2 pcs Abrasive Belt Z#60 × 10 mm |
| | 1 pc Abrasive Belt Z#80 × 10 mm |
| | 1 pc Abrasive Belt Z#100 × 10 mm |
| | 1 pc Abrasive Belt Z#120 × 10 mm |
| | 1 pc 1.5 mm Hex. Wrench Key |
| | 1 pc 4 mm Hex. Wrench Key |
| | 1 pc Bushing R 1/4 × NPT 1/4 |
| Model B-20CL | 2 pcs Abrasive Belt Z#60 × 20 mm |
| | 1 pc Abrasive Belt Z#80 × 20 mm |
| | 1 pc Abrasive Belt Z#100 × 20 mm |
| | 1 pc Abrasive Belt Z#120 × 20 mm |
| | 1 pc 2.5 mm Hex. Wrench Key |
| | 1 pc 4 mm Hex. Wrench Key |
| | 1 pc Bushing R 1/4 × NPT 1/4 |
| Model B-30CL | 1 pc Convex Shoe |
| | 2 pcs Abrasive Belt Z#60 × 30 mm |
| | 1 pc Abrasive Belt Z#80 × 30 mm |
| | 1 pc Abrasive Belt Z#100 × 30 mm |
| | 1 pc 5 mm Hex. Wrench Key |
| | 1 pc Bushing R 1/4 × NPT 1/4 |
| | 1 pc Sub Handle Ass'y |

| Unit Per Set | | |
|------------------------------|---|--------------------------------|
| CODE | 59 05 41 | 59 05 42 |
| Model | FS-50A | FS-100C |
| Pad Size | 75 × 82 mm | 110 × 100 mm |
| Sand Paper Size | 70 × 114 mm | 114 × 140 mm |
| Rated Air Pressure | 0.6 MPa (6 kgf/cm ²) | |
| Motor Free Speed | 15,000 min ⁻¹ (rpm) | 20,000 min ⁻¹ (rpm) |
| Air Consumption (No load) | 0.14 m ³ /min | 0.2 m ³ /min |
| Weight | 0.5 kg | |
| Standard Accessories | - 5 sheets each Sanding paper #180, #240 - 1 set Air hose assembly - 1 pc Bushing R 1/4 x NPT 1/4 | |

Name of Mfr.: Nitto Kohki Co.,Ltd.

Sanding Paper for Pneumatic Orbital Sander

Papel de lija para Lijadora Orbital Neumática
エア研磨機用サンドペーパー 空气式磨砂机用磨砂纸



Unit Per Pkt.

| CODE | Grit | Sht/Pkt | CODE | Grit | Sht/Pkt |
|----------|------|---------|----------|------|---------|
| 59 05 43 | 100 | | 59 05 47 | 240 | |
| 44 | 120 | | 48 | 280 | |
| 45 | 150 | 200's | 49 | 320 | |
| 46 | 180 | | | | 200's |

Pneumatic Needle Scalers

Martilletas de Aguja Neumática
エアー・ニードル・スケーラー 气动针式除垢仪

Unique needle scaler with integrated anti-vibration system in order to protect the operators hands and arms but not the rust. Optimal weight distribution and fully insulated handle and pistol body.



Unit Per Pkt.

| CODE | 59 05 51 |
|---------------------------|-----------------------|
| Model | NP23K (#700722) |
| Air Hose Size | 1/4" |
| Air Consumption | 100 l/min. (3.5 cfm) |
| Air Pressure (Max.) | 7 bar (100 psi) |
| Vibration Value on Handle | 8.91 m/s ² |
| Sound Pressure Level | <100.7 dB (A) |
| Acoustic Power Level | <110.0 dB (A) |
| Needles | Ø3 mm × 19 pcs |
| Weight | 2.2 kg (4.9 lbs) |

Name of Mfr.: Von Arx EOOD

Standard Accessories

| | |
|--------------|----------------------------------|
| Model BB-10B | 1 pc Abrasive Belt Z#100 × 10 mm |
| | 1 pc Abrasive Belt Z#120 × 10 mm |
| | 1 pc Abrasive Belt Z#180 × 10 mm |
| | 1 pc Abrasive Belt Z#240 × 10 mm |
| | 1 pc 1.5 mm Hex. Wrench Key |
| | 1 pc Bushing R 1/4 × NPT 1/4 |
| | 1 pc Offset Bracket Ass'y |
| Model BB-20 | 1 pc Abrasive Belt Z#60 × 20 mm |
| | 1 pc Abrasive Belt Z#120 × 20 mm |
| | 1 pc Abrasive Belt Z#240 × 20 mm |
| | 1 pc 2.5 mm Hex. Wrench Key |
| | 1 pc 3 mm Hex. Wrench Key |
| | 1 pc Shoe |
| | 1 pc Dust Cover |
| | 1 pc Bushing R 1/4 × NPT 1/4 |

Pneumatic Orbital Sanders

Lijadoras Orbital Neumáticas エア研磨機 空气式磨砂机

Lightweight and handy palm sander makes working easy in corners and other tight spots.



Pneumatic Chisel Hammers

Martillo-Buril Neumático エアー・チゼル・ハンマー 风动式凿眼机

Low vibration, but high power pneumatic chisel hammer. Various types of spare chisel are available in separate order.



| CODE | 59 05 52 | Unit Per Pcs. |
|---------------------------|------------------------|---------------|
| Model | MH23K (#706092) | |
| Air Hose Size | 1/4" | |
| Air Consumption | 100 l/min. (3.5 cfm) | |
| Air Pressure (Max.) | 7 bar (100 psi) | |
| Vibration value on handle | 12.79 m/s ² | |
| Sound pressure level | < 98.2 dB (A) | |
| Acoustic Power Level | ≤ 106.2 dB (A) | |
| Chisel (Flat) | 1 pc. (W: 24 mm) | |
| Weight | 2.3 kg (5.1 lbs) | |

Name of Mfr.: Von Arx EOOD

Spare Chisels

for Pneumatic Chisel Hammer MH23K

Cortafrio de Recambio para Martillo Neumático

エアーチゼルハンマー用チゼル

风动式凿眼机用备用凿子



| CODE | Description | S/No. | No. | Unit Per Pcs. |
|----------|---------------------------------------|--------|-----|---------------|
| 59 05 53 | Flat chisel W: 40 mm × 520 mm | 700207 | 1 | |
| 59 05 55 | Flat chisel W: 40 mm × 250 mm | 700194 | 2 | |
| 59 19 16 | Flat chisel W: 24 mm × 190 mm | 700193 | 3 | |
| 59 05 56 | Pointed chisel 290 mm | 700196 | 4 | |
| 59 05 57 | Flat chisel W: 100 mm × 180 mm | 700205 | 5 | |
| 59 05 58 | Flat chisel W: 60 mm × 300 mm | 708582 | 6 | |
| 59 | Flat chisel cranked 24 mm × 260 mm | 700195 | 7 | |
| 61 | Carpet removal chisel 210 mm | 706867 | 8 | |
| 62 | Pitching tool holder, hexagonal shaft | 700204 | 9 | |
| 63 | Pitching tool holder, round shaft | 700198 | 10 | |
| 59 05 64 | Pitching tool 3x3 | 700199 | 11 | |
| 65 | Pitching tool 4x4 | 700200 | 12 | |
| 66 | Pitching tool 5x5 | 700201 | 13 | |
| 67 | Pitching tool 7x7 | 700202 | 14 | |

Name of Mfr.: Von Arx EOOD

Pneumatic Chisel Scalers

Trelawny

Martilletas de Aguja Neumática

エアー・チゼル・スケーラー 风动凿式除锈机

Provides a thorough and effective means of removing coatings, corrosion and other accumulated materials. These scalers will work on almost any surface, especially irregular ones that are otherwise hard to prepare.



Application

| | |
|------------------------------|-----------------------|
| 2B : For light duty | 3BPG : For heavy duty |
| 2BPG : For intermediate duty | |

| CODE | 59 05 81 | 59 05 82 | 59 05 83 | Unit Per Set |
|---------------------------|-----------------------|-----------------------|-----------------------|--------------|
| Model | 2B | 2BPG | 3BPG | |
| Part No. | 124.2200 | 125.2300 | 135.3300 | |
| Type | Inline | Pistol grip | | |
| BPM | 3,000 | 3,000 | 2,200 | |
| Air Consumption (lps/sec) | 2.6 (5.5 cfm) | 2.6 (5.5 cfm) | 3.8 (8 cfm) | |
| Noise Level | | | | |
| LpA dB (A) | 85.6 | 85.6 | 92.1 | |
| LwA dB (A) | 98.9 | 98.9 | 105.1 | |
| Vibration (AEQ) | 17.4 m/s ² | 22.4 m/s ² | 25.6 m/s ² | |
| Air Inlet Size | BSP 1/4" or NPT 1/4" | | | |
| Length | 343 mm (13.5") | 260 mm (10.2") | 339 mm (13.4") | |
| Weight | 2.0 kg (4.4 lbs) | 2.0 kg (4.4 lbs) | 2.6 kg (5.8 lbs) | |

Remark : LpA dB(A) – Sound Power Level

LwA dB(A) – Sound Pressure Level

Name of Mfr. : Trelawny SPT Ltd

Model: 2B

| No. | Part No. | Description | Quantity |
|-----|----------|---|----------|
| 1 | 615.3021 | Cap Valve | 1 |
| 2 | 809.0139 | O'Ring 10.8x1.78 Valve Cap | 1 |
| 3 | 712.3022 | Spring Valve Universal | 1 |
| 4 | 618.3022 | Valve Stem | 1 |
| 5 | 809.0089 | O'Ring Square Section V/Seat | 1 |
| 6 | 423.2021 | Valve S/A 2B | 1 |
| 7 | 716.3000 | Throttle Lever Universal | 1 |
| 8 | 813.0108 | Spring Pin 1/8" x 1" Long | 1 |
| 9 | 612.2001 | Piston 2B & 2BPG | 1 |
| 13 | 411.2002 | 2B Cylinder c/w Sleeve Assy | 1 |
| 17 | 809.5179 | O'Ring 36.3 x 1.78 2B | 1 |
| 30 | 806.0830 | Cap Head Screw - M8x30 | 1 |
| 31 | 419.2241 | Chisel Holder 1/2" Square | 1 |
| 32 | 704.1101 | Chisel 1/2" Square 7" Long x 3/4" Blade | 1 |

Model : 2BPG

| No. | Part No. | Description | Quantity |
|-----|----------|---|----------|
| 1 | 615.3021 | Cap Valve | 1 |
| 2 | 809.0139 | O'Ring 10.8 x 1.78 Valve Cap | 1 |
| 3 | 712.3022 | Spring Valve Universal | 1 |
| 4 | 618.3022 | Valve Stem | 1 |
| 5 | 809.0089 | O'Ring Square Section V/Seat | 1 |
| 6 | 423.3021 | Valve S/A 3B/4B & all PG range | 1 |
| 7 | 716.3000 | Throttle Lever Universal | 1 |
| 8 | 813.0108 | Spring Pin 1/8" x 1" Long | 1 |
| 9 | 612.2001 | Piston 2B & 2BPG | 1 |
| 10 | 613.2101 | Cylinder 2BPG | 1 |
| 11 | 809.0249 | O'Ring 28.3 x 1.78 1B/2BPG | 1 |
| 12 | 809.0269 | O'Ring 31.5 x 1.78 2BPG/3B | 1 |
| 14 | 425.2100 | Cover S/A 2BPG | 1 |
| 18 | 717.3101 | Grip Rubber 2BPG & 3BPG | 1 |
| 30 | 806.0830 | Cap Head Screw - M8x30 | 1 |
| 31 | 419.2241 | Chisel Holder 1/2" Square | 1 |
| 32 | 704.1101 | Chisel 1/2" Square 7" Long x 3/4" Blade | 1 |

Model : 3BPG

| No. | Part No. | Description | Quantity |
|-----|----------|---|----------|
| 1 | 615.3021 | Cap Valve | 1 |
| 2 | 809.0139 | O'Ring 10.8 x 1.78 Valve Cap | 1 |
| 3 | 712.3022 | Spring Valve Universal | 1 |
| 4 | 618.3022 | Valve Stem | 1 |
| 5 | 809.0089 | O'Ring Square Section V/Seat | 1 |
| 6 | 423.3021 | Valve S/A 3B/4B & all PG range | 1 |
| 7 | 716.3000 | Throttle Lever Universal | 1 |
| 8 | 813.0108 | Spring Pin 1/8" x 1" Long | 1 |
| 9 | 612.3001 | Piston 3B | 1 |
| 10 | 613.3101 | Cylinder 3BPG & 3BLR | 1 |
| 11 | 809.0289 | O'Ring 34.6 x 1.78 3BPG/3BLR | 1 |
| 12 | 809.0299 | O'Ring 37.8 x 1.78 3BPG/3BLR | 1 |
| 14 | 425.3100 | Cover S/A 3BPG | 1 |
| 18 | 717.3101 | Grip Rubber 2BPG & 3BPG | 1 |
| 30 | 806.0830 | Cap Head Screw - M8 x 30 | 1 |
| 31 | 419.3341 | Chisel Holder 1/2" Square | 1 |
| 32 | 704.1101 | Chisel 1/2" Square 7" Long x 3/4" Blade | 1 |

Low-Vibration Chisel Scalers

Escaladores de cincel de baja vibración

低振動チゼル・スケーラー 低振动凿鳞器

Heavy duty scaler for toughest applications, ideal for removing paint, coatings and corrosion.



Unit Per Set

| CODE | 59 05 19 | 59 05 13 | 59 05 14 |
|---------------------------|-----------------------|-----------------------|----------------------|
| Model | VL223 | VL203 | VL303 |
| Part No. | 196.2213 | 196.2203 | 196.3203 |
| Type | In-line | Pistol Grip | |
| BPM | 2,400 | 2,400 | 3,000 |
| Air Consumption (lps/sec) | 1.89 (4 cfm) | 1.89 (4 cfm) | 2.6 (5.5 cfm) |
| Noise Level | | | |
| LpA dB (A) | | | 86.7 |
| LwA dB (A) | LwA: 76.3 | LwA: 76.3 | 78.2 |
| Vibration (AEQ) | 3.69 m/s ² | 3.33 m/s ² | 3.7 m/s ² |
| Air Inlet Size | BSP 1/4" or NPT 1/4" | | |
| Length | 435 mm (17.1") | 395 mm (15.5") | 440 mm (17.3") |
| Weight | 2.95 kg (6.5 lbs) | 3.2 kg (7.05 lbs) | 4.0 kg (8.8 lbs) |

Remark: LpA dB(A) = Sound Power Level
LwA dB(A) = Sound Pressure Level

Name of Mfr.: Trelawny SPT Ltd

Model: VL223

| No. | Part No. | Description | Quantity |
|-----|----------|--------------------------------|----------|
| 1 | 615.3021 | Cap Valve | 1 |
| 2 | 809.0139 | O'Ring 10.8 x 1.78 Valve Cap | 1 |
| 3 | 712.3022 | Spring Valve Universal | 1 |
| 4 | 618.3022 | Valve Stem | 1 |
| 5 | 809.0089 | O'Ring Square Section V/Seat | 1 |
| 7 | 716.3000 | Throttle Lever Universal | 1 |
| 8 | 813.0108 | Spring Pin 1/8" x 1" Long | 1 |
| 10 | 423.2023 | VL223 Valve Body/Cover | 1 |
| 12 | 652.3003 | Guide Plate VL203/223 | 1 |
| 13 | 829.2003 | Guide Plate Seal | 1 |
| 14 | 809.0299 | O'Ring 37.8 x 1.78 3BPG/3BLR | 1 |
| 15 | 428.2003 | Cylinder VL203 | 1 |
| 17 | 816.3003 | 6mm dia Plastic Ball | 1 |
| 18 | 809.0080 | O'Ring 4.47 x 1.78 VR 3BPG | 1 |
| 19 | 809.2004 | Piston Cushion VL203/223 50 mm | 1 |
| 22 | 622.2031 | Intermediate Tube VL203/223 | 1 |
| 23 | 721.2003 | Int/Tube Outer Sleeve (Black) | 1 |
| 26 | 612.2003 | Piston VL203/223 | 1 |

(to be continued)

| No. | Part No. | Description | Quantity |
|-----|----------|--------------------------------------|----------|
| 28 | 636.3003 | Valve Pin | 1 |
| 29 | 829.2002 | Piston Ring VL203 | 1 |
| 32 | 712.2003 | Front Spring VL203/223 | 1 |
| 35 | 809.3005 | Cylinder Stem Reaction Ring | 1 |
| 36 | 610.2003 | Anvil | 1 |
| 37 | 419.2003 | Chisel Holder 1/2" Square | 1 |
| 38 | 704.3101 | Chisel 1/2" Sq Shank 7" x 3/4" Blade | 1 |

Model : VL203

| No. | Part No. | Description | Quantity |
|-----|----------|--------------------------------------|----------|
| 1 | 615.3021 | Cap Valve | 1 |
| 2 | 809.0139 | O'Ring 10.8 x 1.78 Valve Cap | 1 |
| 3 | 712.3022 | Spring Valve Universal | 1 |
| 4 | 618.3022 | Valve Stem | 1 |
| 5 | 809.0089 | O'Ring Square Section V/Seat | 1 |
| 6 | 423.3021 | Valve S/A 3B/4B & all PG range | 1 |
| 7 | 716.3000 | Throttle Lever Universal | 1 |
| 8 | 813.0108 | Spring Pin 1/8" x 1" Long | 1 |
| 9 | 717.3050 | Grip 2/3BPG Trelawny Logo | 1 |
| 10 | 425.2003 | Cover Assembly VL203 | 1 |
| 12 | 652.2003 | Guide Plate VL203/223 | 1 |
| 13 | 829.2003 | Guide Plate Seal | 1 |
| 14 | 809.0299 | O'Ring 37.8 x 1.78 3BPG/3BLR | 1 |
| 15 | 428.2003 | Cylinder VL203 | 1 |
| 17 | 816.3003 | 6mm dia Plastic Ball | 1 |
| 18 | 809.0080 | O'Ring 4.47 x 1.78 VR 3BPG | 1 |
| 19 | 809.3004 | Piston Cushion 85 mm long | 1 |
| 22 | 622.3031 | Intermediate Tube | 1 |
| 23 | 721.3003 | Intermediate Tube Outer Sleeve | 1 |
| 24 | 814.3003 | Circlip (Spring Seat Location) | 1 |
| 25 | 809.0299 | O'Ring 37.8 x 1.78 3BPG/3BLR | 1 |
| 26 | 612.3003 | Piston VL303 | 1 |
| 28 | 636.3003 | Valve Pin | 1 |
| 29 | 829.3002 | Piston Ring | 1 |
| 32 | 712.3003 | Front Spring | 1 |
| 35 | 729.3003 | Cylinder Stem Reaction Ring | 1 |
| 36 | 610.3003 | Anvil | 1 |
| 37 | 419.3003 | Chisel Holder 1/2" Square | 1 |
| 38 | 704.3101 | Chisel 1/2" Sq Shank 7" x 3/4" Blade | 1 |

Model : VL303

| No. | Part No. | Description | Quantity |
|-----|-----------|--------------------------------------|----------|
| 1 | 615.3021 | Cap Valve | 1 |
| 2 | 809.0139 | O'Ring 10.8 x 1.78 Valve Cap | 1 |
| 3 | 712.3022 | Spring Valve Universal | 1 |
| 4 | 618.3022 | Valve Stem | 1 |
| 5 | 809.0089 | O'Ring Square Section V/Seat | 1 |
| 6 | 423.3021 | Valve S/A 3B/4B & all PG range | 1 |
| 7 | 716.3000 | Throttle Lever Universal | 1 |
| 8 | 813.0108 | Spring Pin 1/8" x 1" Long | 1 |
| 9 | 717.3050 | Grip 2/3BPG Trelawny Logo | 1 |
| 10 | 425.3003 | Cover Assembly VL303 | 1 |
| 12 | 652.3003 | Guide Plate | 1 |
| 13 | 829.3003 | Guide Plate Seal | 1 |
| 14 | 809.0299 | O'Ring 37.8 x 1.78 3BPG/3BLR | 1 |
| 15 | 428.3003A | VL303 Cyl Kit inc 729.3003 | 1 |
| 17 | 816.3003 | 6mm dia Plastic Ball | 1 |
| 18 | 809.0080 | O'Ring 4.47 x 1.78 VR 3BPG | 1 |
| 19 | 809.3004 | Piston Cushion 85 mm long | 1 |
| 22 | 622.3031 | Intermediate Tube | 1 |
| 23 | 721.3003 | Intermediate Tube Outer Sleeve | 1 |
| 24 | 814.3003 | Circlip (Spring Seat Location) | 1 |
| 25 | 809.0299 | O'Ring 37.8 x 1.78 3BPG/3BLR | 1 |
| 26 | 612.3003 | Piston VL303 | 1 |
| 28 | 636.3003 | Valve Pin | 1 |
| 29 | 829.3002 | Piston Ring | 1 |
| 32 | 712.3003 | Front Spring | 1 |
| 35 | 729.3003 | Cylinder Stem Reaction Ring | 1 |
| 36 | 610.3003 | Anvil | 1 |
| 37 | 419.3003 | Chisel Holder 1/2" Square | 1 |
| 38 | 704.3101 | Chisel 1/2" Sq Shank 7" x 3/4" Blade | 1 |

Spare Chisels for Pneumatic Chisel Scaler

Cortafrio de Recambio para Descascarilladora Neumática
エアー・チゼル・スケーラー用替えチゼル
气动铲备用品

Common to all models when fitted with the standard (12 mm) 1/2" sq chisel holder.

Unit Per Pc.

| CODE | Blade Size mm | | Type | Part No. |
|----------|---------------|-----------|---------------------|----------|
| | Width | Length | | |
| 59 05 91 | 19 (3/4") | 175 (7") | Flat | 704.1101 |
| 92 | 19 (3/4") | 254 (10") | " | 704.1107 |
| 93 | 62 (2-1/2") | 175 (7") | " | 704.1103 |
| 59 05 95 | 34 (1-3/8") | 175 (7") | Cranked | 704.2105 |
| 97 | 50 (2") | 175 (7") | *Flat | 704.1110 |
| 59 19 01 | 19 (3/4") | 175 (7") | 1/2" Square | 704.3101 |
| 02 | 62 (2-1/2") | 175 (7") | | 704.3103 |
| 59 19 03 | 50 (2") | 175 (7") | *1/2" Square | 704.3110 |
| 04 | 34 (1-3/8") | 175 (7") | 1/2" Square cranked | 704.3205 |
| 05 | 19 (3/4") | 254 (10") | Square - flat | 704.3107 |

Note: * marked is non-spark for use in hazard areas.

59 19 01 to 59 19 04 are common to all VL models.

Name of Mfr.: Trelawny SPT Ltd.

Dust Shrouds

for Trelawny Needle Scaler and Chisel Scaler

Cubiertas antipolvo para martilleadoras de aguja y martilleadoras de cincel Trelawny
スケーラー用ほこり防止覆い 除锈机用防尘罩

Where control of dust is necessary, Trelawny's range of needle and chisel scalers can be fitted with vacuum shrouded front tubes (look for the TVS Logo for applicable models).



Standard Range

Shroud only

| CODE | 59 25 01 | 59 25 02 |
|-----------------|----------|----------|
| Shroud Part no. | 418.2200 | 418.3040 |
| For Scaler | 2B | 2BPG |

Complete Needle Scaler fitted with shroud

| CODE | 59 25 03 | 59 25 04 | 59 25 05 |
|---------------|----------|----------|----------|
| Set Part No. | 139.2000 | 139.2100 | 139.3197 |
| Needle Scaler | 2B | 2BPG | 3BPG |

Low Vibration Range

Shroud only

| CODE | 59 25 06 | 59 25 07 |
|-----------------|----------|----------|
| Shroud Part no. | 418.2003 | 418.3003 |
| For Scaler | VL223 | VL203 |

Complete Needle Scaler fitted with shroud

| CODE | 59 25 08 | 59 25 09 | 59 25 10 |
|---------------|----------|----------|----------|
| Set Part No. | 139.2103 | 139.2003 | 139.3003 |
| Needle Scaler | VL223 | VL203 | VL303 |

Name of Mfr.: Trelawny SPT Limited.

Pneumatic Rattling Needle Chisels

Cinceles de agua vibratorios neumáticos
エアー式ニードルチゼル
气动针束除锈凿

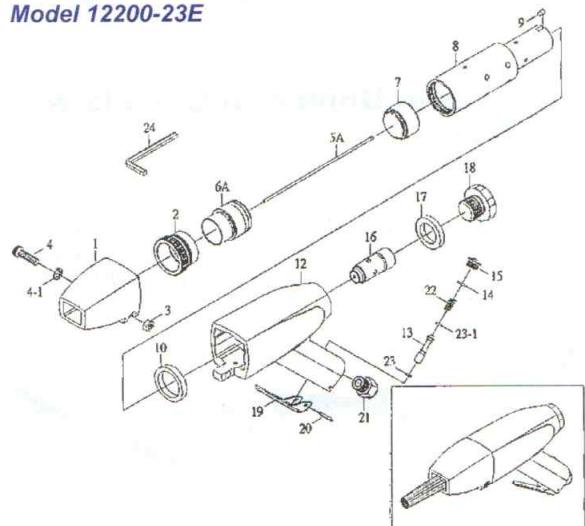


Equipment suitable for chipping rust, old paints, welding, casting scales and various fouling from irregular, angular or bent surfaces. Each needle is independent from the other, thus permitting a perfect adherence to all irregular surfaces, with guarantee of very accurate cleaning. Due to the possibility of using spark proof needles, the machine is suitable for use in environments with risk of explosion.

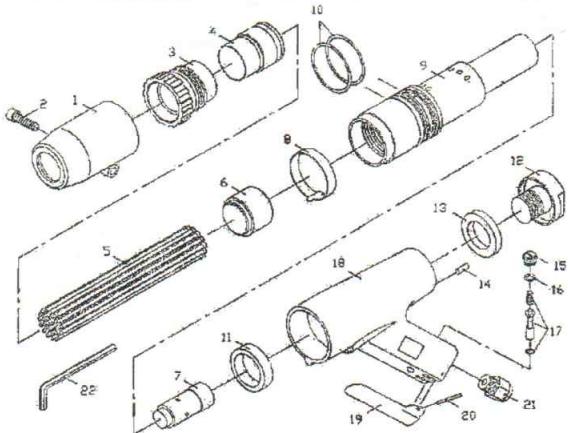
| CODE | 59 05 36 | 59 05 37 | 59 05 38 |
|-------------------------|------------------------------------|---|-----------------|
| Model | 12200-23E | 12200-28E | 12200-L |
| Handle Type | Pistol | Straight | |
| Blow per Min. rpm | 3,500 | 4,600 | |
| Air Consumption m³/min. | 0.22 | 0.25 | 0.25 |
| Air Pressure bar | 6 | | |
| Connection inch | 3/8" gas | 1/4" gas | |
| No. of Needles | 2 mm dia×53 pcs 3 mm dia×23 pcs | 2 mm dia×66 pcs 3 mm dia×28 pcs 4 mm dia×14 pcs | 3 mm dia×19 pcs |
| Needle Length | 180 mm | | |
| Overall Length mm | 348 | 360 | 457 |
| Weight kg | 2.7 | 3.5 | 2.8 |

Name of Mfr.: I.C.O. s.r.l.

Spare Parts for ICO Pneumatic Rattling Needle Chisel Model 12200-23E



| No. | Part Name | Q'ty | No. | Part Name | Q'ty |
|-----|---------------------------|-------|-----|----------------------|------|
| 1 | Needle guide ass'y | 1 set | 13 | Throttle valve | 1 |
| 2 | Lock ring | 1 | 14 | O ring (d8.8 x W1.9) | 1 |
| 3 | Nut (5/16) | 1 | 15 | Valve cap | 1 |
| 4 | Cap Head Screw | 1 | 16 | Piston | 1 |
| 4-1 | Washer | 1 | 17 | Rear washer | 1 |
| 5 | Needle set dia 3 x 180 mm | 23 | 18 | Rear plug | 1 |
| 6 | Needle supporter dia 3 mm | 1 | 19 | Throttle lever | 1 |
| 7 | Throttle anvil | 1 | 20 | Spring pin | 1 |
| 8 | Cylinder | 1 | 21 | Air inlet | 1 |
| 9 | Cylinder lock pin | 1 | 22 | Throttle spring | 1 |
| 10 | Front washer | 1 | 23 | O ring | 1 |
| 12 | Housing Sub Ass'y | 1 set | 24 | Hex. Wrench (6 mm) | 1 |

Model 12200-28E

| No. | Part Name | Q'ty | No. | Part Name | Q'ty |
|-----|------------------------------------|-------|-----|----------------------|-------|
| 1 | Round needle guide ass'y | 1 set | 12 | Rear bolt ass'y | 1 set |
| 2 | Hexagon socket head bolt 8 x 25 mm | 1 | 13 | Rear washer | 1 |
| 3 | Stop ring | 1 | 14 | Cylinder lock pin | 1 |
| 4 | Needle supporter diam 3 mm | 1 | 15 | Valve cap | 1 |
| 5 | Needle diam 3 x 180 mm | 28 | 16 | Valve packing | 1 |
| 6 | Throttle anvil | 1 | 17 | Throttle valve ass'y | 1 set |
| 7 | Piston | 1 | 18 | Housing sub ass'y | 1 set |
| 8 | Safety band | 1 | 19 | Throttle lever | 1 |
| 9 | Cylinder | 1 | 20 | Spring pin 3 x 28 mm | 1 |
| 10 | O ring W-4 | 2 | 21 | Air inlet | 1 |
| 11 | Front washer | 1 | 22 | Hex wrench (6 mm) | 1 |

Pneumatic Universal Chisels & Chippers

Cinceles y cortafrios neumáticos

エアーワードルチゼル & チッパー 气动式凿及铲

Powerful hammers for general chipping and caulking weld line, paint and rust removing in limited space. Compact chippers in light weight pistol handle or straight handle, supplied with flat chisel.



850-0



850-00



850-L

Unit Per Set

| CODE | 59 24 21 | 59 24 22 | 59 24 23 |
|------------------|--------------------------|--------------------------|----------------------|
| Model | 850-0 | 850-00 | 850-L |
| Handle | Pistol | Pistol | Straight |
| Blow per Min. | 2,000 | 2,000 | 2,100 |
| Piston Stroke | 30 mm | 30 mm | 89 mm |
| Piston Dimension | 24.5 mm dia x 69.5 mm | 24.5 mm dia x 69.5 mm | 19 mm dia x 60 mm |
| Hose Connection | 1/2" gas | 1/2" gas | 1/2" gas |
| Air Hose Diam | 13 mm | 13 mm | 13 mm |
| Air Pressure | 6 bar | 6 bar | 6 bar |
| Air Consumption | 300 ltr/min | 300 ltr/min | 200 ltr/min |
| Overall Length | 450 mm | 400 mm | 350 mm |
| Weight | 2.5 kg | 2.5 kg | 2.0 kg |

Name of Mfr.: I.C.O. s.r.l.

Interchangeable Tools for Pneumatic Universal Chisel & Chipper

Herramientas intercambiables 交換可能ツール 可互换工具

Unit Per Pc.

| CODE | Drawing | ICO No. | Use |
|----------|---------|---------|--|
| 59 24 26 | | 850-26 | Normal chisel 50mm: suitable to eliminate foundry & welding burrs, deval edges & light jobs. |
| 59 24 27 | | 850-27A | Sheet sharing chisel: suitable for cutting rolled sheets 1.5mm - 2mm thick. |
| 59 24 28 | | 850-27B | Triangle cross cut chisel: suitable to eliminate fusion & welding blowholes & to prepare triangle grooves for welding. |
| 59 24 29 | | 850-27C | Mason's point: suitable for drilling concrete or brick walls. |
| 59 24 30 | | 850-27E | Nail punch: suitable to punch flat head nails against the plate to obtain better tightness. |
| 59 24 31 | | 850-27D | Rammer: suitable to caulk plates. |
| 59 24 32 | | 850-27F | Wails: suitable for rivetting. |

4. Pneumatic Saws**Pneumatic Hacksaws**

Sierra (Segueta) Neumáticas エアーハックソー 风动弓锯

Light duty air operated hand hacksaw. Maximum cutting capacity is up to 3 mm thickness of steel plate. Special hacksaw blade is to be used.



Unit Per Set

| CODE | 59 05 71 |
|---------------------------|--|
| Model | SSW-110 |
| Stroke Speed (No Load) | 7,000 min ⁻¹ |
| Stroke Length | 11 mm |
| Cutting Capacity | Max. plate thickness 3 mm (for mild steel SS400) |
| Rated Air Pressure | 0.6 MPa (6 kgf/cm ²) |
| Air Consumption (No Load) | 0.29 m ³ /min |
| Weight | 0.62 kg |
| Standard Accessories | - 2 pcs Hacksaw blade 32 teeth - 1pc 3 mm Hex Socket Screw Key - 1pc Bushing R 1/4 x NPT 1/4 |

Name of Mfr.: Nitto Kohki Co.,Ltd.

Spare Blades for Pneumatic Hacksaw

Hojas de Repuesto para Sierra (Segueta) Neumática
エアーワークス用替刃 风动弓锯用备用刀刃

Sold by 10 pieces per package.



| Unit Per Pkt | | | | | |
|--------------|------------|---------|----------|------------|---------|
| CODE | Tooth/Inch | Pcs/Pkt | CODE | Tooth/Inch | Pcs/Pkt |
| 59 05 73 | 9 | | 59 05 76 | 18 | |
| 74 | 12 | 10's | 77 | 24 | |
| 75 | 14 | | 78 | 32 | 10's |

Pneumatic Saws

Sierra Neumática エアーソー 气動鋸

ATEX certified saws for cutting all types of Metal, up to 300mm diameter Steel pipe, conduit, bolts and composite materials. Operates on less than 6 cfm, fast cutting, low weight, low vibration and low noise levels.



CL 50 or CL 75

PL 905



JP 901

JSZ

| Unit Per Set | | |
|--------------------------------------|--|------------------------|
| CODE | 59 05 79 | 59 05 80 |
| Model | CL50 | CL75 |
| Blade Width (mm) | 12 | 19 |
| Blade Type | Hand hacksaw, MC, MCSS blades | MB blades, 220 mm long |
| Speed Stroke Per Minute | | 1,200 |
| Stroke mm | | 45 |
| Air Consumption M ³ /min. | | 0.168 |
| Air Pressure Bar | | 5 - 6 |
| L x H x W mm | | 400x135x40.6 |
| Weight Kgs | | 2.5 |
| Application | Suitable for cutting steel sections and pipe up to 150mm diameter. Use freehand or mounted on a clamp / Inside or outside trigger. | |
| Name of Mfr. | Cengar Ltd. | |

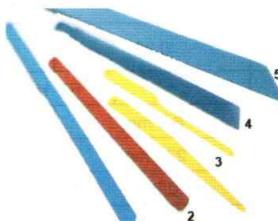
| Unit Per Set | | | |
|--------------------------------------|---|---|---|
| CODE | 59 05 88 | 59 05 89 | 59 05 90 |
| Model | PL 905 | JP 901 | JSZ |
| Blade Width (mm) | 12 | 12 | 25 |
| Blade Type | Hand hacksaw, MC, MCSS blades | Hand hacksaw, MC, MCSS, MY notched or Tapered blades | MJ Blades |
| Speed Stroke Per Minute | 2,000 | 10,000 | 400/600 |
| Stroke mm | 22 | 9 | 57 |
| Air Consumption M ³ /min. | 0.116 | 0.116 | 0.168 |
| Air Pressure Bar | 5-6 | | |
| L x H x W mm | 300x135x40.6 | 270x70x40 | 448x141x54 |
| Weight Kg | 2.4 | 1.6 | 5.5 |
| Application | For cutting steel pipe, sections, bolts and GRP up to 50mm thick. Use Freehand / Inside or Outside Trigger. | For cutting out circles and other shapes e.g., in instrument panels and dashboards. Use Freehand. | For cutting 150 mm to 300 mm dia. steel pipes. Mounted on a clamp with a blade guide which ensures straight cuts. |
| Name of Mfr. | Cengar Ltd. | | |

Spare Blades for Cengar Pneumatic Saw

Cuchillas de repuesto para sierra neumática Cengar
エアーソー用替刃 Cengar 气锯的替换锯片

Made of special quality European steel which allows them to be bent during use without shattering. Long life, smooth cutting and safe.

A wide range of sizes and tpi's to suit every application.



Blades

| Unit Per Pc. | | | | | |
|----------------------------|----------------|-----------|--------|-----------|--------------------|
| CODE | Type | Length mm | T.P.I. | Ref. No. | For Model |
| 12 mm (1/2") Wide Bi-Metal | | | | | |
| 59 06 14 | Hand | 305 | 18 | HB300/18 | CL50, PL905, JP901 |
| | | | 24 | HB300/24 | CL50, PL905 |
| 59 06 16 | Machine (Red) | 220 | 24 | MC220/24 | |
| 59 06 18 | Notched Yellow | 152 | 18 | MYN150/18 | JP901 |
| | | | | MYT150/18 | |
| 19 | Tapered Yellow | | | | |

(to be continued)

| Unit Per Pcs. | | | | | |
|-----------------------------------|-------------------|-----------|--------|-------------|---------------|
| CODE | Type | Length mm | T.P.I. | Ref. No. | For Model |
| 19 mm (3/4") Wide Bi-Metal | | | | | |
| 59 06 92 | Machine (Blue) | 152 | 10/14 | MB150/10/14 | CL75, CS75 |
| 93 | | | 18 | MB150/18 | |
| 94 | | | 24 | MB150/24 | |
| 59 06 95 | | 203 | 10/14 | MB200/10/14 | |
| 96 | | | 18 | MB200/18 | |
| 97 | | | 24 | MB200/24 | |
| 59 06 98 | | 254 | 10/14 | MB250/10/14 | |
| 99 | | | 18 | MB250/18 | |
| 59 07 00 | | | 24 | MB250/24 | |
| 59 07 05 | Machine (Grey) | 305 | 8 | MB300/8 | JSZ |
| 06 | | | 10/14 | MB300/10/14 | |
| 07 | | | 18 | MB300/18 | |
| 08 | | | 24 | MB300/24 | |
| 59 07 15 | | 305 | 6 | MJ300/6 | |
| 16 | | | 8 | MJ300/8 | |
| 17 | | | 10/14 | MJ300/10/14 | |
| 18 | | | 14 | MJ300/14 | |
| 59 07 25 | | 457 | 6 | MJ450/6 | |
| 26 | | | 8 | MJ450/8 | |
| 27 | | | 10/14 | MJ450/10/14 | |
| 28 | | | 14 | MJ450/14 | |

59

Pneumatic Saws

Sierra Neumática エアーソー 氣動鋸

Equipped with a damper to minimize vibration, stroke regulator and blade cooling device, and can cut in any direction.



FRF-4-2

FRS-45

| Unit Per Set | | |
|---------------------------------------|----------|----------|
| CODE | 59 05 85 | 59 05 86 |
| Model | FRF-4-2 | FRS-45 |
| Stroke/Min. | 1,600 | 1,200 |
| Blade Stroke | 12 mm | 45 mm |
| Air Consumption Nm ³ /min. | 0.28 | 0.40 |
| Air Inlet Thread | PT 1/4 | |
| Air Hose Size | 6.3 mm | 9.5 mm |
| Overall Length | 233 mm | 419 mm |
| Mass Weight | 0.8 kg | 2.9 kg |

Name of Mfr.: Fuji Air Tools Co., Ltd.

Explosion-Proof Air Saws

Sierras Aéreas Resistentes a Explosión

防爆エアーソー 防爆風锯

A unique and most ideal all-purpose pneumatic hacksaw. Its reciprocating blade is designed to cut any sawable material of any shape.



Its automatic lubricating system will not produce either heat or sparks on the blade and material to be cut.

This safety saw can be used even in places where flammables are prohibited such as tankers, chemical plants, and petroleum refineries. This pneumatic saw is rust-proof and water-proof. Thus it can also be used for under water work.

| Unit Per Set | |
|----------------------|---|
| CODE | 59 05 87 |
| Model | ITI-45 |
| Stroke/Min. | 0 - 1,200 |
| Blade Stroke | 45 mm |
| Air Consumption | 0.18 m ³ /min. |
| Dimensions L x W x H | approx. 425 x 42 x approx. 160 mm |
| Weight | 2.65 kg |
| Blade | Standard hacksaw blade, Broken hacksaw blade, Band saw blade, etc. |
| Standard Accessories | <ul style="list-style-type: none"> * 1 pc Metal case * 1 can Maintenance oil * 1 pr Air coupler * 1 pc Saw blade * 1 pc Wrench for attaching blade |

5. Pneumatic Winches

Pneumatic Driven Winches

Grua Tanque Neumática エア・ワインチ 风动驱动绞盘

Pneumatic driven mucking winch specially designed for tank cleaning purposes. Pipe frame pole and suspension available with or without wheels. For further details, please ask your local manufacturers.



Unit Per Set

| CODE | Lifting Capacity Kg | Lifting Speed (Mtr/Min) | Wire Rope | | Air Hose Diam. mm | Weight kg |
|----------|---------------------|-------------------------|-----------|------------|-------------------|-----------|
| | | | Diam. mm | Length mtr | | |
| 59 06 01 | 50 | 35 | 3 | 33 | 15 | 47 |
| 02 | 75 | 35 | 3 | 33 | 15 | 50 |
| 03 | 100 | 30 | 4 | 33 | 15 | 70 |
| 04 | 150 | 25 | 6 | 33 | 19 | 75 |
| 05 | 200 | 30 | 5 | 40 | 12 | 75 |
| 06 | 250 | 20 | 6 | 33 | 25 | 120 |
| 07 | 300 | 30 | 5 | 40 | 12 | 80 |

Electric Driven Winches

Cabrestante de propulsión eléctrica

電動式ワインチ 电动绞盘

Electric driven winch specially designed for lifting goods from ship tank, ship bottom. Frame equipped with winding wheel for easy removal. Available from 100 - 400 kg capacity, 110-220 Voltage.



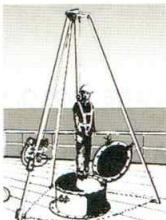
| CODE | Lifting Capacity Kg | Lifting Speed (Mtr/Min) | Wire Rope | | Voltage | Weight kg |
|----------------|---------------------|-------------------------|-----------|------------|--------------|-----------|
| | | | Diam. mm | Length mtr | | |
| 59 06 08 10 | 100 | 30 | 5 | 42 | 110V 220V | 66 |
| 59 06 13 24 | 150 | 26 | 5 | 42 | 110V 220V | 68 |
| 59 06 30 36 | 200 | 24 | 5 | 40 | 110V 220V | 70 |
| 59 06 38 39 | 250 | 22 | 5 | 35 | 110V 220V | 80 |
| 59 06 40 50 | 300 | 20 | 6 | 30 | 110V 220V | 80 |
| 59 06 58 59 | 400 | 18 | 6 | 30 | 110V 220V | 85 |

Pneumatic Casualty Winches

Cabrestante neumático para emergencias

エアー式非常時負傷者用ワインチ

气动式紧急伤员用起降机



Built in galvanized steel. Frame equipped with winding wheel and handles to allow quick and easy removal. Tested by the most important classification international registers.

Areas of use: Tankers and Freighters/For hoisting injured men and various materials from tanks, holds, etc.

| Unit Per Set | |
|-------------------------------|----------------------|
| CODE | 59 06 09 |
| Model | 1500-MW7 |
| Lifting Capacity | 250 kg |
| Lift from Deck Level | 15 – 20 mtr |
| Steel Rope Breaking Point | 1,500 kg |
| Diam. of Sparkless Steel Rope | 5 mm |
| Power | 1 HP |
| Speed | 20 mtr/min. |
| Air Pressure | 6 – 7 atm. |
| Air Consumption | 1.2 cbm/min |
| Air Inlet | 3/4" x 19mm diam. |
| Overall Dimensions | 500 x 500 x 4,000 mm |
| Weight | 60 kg |

Name of Mfr.: I.CO. s.r.l.

6. Neoprene Rubber Buckets

Neoprene Rubber Buckets

Cubo de Goma para Grua Tanque

ネオプレンゴムばけつ 氯丁橡胶桶

Specially developed spark proof buckets for use when cleaning tanks with chemical or petroleum cargo. Made of hard neoprene. When ordering, please specify the liter capacity required referring to the list below.



Unit Per P.C.

| CODE | Capacity ltr | Dimension mm | |
|----------------|--------------|--------------|------------|
| | | Upper Diam | Height |
| 59 06 11 12 | 10 20 | 260 360 | 335 350 |

7. Air Motors

Air Motors

Motores de Aire エアモーター 压缩空气发动机



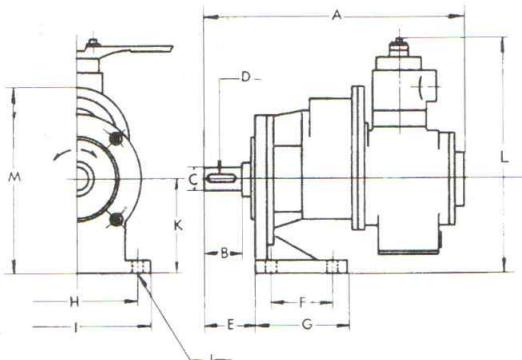
This air motor is free from explosion because it is equipped with a non-spark mechanism. It has a wide range of applications where an electric motor can not be used because of severe working conditions such as high temperature, high humidity, or problems with sparking.

Required air pressure for this motor is 0.59 MPa (6 kgf/cm²).

How to order : 59 - 06 - 20

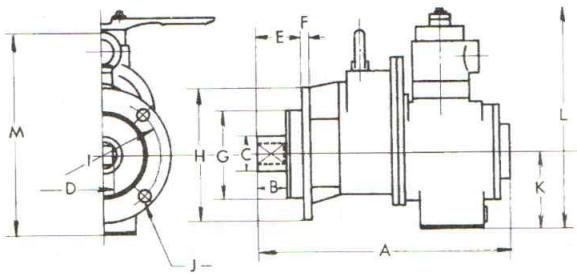
Air motor, with the following specifications:

- | | |
|----------------------------|---|
| 1) Mounting system | Base type (Horizontal) Flange type (Vertical) |
| 2) Shaft connecting system | Key type Socket type |
| 3) Operation system | Manual operation Remote operation |
| 4) Load torque | kg-m |
| 5) Free speed | R.P.M. |
| 6) Maximum power | P.S. |
| 7) Application | For opening and closing hatches. For lifting and lowering life boats or ladders. |



Mounting System : Base Type

Shaft Connecting System : Key Type



Mounting System : Flange Type

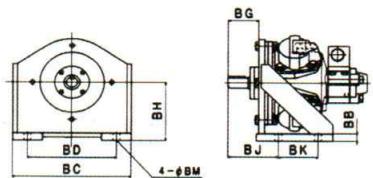
Shaft Connecting System : Socket Type

Air Motors

Motores de Aire エアモーター 压缩空气发动机

PADIAL PISTON MOTOR (DM)

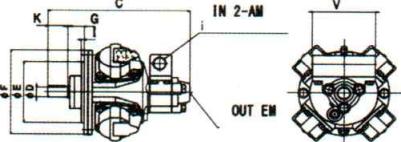
This is the most popular Radial Piston type air motor. The quality of this motor is high torque and low speed. So it may use with compact reducer and in low noise area. Generally, used for air hoists and air winches. The method of air motor operation is direct pipe connecting. The way of motor mounting are base mount or flange mount. And the optional accessories can be available as air brake, reduction gear, pneumatic equipment etc.



BASE TYPE



FLANGE TYPE

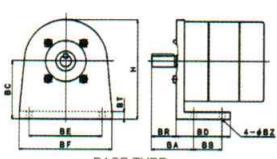


| Unit Per Pcs. | | | | | |
|---------------------|-----------|-------|----------|-----------|-------|
| CODE | Output kW | Model | CODE | Output kW | Model |
| Base Mount | | | | | |
| 59 09 31 | 0.86 | DM1 | 59 09 34 | 7.15 | DM220 |
| 32 | 1.73 | DM3 | 35 | 11.99 | DM36 |
| 33 | 3.90 | DM9 | 36 | 17.62 | DM45 |
| Flange Mount | | | | | |
| 59 09 37 | 0.86 | DM1 | 59 09 40 | 7.15 | DM220 |
| 38 | 1.73 | DM3 | 41 | 11.99 | DM36 |
| 39 | 3.90 | DM9 | 42 | 17.62 | DM45 |

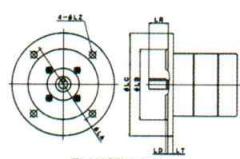
Name of Mfr.: San-ei Seiki Seisakusho Co., Ltd.

VANE MOTOR (VA) – One Way Rotation

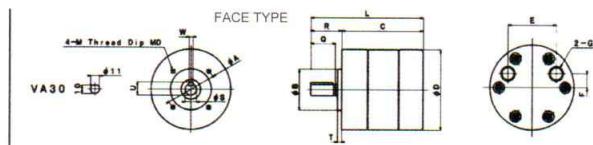
A compact and light-weight motors by the high quality machining and finishing. It is the most popular model and it is used to various fields widely. The motor speed is middle and high range. The unique system makes to keep the low speed torque and high starting torque. In case of the extra low speed or the extra high torque, the optional reducer can be available. The way of motor mounting are base mount, flange mount or face mount, and it can be applied to various site requirement.



BASE TYPE



FLANGE TYPE

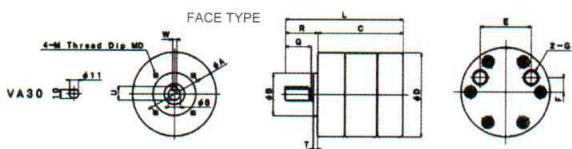
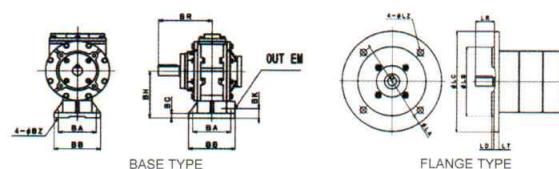


| Unit Per Pcs. | | | | | |
|---------------------|-----------|-------|----------|-----------|-------|
| CODE | Output kW | Model | CODE | Output kW | Model |
| Base Mount | | | | | |
| 59 09 51 | 0.14 | VA15 | 59 09 53 | 0.45 | VA50 |
| 52 | 0.27 | VA30 | 54 | 0.90 | VA100 |
| Flange Mount | | | | | |
| 59 09 55 | 0.14 | VA15 | 59 09 57 | 0.45 | VA50 |
| 56 | 0.27 | VA30 | 58 | 0.90 | VA100 |
| Face Mount | | | | | |
| 59 09 59 | 0.14 | VA15 | 59 09 61 | 0.45 | VA50 |
| 60 | 0.27 | VA30 | 62 | 0.90 | VA100 |

Name of Mfr.: San-ei Seiki Seisakusho Co., Ltd.

VANE MOTOR (VF) – Two Way Rotation

A compact and light-weight motors by the high quality machining and finishing. The motor speed is middle and high range, which keeps the low speed torque and high starting torque. In case of the extra low speed or the extra high torque, the optional reducer can be available. The way of motor mounting are base mount, flange mount or face mount, and it can be applied to various site requirement.

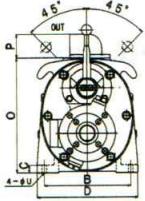


| Unit Per Pcs. | | | | | |
|---------------------|-----------|-------|----------|-----------|-------|
| CODE | Output kW | Model | CODE | Output kW | Model |
| Base Mount | | | | | |
| 59 09 65 | 0.38 | VF05 | 59 09 68 | 2.25 | VA30 |
| 66 | 0.75 | VF10 | 69 | 3.76 | VA50 |
| 67 | 1.50 | VF20 | 70 | 5.71 | VA70 |
| Flange Mount | | | | | |
| 59 09 71 | 0.38 | VF05 | 59 09 74 | 2.25 | VA30 |
| 72 | 0.75 | VF10 | 75 | 3.76 | VA50 |
| 73 | 1.50 | VF20 | 76 | 5.71 | VA70 |
| Face Mount | | | | | |
| 59 09 77 | 0.38 | VF05 | 59 09 80 | 2.25 | VA30 |
| 78 | 0.75 | VF10 | 81 | 3.76 | VA50 |
| 79 | 1.50 | VF20 | 82 | 5.71 | VA70 |

Name of Mfr.: San-ei Seiki Seisakusho Co., Ltd.

GEAR TURBINE MOTOR (AGM)

The construction of this motor is the same as gear pump. Because of no sliding parts inside, it rotates without friction heat-up. This motor is equipped on the speed governor, and the rotating speed is always fixed against the alternation of the driving load. The way of motor control is handle type, and remote type is available by optional request.



Unit Per Pcs.

| CODE | Output kW | Model | CODE | Output kW | Model |
|--------------------|-----------|-------|----------|-----------|-------|
| Handle Type | | | | | |
| 59 09 85 | 5.65 | AGM6 | 59 09 88 | 22.46 | AGM23 |
| 86 | 8.95 | AGM10 | 89 | 37.70 | AGM40 |
| 87 | 14.14 | AGM15 | | | |

Name of Mfr.: San-ei Seiki Seisakusho Co., Ltd.

8. Air Winches

Air Winches

Cabrestante de Aire エアウインチ 气动式起降机

Simple, rugged, reliable source of enormous lifting, lowering and tensioning with variable speed control for precise load handling for their weight.



Air winches are well-suited for applications in hot, cold, dusty, dirty, explosive and wet conditions. They pose no electric shock hazard, require no special enclosures, and there are no high pressure hydraulic lines to leak. Air winches are easy to service, maintain, and repair. The most common models are described below for your reference. Please ask for further information and brochures of various manufacturers and models available from local suppliers when required. Wire rope is to be ordered separately.

Guidance to choose the correct utility winch for your applications:

- How much is to be lifted, pulled, or tensioned?
- How fast is the load to be moved (if at all)?
- How much wire rope is needed?

Unit Per Set

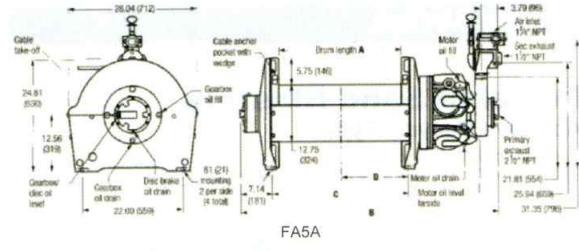
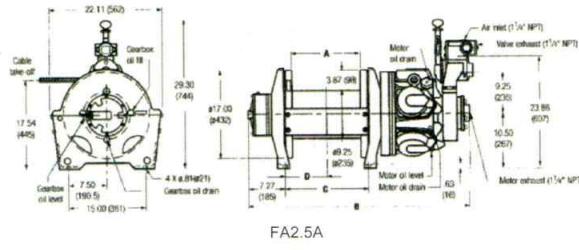
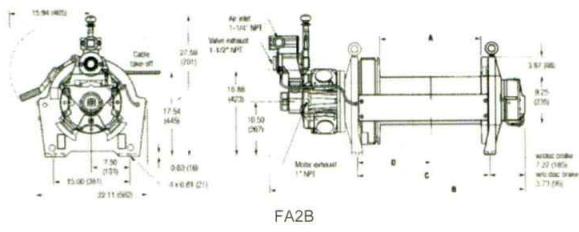
| CODE | 59 06 21 | 59 06 22 | 59 06 23 |
|-------|----------|----------|----------|
| Model | FA2B | FA2.5A | FA5A |

Capacity lbs (kg)

| | | | | |
|---|-------|---------------|---------------|----------------|
| Lift Rating per ANSI / ASME B30.16 at 5:1 | First | 5,000 (2,273) | 5,000 (2,273) | 11,400 (5,182) |
| | Mid | 4,000 (1,818) | 5,000 (2,273) | 10,000 (4,545) |
| | Top | 3,200 (1,455) | 4,100 (1,864) | 8,000 (3,636) |
| Pull Rating ANSI / ASME B30.7 at 3.5:1 | First | 5,100 (2,138) | 7,100 (3,227) | 13,100 (5,955) |
| | Mid | 4,000 (1,818) | 6,400 (2,909) | 10,000 (4,545) |
| | Top | 3,200 (1,455) | 5,400 (2,455) | 8,000 (3,636) |

| Speed fpm (mm/min) | | | | |
|---|-------|----------------|----------------|-----------------|
| Lift Rating per ANSI / ASME B30.16 at 5:1 | First | 79 (24) | 119 (36) | 40 (12) |
| | Mid | 96 (29) | 114 (35) | 50 (15) |
| | Top | 122 (37) | 141 (43) | 62 (19) |
| Pull Rating ANSI / ASME B30.7 at 3.5:1 | First | 76 (23) | 67 (20) | 26 (8) |
| | Mid | 96 (29) | 42 (13) | 50 (15) |
| | Top | 122 (37) | 45 (14) | 62 (19) |
| Standard Drum Length* | | 20" | 20" | 27" |
| Drum Root Diameter | | 9.25" (235 mm) | 9.25" (235 mm) | 12.75" (324 mm) |
| Stall lbs (kg) | | 6,800 (3,084) | 10,400 (4,727) | 17,000 (7,727) |
| Average Air Consumption cfm (m³/min) | | 350 (10) | 700 (20) | 700 (20) |
| Motor HP | | 16 | 25 | 25 |
| Air Inlet - NPT Size | | 1-1/4" (32 mm) | 1-1/4" (32 mm) | 1-1/4" (32 mm) |
| Rope Anchor Diameter | | 1/2" (13 mm) | 5/8" (16 mm) | 3/4" (19 mm) |
| Recommended Rope Size | | 1/2" (13 mm) | 5/8" (16 mm) | 3/4" (19 mm) |
| Weight lbs (kg) | | 738 (335) | 818 (372) | 1,251 (569) |
| Name of Mfr. | | Ingersoll Rand | | |

Remark : *Other drum length is available on request.



Air Winches

Cabrestante de Aire エアウインチ 气动式起降机

This is the multi-purpose air winch and it is attached standard radial piston type air motor, and control valve. The handling of this winch can be easily and safety. DNV type approved.

- Easy operation [control Lever only] and safe mechanism [Brake] are designed.
- Compact light weight can be moved quickly from one location to another.
- Dusty environment is acceptable for use.
- No sparks are generated.
- No damage with overheat occurs even for overload.
- Continuous operation at full capacity is available.
- Drum diameter is large enough to prolong life of rope.



Guidance to choose the correct utility winch for your applications;

1. How much is to be lifted, pulled, or tensioned?
2. How fast is the load to be moved (if at all)?
3. How much wire rope is needed?

Specifications

| Model | W-05 | W-10 | W-20 | W-30 | W-50 |
|--|------|------|------|-------|-------|
| Motor Output (kW) | 1.73 | 7.15 | 7.15 | 12.00 | 12.00 |
| Rope Pull (Ton) | 0.5 | 1 | 2 | 3 | 5 |
| Rope Speed (m/min) | 19 | 37 | 19 | 19 | 11 |
| Air Consumption (Nm ³ /min) | 2.0 | 5.4 | 5.4 | 9.0 | 9.0 |

Unit Per Set

| CODE | Model | Drum Capacity (dia x m) | | Weight (kg) | |
|------------------------|-------|----------------------------|------------|---------------|--------------|
| | | Short Drum | Long Drum | Short Drum | Long Drum |
| Manual Brake | | | | | |
| 59 13 71 | W-05 | 8 x 45 | 8 x 90 | 55 | 60 |
| 72 | W-10 | 10.0 x 175 | 10.0 x 350 | 257 | 276 |
| | | 12.5 x 115 | 12.5 x 230 | | |
| 73 | W-20 | 12.5 x 115 | 12.5 x 230 | 266 | 287 |
| 74 | W-30 | 16 x 160 | 16 x 320 | 470 | 513 |
| 75 | W-50 | 22.4 x 115 | 22.4 x 230 | - | 850 |
| Automatic Brake | | | | | |
| 59 13 76 | W-05 | 8 x 45 | 8 x 90 | 59 | 64 |
| 77 | W-10 | 10.0 x 175 | 10.0 x 350 | 267 | 288 |
| | | 12.5 x 115 | 12.5 x 230 | | |
| 78 | W-20 | 12.5 x 115 | 12.5 x 230 | 276 | 297 |
| 79 | W-30 | 16 x 160 | 16 x 320 | 513 | 527 |
| 80 | W-50 | 22.4 x 115 | 22.4 x 230 | 780 | 873 |

Name of Mfr.: San-ei Seiki Seisakusho Co.

9. Sand Blasters

Portable Sand Blasters

Abrasive Recycle Type

Máquina de Granalla Portátil

ポータブルサンドブラスター

循环耐磨型便携式喷砂机

Lightweight, portable abrasive blasting tool with an integral abrasive recovery system. During blasting, the sand is continuously recycled, while dust and other debris is collected in a slip-on dust filter.



This item is effective for conserving the amount of abrasive necessary for large jobs.

| CODE | 59 06 37 | Unit Per Set |
|---------------------------|---|--------------|
| Model | Educt-O-Matic | |
| Blast Media | Steel & Iron Grit 40 to 100 mesh | |
| Air Consumption | 90 cfm @ 90 psi | |
| Closed-circuit Blast Head | Rubber containment with 3/8" suction blast nozzle and 3/16" suction jet | |
| Weight | 5.4 kg | |
| Name of Mfr. | Clemco Industries Corp. | |

Pneumatic Sand Blasters

Máquina de Granalla Neumática

サンドブラスター 风动喷砂机

Removes rust, scale, corrosion and paint, etc.



For use on metal, plastic, concrete, brick and glass. Has a compressed air sandjet with a compact and large volume tank which is suitable for continuous operation.

Cleans any hard surface quickly and leaves it in an ideal condition for repainting without further preparation.

Specifications

| Model | AC(R)-1P | AC(R)-2P | AC(R)-3P |
|---------------------|-----------|-----------|-----------|
| Tank | 88 | 134 | 275 |
| Capacity | 90 | 150 | 300 |
| Grits (kg) | 240 | 400 | 800 |
| Diam of Tank (mm) | 500 | 600 | 750 |
| Height of Tank (mm) | 1,181 | 1,328 | 1,525 |
| Weight of Tank (kg) | 130 (145) | 160 (175) | 210 (225) |

Name of Mfr.: Atsuji Tekko

Specifications

| Model | 1648 | 2452 |
|--------------------------|--------------|--------------|
| Working Pressure | 150 psi | 150 psi |
| Dimension (Dia x Height) | 16" x 48" | 24" x 52" |
| Capacity in Cuft. | 3 | 6 |
| Piping I.D. | 1" or 1-1/4" | 1" or 1-1/4" |

Name of Mfr.: Clemco Industries Corp.

How to order: CODE

Sand blaster, pneumatic, TYPE, MODEL

| CODE | Model | Type | Name of Mfr. |
|----------|----------|-----------------------------------|----------------------------|
| 59 06 41 | AC - 1P | Portable | Atsuji-Tekko |
| 42 | AC - 2P | | |
| 43 | AC - 3P | | |
| 59 06 44 | ACR - 1P | Portable and Remote Control | Clemco Industries Corp. |
| 45 | ACR - 2P | | |
| 46 | ACR - 3P | | |
| 59 06 48 | 1648 | Portable and Remote Control | Clemco Industries Corp. |
| 49 | 2452 | | |

10. Tank Cleaning Machines

Tank Cleaning Machines

Máquinas de Limpieza para Tanque

タンククリーニングマシン 油船清洗机

Equipped with a unique, self start, hydraulic turbine which cleans effectively using the least amount of water. These machines are capable of rotating 360° horizontally and vertically to reach any tank surface.



The movement of the nozzle can be programmed to make a controlled pass suitable to the areas of the tank being cleaned. The gear box is enclosed with the bearings fully lubricated to preserve the long life of the workings. The gears are built into the lower part of the body for easy inspection and replacement.

Tank cleaning machines are available from a variety of manufacturers internationally. Because models, gearbox design, and wash patterns differ, it is advisable to ask your supplier or local dealer for detailed information about each machine and its features. A major manufacturer is listed below as a reference. When ordering, select a representative code for the nozzle size you require and specify the name of the manufacturer from whom you wish to order.

| Unit Per Set | | | |
|-------------------|----------------|----------|----------|
| CODE | 59 06 51 | 59 06 52 | 59 06 53 |
| Model | Mu-301 | Mu-302 | Mu-303 |
| Nozzle Diam | 11 mm | 12 mm | 13 mm |
| Water Consumption | 29 m³/Hr | 34 m³/Hr | 39 m³/Hr |
| Jet Length | 11.5 mtr | 12.5 mtr | 14.5 mtr |
| Washing Cycle | 3.7 min./cycle | | |
| Working Pressure | 10 kgf/cm² | | |
| Weight | 18 kg | | |
| Name of Mfr. | Exeno-Yamamizu | | |

Tank Cleaning Hose

Manguera de Limpieza para Tanque

タンククリーニングホース 油船清洗管



The hoses are made of a suitable rubber specially compounded for attaining high durability. There is no elongation or expansion of the outer diameter when pressure is exerted on the inside of the hose. Stainless wires (two spiral wires) are incorporated for discharging any static electricity. They are lightweight and have excellent flexibility.

Hoses are available from a variety of manufacturers internationally. Hoses from a few of the major manufacturers are listed below as a reference. When ordering, select a representative code for the size of the hose required and specify the name of the manufacturer from whom you wish to order.

Hoses for: MU Series: Exeno Yamamizu

| Unit Per Lgh. | | | | | | |
|---------------|----------------|-------------|--------------------------|---------------------------|-------------------|-----------|
| CODE | Nom. Dia x Lgh | Out Diam mm | Working Pressure kgf/cm² | Bursting Pressure kgf/cm² | Appli-cable Temp. | Weight kg |
| 59 06 61 | 2-1/2 x 10 mtr | | | | 28 | |
| 62 | 2-1/2 x 15 mtr | 70 | 13 | 26 | 140°C | 39 |
| 63 | 2-1/2 x 20 mtr | | | | | 50 |
| 64 | 2-1/2 x 25 mtr | | | | | 61 |

Tank Cleaning Hose Accessories for MU Series

Accesorios para Manguera de Limpieza para Tanque Serie MU

タンククリーニングホース附属品

油箱清洁管附件



59 06 71



59 06 72



59 06 73



59 06 74



59 06 75



59 06 76



59 06 77

For MU Series

| CODE | Name | Size | Material | Weight |
|----------|---------------------------------|--------------------------|---------------------|----------|
| 59 06 71 | Coupling | ASA 2-1/2" 7.5 thread | Cast Bronze | 3.3 kg |
| 59 06 72 | Y. Piece For Connecting Hose | " | " | 4.9 kg |
| 59 06 73 | Double Male Coupling | " | " | 1.3 kg |
| 59 06 74 | Coupling Spanner | | Cast Alum-Bronze | 0.9 kg |
| 59 06 75 | Combined Spanner | | " | 0.8 kg |
| 59 06 76 | Hose Packing | O.D. 73 | I.D. 51 | t 6 |
| 59 06 77 | Y. Piece Packing | 78 | 62 | 4 |
| | | | | Neoprene |

Tank Cleaning Hose Saddles

Sillines para Manguera de Limpieza para Tanque

タンククリーニングホースサドル

油舱清洗管鞍垫



For the protection and easy lifting of tank cleaning hoses.

| Unit Per Set | | | |
|----------------------|-------|-----------------|--------|
| CODE | Type | Material | Weight |
| For Mu Series | | | |
| 59 06 81 | 300 N | Corrosion-proof | 6.7 kg |
| 82 | 400 N | Aluminium alloy | 8.3 |

Tank Washing Machines, Twin Nozzle VP Major & VP Minor, Stainless Steel

Máquina Lavadora de Depositos, Boquilla Doble VP Major Bronce y Acero Inoxidable

タンククリーニングマシン 油箱清洁机

The VP Major & VP Minor are pre-programmed twin nozzle tank washing machines available in 316 Stainless Steel.

Both use an orbital progressive intensity wash pattern to meet IMO Annex II pre-wash requirement standard. Automatic 'slip-clutch' to prevent accidental damage in use. Simple to service, with use of hi-performance long life gears, and fully Type Approved by Class Societies worldwide. Ancillary equipment available i.e. rigid hoses, adaptors, hose saddle, lifting tripod and downtubes.

VP Major

Suitable for use on both medium and large crude oil, chemical and product tankers, and can be supplied as a fixed or portable application.

**Key Features**

- * Nozzle sizes range from 12 mm to 18 mm (18 mm Fixed machines only).
- * Offered with 'media lubricated' drive.
- * Alternative flange (up to 180 mm diameter) and fixings available.

Technical Specification

Wash Pattern: pre-programmable rotary 360°

Operating Pressure: Maximum 12 kg/cm² (190 psi)

Operating Temperature: Maximum 95°C (203°F)

Installation: Portable 2" NST male thread, Fixed Flanged Std DIN 50 NP16

Weight: Portable 19.5 kg (43 lbs), Fixed Flanged 21 kg (46 lbs)

Minimum Deck Opening: Ø245 mm (9.6 inches)

| CODE | Nozzle Diam. | Supply Pressure kg/cm ² | | | | | | | | | | Unit Per Set |
|----------|--------------|------------------------------------|----|----|----------------|------|------|------------------|----|----|--|--------------|
| | | 8 | 10 | 12 | 8 | 10 | 12 | 8 | 10 | 12 | | |
| | | Flow m ³ /hour | | | Jet Length mtr | | | Cycle Time mins. | | | | |
| 59 07 62 | 2 x 12 mm | 32 | 35 | 40 | 19 | 20.5 | 21.5 | 39 | 36 | 34 | | |
| 63 | 2 x 14 mm | 42 | 45 | 51 | 20 | 23 | 24 | 43 | 39 | 37 | | |
| 64 | 2 x 16 mm | 50 | 55 | 61 | 22 | 24 | 25 | 42 | 39 | 37 | | |
| 65 | 2 x 18 mm | 57 | 64 | 70 | 23 | 25 | 26 | 49 | 46 | 44 | | |

Name of Mfr.: Victor Marine Ltd.

Unit Per Set

| CODE | Nozzle Diam. | Supply Pressure kg/cm ² | | | | | | | | | | | |
|----------|--------------|------------------------------------|------|------|------|------|------|------|------|----|----|------|----|
| | | 6 | 8 | 10 | 12 | 6 | 8 | 10 | 12 | 6 | 8 | 10 | 12 |
| 59 07 66 | 2 x 7 mm | 7.3 | 8 | 8.5 | 9.2 | 9.1 | 10.5 | 11 | 11.6 | 27 | 21 | 18.5 | 18 |
| 67 | 2 x 8 mm | 10 | 11.3 | 12.2 | 13 | 9.5 | 11.3 | 12 | 12.5 | 26 | 20 | 18 | 17 |
| 68 | 2 x 9 mm | 10.4 | 11.6 | 12.6 | 13.7 | 10.6 | 11.6 | 12.5 | 13 | 27 | 23 | 19 | 16 |
| 69 | 2 x 10 mm | 13 | 14.2 | 16 | 17.6 | 11.6 | 14.2 | 14.8 | 15.5 | 26 | 22 | 20 | 18 |
| 70 | 2 x 11 mm | 15 | 16.2 | 17.7 | 19.3 | 14 | 12.2 | 16 | 17 | 24 | 20 | 18 | 17 |

Name of Mfr.: Victor Marine Ltd.

Unit Per Set

**Tank Cleaning Hose & Accessories****for VP Major and VP Minor**

Mangueras y accesorios para limpieza de depósitos

タンク清掃用ホース & アクセサリー 储罐清洗软管及配件

Used for delivery of sea water, detergent solutions and for cleaning fuel and oil tanks, road tankers and ships' tanks. Made from superior quality Neoprene with Styrene Butadiene Rubber (SBR) liner and cover. Reinforced with multiple rayon braids for long life. Anti-scuff cover, weather and ozone resistant, with anti-friction lining. Earthed with two stainless steel braided wires, spirally wound, embedded in hose wall and connected to couplings. All hoses continuity tested (to under 6 Ohms per/mtr) and certified prior to dispatch.

Tankwash Hose (Black/Yellow with Logo) for VP Major Twin Nozzle Tank Washing Machine

2" (50 mm) nominal bore. Standard lengths are 10, 15, 25, 30, 40 and 50 metres. Fitted with standard 2½" NST (7.5 TPI) BW couplings. Couplings : Bronze swivel couplings. Clamp bands for safety. Fully earthed. Other connections are available upon request including Stainless Steel.

| CODE | Nom. Dia x Lgh | Working Pressure Bar (psi) | | | Min. Burst Pressure Bar (psi) | Temp. Range | Weight kg per mtr | Unit Per Lgh. |
|----------|----------------|----------------------------|------------------|----------------|-------------------------------|-------------|-------------------|---------------|
| | | 20 bar (290 psi) | 60 bar (870 psi) | - 30°C to 85°C | | | | |
| 59 07 74 | 50 mm x 10 mtr | | | | | | | |
| 71 | 50 mm x 15 mtr | | | | | | | |
| 72 | 50 mm x 25 mtr | | | | | | | |
| 73 | 50 mm x 30 mtr | | | | | | | |
| 80 | 50 mm x 40 mtr | | | | | | | |
| 82 | 50 mm x 50 mtr | | | | | | | |

Name of Mfr.: Victor Marine Ltd.

Unit Per Lgh.

Tankwash Hose (Black/Yellow with Logo) for VP Minor Twin Nozzle Tank Washing Machine

1½" (38 mm) nominal bore. Standard lengths are 10, 15, 25, 30, 40 and 50 mtrs. Fitted with standard 1½" BSP couplings. Couplings : Bronze swivel couplings. Clamp bands for safety. Fully earthed. Other connections are available upon request including Stainless Steel.

| CODE | Nom. Dia x Lgh | Working Pressure Bar (psi) | | | Min. Burst Pressure Bar (psi) | Temp. Range | Weight kg per mtr | Unit Per Lgh. |
|----------|----------------|----------------------------|------------------|----------------|-------------------------------|-------------|-------------------|---------------|
| | | 20 bar (290 psi) | 60 bar (870 psi) | - 30°C to 85°C | | | | |
| 59 07 75 | 38 mm x 10 mtr | | | | | | | |
| 76 | 38 mm x 15 mtr | | | | | | | |
| 77 | 38 mm x 25 mtr | | | | | | | |
| 78 | 38 mm x 30 mtr | | | | | | | |
| 84 | 38 mm x 40 mtr | | | | | | | |
| 86 | 38 mm x 50 mtr | | | | | | | |

Name of Mfr.: Victor Marine Ltd.

Hose Saddle

Lightweight LM6 aluminium alloy comprising of saddle, deck plate, hose guide and positioning clamp. Suitable for 38 mm nominal bore or 50 mm nominal bore (1½" or 2") hoses. Deck base plate for standard 318 mm deck opening or other sizes to special order. Weight 5.5 kg.



| CODE | Items | Remarks | Unit |
|----------|-------------|---|------|
| 59 07 91 | Hose saddle | For 38 mm bore or 50 mm bore hoses. Weight 5.5 kg | Pc. |

Name of Mfr.: Victor Marine Ltd.

Tank Washing Machines**D-3000 Stainless Steel**

Máquinas para Limpiar Tanques

タンククリーニングマシン 油箱清洁机

The smallest and most versatile tank washing machine and can be supplied as a fixed, permanently installed unit or as a portable machine.



Lubrication by the wash media alone removes the possibility of contamination by gearbox lubricants. A combination of nozzle sizes and cycle times allows tailor made to suit particular applications. Type Approval by BV.

| CODE | 59 21 05 | 59 21 03 | 59 21 04 | 59 21 07 | 59 21 10 | 59 21 06 |
|-----------------------------|-----------------------------|-----------|-----------|-----------|-----------|-----------|
| Nozzle Diam | 6 mm | 7 mm | 8 mm | 9 mm | 10 mm | 12.5 mm |
| Jet Length (m) | 11.6-14.5 | 12.8-14.9 | 12.9-15.2 | 13.9-15.8 | 14.2-16.5 | 15.5-16.9 |
| Flow m³/hr | 7.8-10.2 | 9.2-13.8 | 12.6-16.2 | 14.5-19.0 | 16.2-21.9 | 26.4-33.6 |
| Inlet Connection | 1.5" BSP, PN10/40 flange | | | | | |
| Operating temperature range | Up to 100°C | | | | | |
| Cycle times | Various times available | | | | | |
| Sizes | H: 241 mm x W: 150 mm (max) | | | | | |
| Weight | 11 kg | | | | | |

Name of Mfr.: Dasic Marine Ltd.

Tank Washing Machines**D-4000 Stainless Steel**

Máquinas para Limpiar Tanques

タンククリーニングマシン 油箱清洁机

A pre-programmed double nozzle sealed gearbox machine to be used as part of a permanently installed Crude Oil Washing System on any size Crude Tanker.



Double Nozzle COW allows the user to start COW operations while Machine is submerged in Crude with no cumbersome time-consuming adjustments.

The drive mechanism of the D4000 enables operation to commence at very low pressure (3.5 kg/cm² - 50 psi) therefore making it ideally suited to Tank Washing with water when required as well as allowing more machines to be used at one time while COW operations are underway.

Maintenance is greatly reduced due to a minimum of working parts this works to improve reliability of the Machines. Sealed grease lubricated gearbox for long life.

| CODE | 59 21 08 | 59 21 12 | 59 21 09 | Unit Per Set |
|-----------------------------|-----------------------------------|-----------|-----------|--------------|
| Nozzle Diam | 12.5 mm | 14 mm | 16 mm | |
| Jet Length (m) | 16.5-19.2 | 18.9-25.5 | 18.9-25.5 | |
| Flow m³/hr 6 | 26.0-32.6 | 32.0-40.4 | 41.5-52.0 | |
| Inlet Connection | 2.5" 7.5 tpi male, PN16/50 flange | | | |
| Operating temperature range | Up to 100°C | | | |
| Cycle times | Various times available | | | |
| Size | H: 265 mm x W: 165 mm (max) | | | |
| Weight | 14 kg | | | |

Name of Mfr.: Dasic Marine Ltd.

Tank Cleaning Machines**Orbitor**

Máquinas para Limpiar Tanques

タンククリーニングマシン 油箱清洁机

A self lubricated, self cleaning orbital tank washing machine. Its unique design and simplicity of operation and maintenance is ideally suited for use in the rigorous marine environment.



It is a turbine driven with the cleaning medium passing through the machine before being delivered by the nozzles as high pressure impact jets. It is ideally suited for use with very hot water and can be used with low supply pressures. Ideally suited for product carriers up to 20k dwt, with its cleaning media lubricated gear box there is no risk of cargo contamination.

The Orbitor can be supplied as a fixed or portable machine and can easily be utilized as a multi-level unit in chemical carriers.

| CODE | 59 21 13 | 59 21 14 | 59 21 15 | 59 21 16 | 59 21 17 | 59 21 18 |
|-----------------------------|-----------------------------|----------|----------|-----------|-----------|-----------|
| Nozzle Diam | 5 mm | 6 mm | 7 mm | 8 mm | 10 mm | 12.5 mm |
| Jet Length (m) | 6.0-10.5 | 8.0-12.5 | 9.0-13.5 | 10.0-14.5 | 13.0-20.0 | 13.0-21.0 |
| Flow m³/hr | 9.9-13.5 | 6.6-9.0 | 8.4-12.4 | 10.5-14.2 | 17.4-24.2 | 26.4-35.5 |
| Inlet Connection | 1.5" BSP | | | | | |
| Operating temperature range | Up to 95°C | | | | | |
| Cycle times | Various times available | | | | | |
| Sizes | H: 265 mm x W: 120 mm (max) | | | | | |
| Weight | 6 kg | | | | | |

Name of Mfr.: Dasic Marine Ltd.

Tank Cleaning Hose for Jetstream Tank Cleaning Machine

Manguera de Limpieza para Tanque

タンククリーニングホース 油船清洗管

Manufactured with a fully woven polyester reinforcement and completely encapsulated with a thermoplastic elastomer (polyurethane), the hose provides high pressure capabilities together with excellent resistance to attack by fuels, chemicals, abrasion, weathering and ozone/u.v..



Two low resistance stainless steel bonding wires are incorporated against the build up of static electricity. Standard hose length will be available up to 30mtr. Please specify length when ordering. Also available in 50mm diameter.

| Unit Per Mtr. | | | | | |
|---------------|-------|--------------------|---------------------|----------------|-----------------|
| CODE | Dia | Working Pressure | Min. Burst Pressure | Temp. Range | Weight per Mtre |
| 59 21 11 | 38 mm | 20.5 bar (300 psi) | 41 bar (600 psi) | - 48°C to 98°C | 0.3 kg |

Name of Mfr.: Basic Marine Ltd.

Tank Cleaning Machines

Butterworth K / SK / SSK Series Machine

Limpadora de Tanque Serie Butterworth K/KS/KSS

タンククリーニングマシン 油箱清洗機 油脂 K/KS/KSS 系列

They are used portably for water washing, or fixed-in-place crude oil washing of small and medium size tanks and for cleaning hard-to-reach surfaces in large tanks.



They can operate in any position by the Full-sphere with 360° coverage washing pattern.

K Machines

Features rotating twin nozzles and a wash head revolving in planes 90° apart. Small, low-cost and weighing less than 28 kilograms (62 pounds), the K machine has a cleaning range of 10 meters (33 feet) and fluid capacity up to 32 cubic meters (377 cubic feet) per hour. Wash cycle times range from 50 to 23 minutes for inlet pressures of 3.5 to 12 kilograms per square centimeter (50 to 175 psi).

SK and SSK Machines

The SK and SSK machines both weight 30 kilograms (66 pounds) and are identical except for the SSK's larger nozzle and great capacity. The SSK (only used for fixed-in place installations) has a maximum capacity of 75 cubic meters per hour and a cleaning range of 25 meters (82 feet).

The SK has a maximum capacity of 53 cubic meters per hour and a cleaning range of 21 meters (69 feet). The wash cycle times for both units run from 17 to 32 minutes with inlet pressure of 5.25 to 12 kilograms per square centimeter (75 to 175 psi).

Specification

| Model | K | SK | SSK |
|----------------------------------|---|---------------------|---------------------|
| Cleaning Range | 10 meters (33 feet) | 21 meters (69 feet) | 25 meters (82 feet) |
| Fluid Capacity | Up to 32 m³ (377 feet³) | Up to 53 m³ | Up to 75 m³ |
| Pressure Range | Maximum : 250 psi (17.3 bar) Nominal Range : 85-150 psi (5.9-10.3 bar) | | |
| Jet-Length Radius | Maximum : 125' (38 meters) @ 250 psi (12 bar) | | |
| Application | Portable | Fixed-in-place | |
| Inlet Pipe | 50 mm to 65 mm (2" to 2.5") | 75 mm (3") | |
| Inlet Connection Type | 2.50" ASA - B - 26 (NST) - Male | | |
| Thread Connection | American national 2" x 7-1/2 TPI male | | |
| Minimum Tank Opening Requirement | 9.00" (228.6 mm) | | |
| Material | Bronze Alloy | | |
| Weight | 48 lbs (21.77 kg) | 58 lbs (26.31 kg) | |

| CODE | Nozzle Size | Unit Per Pcs. |
|----------|-----------------|---------------|
| 59 23 01 | 9.5 mm (0.375") | K |
| 02 | 11 mm (0.437") | |
| 03 | 14 mm (0.562") | |
| 04 | 22 mm (0.866") | |
| 59 23 05 | 9.5 mm (0.375") | SK |
| 06 | 11 mm (0.437") | |
| 07 | 14 mm (0.562") | |
| 08 | 22 mm (0.866") | |
| 59 23 09 | 9.5 mm (0.375") | SSK |
| 10 | 11 mm (0.437") | |
| 11 | 14 mm (0.562") | |
| 12 | 22 mm (0.866") | |

Accessories for Tank Cleaning Machine Butterworth K / SK / SSK Series Branch Connector



2" Tank Cleaning Hose



Quadrant Deck Plate (Hose Saddle)



Branch Connector



Double Male Coupling



Coupling Spanner

| CODE | Description | Unit |
|----------|--|------|
| 59 23 21 | Tank cleaning hose 2" x 50 feet | Lgh |
| 22 | " 2" x 75 feet | |
| 23 | " 2" x 100 feet | |
| 59 23 24 | Quadrant deck plate (Hose Saddle) | Pc. |
| 59 23 25 | Branch connector 2-1/2" (3 male threads) | Pc. |
| 26 | " 2-1/2" (2 male & 1 female thread) | |
| 59 23 27 | Double male coupling 2-1/2" | Pc. |
| 28 | Coupling spanner | Pc. |

Tank Cleaning Machines

Butterworth LT & LT-FT

Máquinas de limpieza de depósitos タンククリーニングマシン 儲罐清洗机

An automated portable or fixed-in-place tank cleaning machine provides 360° impact indexed coverage for the cleaning of the inside of tanks of Chemical and Product Tankers. A highly versatile machine and is applicable in most all types of tanks for process, storage, and transportation. Tank capacities range from 500 – 150,000 gallons (2 – 570 m³) for one machine per tank and larger tanks where multiple machines are installed.



LT machine creates a pattern matrix similar to a ball of twine, and a complete pattern is established when 65 axial revolutions of the body have been completed. During the process of this pattern build out, 4 cycles are established with each cycle increasing the density of the pattern matrix.

Specification

| | |
|------------------------------------|--|
| Pressure Range | 0 – 300 PSI (21 Bar) |
| Jet Length Radius | 0 – 58' (17.68 mtr) |
| Inlet Connection Type | 1-1/2" NPT (F), 1-1/2" BSP (F) |
| Minimum Tank Operating Requirement | 5.613" (142.56 mm) |
| Material | 316 Stainless steel / CD4-MCU Duplex S/S |
| Weight | 15 lbs (6.8 kg) |

NPT Inlet Type

Unit Per Pcs.

| CODE | Nozzles | Inlet | Max. Rotational PSIG | Model |
|------------------------|------------|--------|----------------------------|--------------|
| Female Threaded | | | | |
| 59 23 71 | 2 x 6.0 mm | | 150 | LT6Z33NOFT |
| 72 | 2 x 8.0 mm | | 300 | LT8Z21NOFT |
| 73 | 2 x 10 mm | 1-1/2" | 300 | LT10Z11NOFT |
| 74 | 2 x 10 mm | NPT | 150 | LT10Z21NOFT |
| 75 | 2 x 12 mm | | 300 | LT12Z11NOFT |
| Male Threaded | | | | |
| 59 23 76 | 2 x 6.0 mm | | 150 | LT6Z33NMOTF |
| 77 | 2 x 8.0 mm | 1-1/2" | 300 | LT8Z21NMOTF |
| 78 | 2 x 10 mm | NPT | 300 | LT10Z11NMOTF |
| 79 | 2 x 10 mm | | 150 | LT10Z21NMOTF |
| 80 | 2 x 12 mm | | 300 | LT12Z11NMOTF |

BSP Inlet Type

Unit Per Pcs.

| CODE | Nozzles | Inlet | Max. Rotational PSIG | Model |
|------------------------|------------|--------|----------------------------|--------------|
| Female Threaded | | | | |
| 59 23 81 | 2 x 6.0 mm | | 150 | LT6Z33BOFT |
| 82 | 2 x 8.0 mm | 1-1/2" | 300 | LT8Z21BOFT |
| 83 | 2 x 10 mm | BSP | 300 | LT10Z11BOFT |
| 84 | 2 x 10 mm | | 150 | LT10Z21BOFT |
| 85 | 2 x 12 mm | | 300 | LT12Z11BOFT |
| Male Threaded | | | | |
| 59 23 86 | 2 x 6.0 mm | | 150 | LT6Z33BMOFT |
| 87 | 2 x 8.0 mm | 1-1/2" | 300 | LT8Z21BMOFT |
| 88 | 2 x 10 mm | BSP | 300 | LT10Z11BMOFT |
| 89 | 2 x 10 mm | | 150 | LT10Z21BMOFT |
| 90 | 2 x 12 mm | | 300 | LT12Z11BMOFT |

Name of Mfr.: Butterworth

Subsea Robots for Hull Cleaning

Robot submarino para limpieza de cascos

船体清掃用ロボット 用于清洁船体的水下机器人

Subsea hull cleaning robot is designed for requirement of higher effective plan with less consumption. The drive mechanism of the robot consists of a thruster and a crawler motor. It has multiple mixed motion modes for cruising through the water, climbing vertically, and walking upright/inverted. The bottom-mounted cavitation jet cleaning nozzles allow cleaning while moving on the surface without damaging the hull's paint. The robot is fitted with a high-definition camera and a dark ambient light compensation system. The whole operation is fully visible and the cleaning effect can be verified. The robot uses thrust adsorption, which can be adapted to different work surface operation requirements and can meet non-magnetic requirements.



ECOSEA ES-150



ECOSEA ES-2000

| CODE | 59 23 91 | 59 23 92 |
|-------------------------|-------------------------|---------------------------|
| Model | ECOSEA ES-150 | ECOSEA ES-2000 |
| Maximum running speed | 12 m/min | 60 m/min |
| Maximum working depth | 50 m | 50 m |
| Cleaning speed | ≤ 200 m ² /h | ≤ 2,000 m ² /h |
| Continuous working time | 24 h | 24 h |
| Power supply | AC440 V±40%, ≥55 kW | DC500 V±50%, ≤20 kW |
| Dimensions (L×W×H) mm | 1,100 × 1,100 × 900 | 3,000 × 1,850 × 900 |
| Weight (kg) | 150 | 580 |
| Name of Mfr | Nesto | |

11. Vacuum Cleaners**Vacuum Cleaners, Industrial Pneumatic**

Aspiradoras, Neumática Industrial

空気式工業用真空掃除機

空气式工业用真空吸尘器

Compressed air driven type vacuum cleaner. Safe operation even in an explosive gas atmosphere.

A wide range of models are available, and the listed specifications are for your reference. When ordering, ask your supplier for more details about the capacity of the machine or ask for catalogues and any further information.



| CODE | 59 07 03 | 59 07 01 | 59 07 02 |
|---|-----------------|-----------------|----------|
| Model | A-250 | AX-1 | AX-2 |
| Tank Capacity (litr) | 18 | 50 | 60 |
| Suction Air Pressure (KPa) | 15.0 | 29.5 | |
| Working Air Pressure (kgf/cm ²) | 5.0 - 6.0 | | |
| Air Hose | 1/4" or 3/8" | 1/2" | |
| Reduction | 32-32 | 50-38 | |
| Suction Hose I.D. (mm) | 32 | 38 | |
| Size (W × D × H mm) | 315 × 315 × 500 | 465 × 560 × 890 | |
| Weight (kg) | 7.5 | 16 | 22 |
| Working Air Quantity (L/min) | 800 | 1,500 | |

Remark: A-250 model replaceable your own 18L (Φ300) pail-cans

Name of Mfr.: Sanritsu-Kiki



| CODE | 59 07 04 | 59 07 09 |
|---|------------------|-------------------|
| Model | VHC110 | VHC200 |
| Tank Capacity (litr) | 37 | 100 |
| Suction Air Pressure (KPa) | 32.5 | 38.0 |
| Working Air Pressure (kgf/cm ²) | 4.0 - 7.0 | 4.0 - 6.0 |
| Air Hose | 1/2" | |
| Reduction | 50 - 40 | 70 - 50 |
| Suction Hose I.D. (mm) | 40 | 50 |
| Size (W × D × H mm) | 570 × 560 × 1010 | 910 × 600 × 1,590 |
| Weight (kg) | 37 | 70 |

Remarks: ATEX/ Explosion Proof version available upon request

Name of Mfr.: Nilfisk Pte Ltd

Vacuum Cleaners, Industrial Electric

Aspiradbras, Eléctrica Industrial

電動工業用真空掃除機 工业电动真空吸尘器

Electric driven, powerful, heavy duty vacuum cleaners for the removal of dust, metal particles, powder, or liquid. A wide range of models are available, and the listed specifications are for your reference. When ordering, ask your supplier for more details about the machine or for catalogues from the dealer.

How to order: CODE

Vacuum cleaner, industrial, electric, CAPACITY ltr, POWER SOURCE VOLTAGE



JE-250-3D (wet and dry)

JX-4530 (wet and dry)

| CODE | 59 07 20 | 59 07 23 | Unit Per Set 59 07 24 |
|------------------------|-------------|---------------|--------------------------|
| Model | ATTIX 30 | VHS120 | S3 L100 |
| Voltage | 110/ 230V* | 230V | 110V/ 220V* |
| Tank Capacity (ltr) | 30 | 37 | 100 |
| Motor Output (kW) | 1.5 | 2.0 | 3.0 |
| IP Protection Class | X4 | | 44 |
| Suction Pressure (KPa) | 25 | | 21 |
| Inlet (mm) | 50 | 50 | 70 |
| Reduction | 50 - 36 | 50 - 40 | 70 - 50 |
| Suction Hose I.D.(mm) | 36 | 40 | 50 |
| Size (W×D×H mm) | 450×380×595 | 560×570×1,015 | 800×600×1,580 |
| Weight (kg) | 10 | 38 | 71 |

Remarks: ATEX/ Explosion Proof version available upon request

Remarks*: 110V available upon request

Name of Mfr.: Nilfisk Pte Ltd

Pneumatic Vacuum Cleaners “BLOVAC CLEANER”

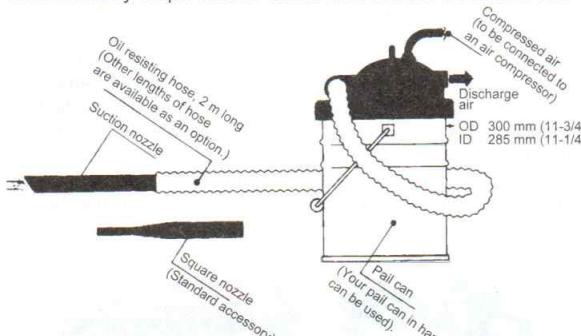
Aspiradoras Neumáticas

プローバッククリーナー 风动真空吸尘器

A compact and lightweight industrial vacuum cleaner which works on compressed air. Capable of cleaning off water, oil, and bottom sludge as well as dust and metal chippings. It will even vacuum explosive materials as long as the machine is properly grounded from electrical current. Made of a unique design permitting the use of an ordinary pail can with an outside diameter of 300 mm to collect the dust and waste. Furnished with a pail can, 2 meters of oil resistant hose, and an oil stopper which automatically stops suction when the receiver becomes full.



Square Nozzle Round Nozzle



| CODE | Type | Hose | Suction nozzle | Air consumption at 5kgf/cm² | Vacuum (in water column) at 5kgf/cm² | Suction capacity at 5kgf/cm² |
|----------|------------------|------------------------------|----------------------------------|-----------------------------|--------------------------------------|------------------------------|
| 59 07 21 | V-300 (for 3 HP) | ø25 mm × 2 m (oil-resisting) | ø25 mm w 30 cm 2 types available | 350 Ltr/min | 2,600 mm/H ₂ O | 1.1 m ³ |
| 59 07 22 | V-500 (for 5 HP) | ø32 mm × 2 m (oil-resisting) | ø32 mm w 30 cm 2 types available | 500 Ltr/min | 2,600 mm/H ₂ O | 1.8 m ³ |

Name of Mfr.: Blovac Co. Ltd.

Optional hoses of other lengths are also available on request.



ATTIX 30

VHS120

S3 L100

Air Polishers

Pulidoras de aire

エア式ボリッシャー 气动式打磨器

Best choice to shampoo the floor and deck board of hazardous area. This air polisher can be used without any electricity nor battery.

- * With safety handle.
- * Air filter, regulator and lubricator equipped.
- * Exhaust muffler/cleaner equipped.
- * Various type of pad & brush available to choose.

Pad and brush is optional.



FP-140AP

| CODE | | 59 07 30 | | Unit Per Set |
|--|------------|-----------------|------|--------------|
| Model | | AFP-140AP | | |
| Air Pressure (MPa) | | 0.5 | 0.4 | |
| Pad/Brush r.p.m. | | 260 | 200 | |
| Air Consumption (Nm ³ /min) | | 0.98 | 0.73 | |
| Air Inlet | | Rc 1/2 (PT 1/2) | | |
| Size | Width | 390 mm | | |
| | Height | 1,175 mm | | |
| | Pad/ Brush | 15 inch/14 inch | | |

Name of Mfr.: San-ei Seiki Seisakusho Co., Ltd.

12. High Pressure Cleaners

High Pressure Cleaners

Aspiradoras de Alta Presión 高压クリーナー

高压清洗机

High performance, excellent ergonomics, low noise levels and easy servicing make this an efficient pressure washer. For more efficient cleaning with reduced chemical consumption the unit can be fed with hot water up to 60 - 85 degrees. HPC 54/1 ideal for 3-4 hours and HPC 67/1 for 6-7 hours continuously operations.



Unit Per Set

| CODE | 59 07 36 | 59 07 35 | 59 07 37 |
|---------------------------|-------------------------------------|-------------------|-------------------|
| Model | HPC 54/1 | HPC 67/1 | HD10/22 S |
| Working Pressure | 200 bar | 195 bar | 3-22 MPa |
| Water Flow | 1,000 ltr/hour | 1,280 ltr/hour | 450-900 L/H |
| Max. Water Inlet Temp. | 60°C | 85°C | 60°C |
| Rotation Speed | 1,750 rpm | | - |
| IP Protection | X5 | | - |
| Water Inlet Connection | 3/4" male | | - |
| Voltage | 3-440 / 60 Hz / 11.4 A | | 3-200V, 50/60 Hz |
| Dimensions L × W × H (mm) | 735 × 570 × 1,020 | 775 × 570 × 1,020 | 560 × 500 × 1,090 |
| Weight kg | 71 | 90 | 62 |
| Name of Mfr. | Unitor™ by Wilhelmsen Ships Service | | Karcher |

Air-Operated Pressure Washers

Hydra-Clean

Limpiaadoras a presión

エア式高圧クリーナー 高压清洗机

High Pressure Washer which can be used safe in hazardous locations. Efficient cleaning with water, detergent or chemical solutions. Supports multiple guns. Designed to use with cold or hot water up to 200°F (93°C). Includes everything needed to use with open-head universal drums. Fits most pressure, flow and material requirements. Available with an accumulator and chemical injector.



Unit Per Set

| CODE | 59 07 38 | 59 07 39 | 59 07 34 |
|-----------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Model | 247551 | 247553 | 258664 |
| Pump Package | 23:1 | 30:1 | 40:1 |
| Pump Construction | Stainless Steel | | |
| Mount Type | Cart Mount | | |
| Max. Working Pressure | 2,275 psi (157 bar, 15.7 MPa) | 3,065 psi (211 bar, 21.1 MPa) | 4,000 psi (276 bar, 27.6 MPa) |
| | 100 psi (7 bar, 0.7 MPa) | | |
| Fluid Flow at 60 cpm | 9.2 gpm (34.7 lpm) | 6.8 gpm (25.9 lpm) | 4.6 gpm (17.4 lpm) |
| Volume per Cycle | 19.6 oz (580 cc) | 14.5 oz (430 cc) | 9.8 oz (290 cc) |
| Air Inlet Size | 3/4" npt (f) | | |
| Fluid Inlet Size | 1" | | |
| Fluid Outlet Size | 3/8" | | |
| Name of Mfr. : Graco | | | |

High Pressure Cleaners

Maquinas para Limpiar de Alta Presión

高压クリーナー 风动高压吸尘器

Air Powered Heavy Duty

Designed for heavy duty use in hazardous areas where combustible gases and liquids may be present, ensuring safety and effective cleaning. It is ideal for removing stubborn dirt, stains and other debris.

Non corrosive materials are used in pump, fittings and pipes.



Unit Per Set

| CODE | 59 08 51 |
|-----------------------------------|---------------------------------------|
| Model | C-200AIR |
| Power Consumption | 9.0 HP (6.6 KW) |
| Motor Speed | 1,500 r.p.m. |
| Working Pressure | 200 bar (2,900 psi) |
| Flow Capacity | 15.0 ltr/min. |
| Max. Air Consumption | 560 m ³ /hour (330 Cf/min) |
| Dimensions | L850 × W550 × H900 mm |
| Weight | 70 kg |
| Name of Mfr. : DEN-SIN by Nilfisk | |

Electric Powered

Designed for general purpose cleaning tasks in multiple industries. These high pressure cleaners are used for daily cleaning of machinery, vehicles, and buildings, for the removal of stubborn dirt, stains and other debris from multiple surfaces. Available in AC220V or AC440V. All pump materials, fittings and pipes in contact with water are non-corrosive.



C-110E/C-170E

Unit Per Set

| CODE | 59 08 52 | 59 08 53 | 59 08 54 |
|-------------------|------------------------|----------------------|----------------------|
| Model | C-110E | C-170E | |
| Power Supply | AC 220V 1 ph 60Hz | AC 220V 3 ph 60Hz | AC 440V 3 ph 60Hz |
| Power Consumption | 3.0 HP (2.2 kW) | | 6.0 HP (4.4 kW) |
| Motor Speed | | 1,750 r.p.m. | |
| Working Pressure | 110 bar (1,600 psi) | 170 bar (2,465 psi) | |
| Flow Capacity | 11.7 ltr/min. | 15.2 ltr/min. | |
| Dimensions | L720 × W480 × H900 mm | | |
| Weight | 45 kg | 46 kg | |

Name of Mfr. : DEN-SIN by Nilfisk

59

C-200E

Unit Per Set

| CODE | 59 08 55 | 59 08 56 |
|-------------------|-----------------------|----------------------|
| Power Supply | AC 220V 3 ph 60Hz | AC 440V 3 ph 60Hz |
| Model | C-200E | |
| Power Consumption | 7.5 HP (5.5 KW) | |
| Motor Speed | 1,750 r.p.m. | |
| Working Pressure | 200 bar (2,900 psi) | |
| Flow Capacity | 16.5 ltr/min. | |
| Dimensions | L720 × W480 × H900 mm | |
| Weight | 56 kg | |

Name of Mfr. : DEN-SIN by Nilfisk

Combijet Model JE60-500

500 bar compact unit with a pressure regulator valve as standard.

Suitable for removal of hard dirt, grease oil, embedded crystallized salt, barnacles and marine growth, soil and clay, rust flakes and corroded paint. Available in 50 and 60 Hz.



Unit Per Set

| CODE | 59 08 64 | 59 08 65 |
|-------------------|-------------------------------------|---------------------------|
| Power Supply | AC 380-440V/ 3 ph 50Hz | AC 380-440V/ 3 ph 60Hz |
| Model | JE60-500 | |
| Power Consumption | 20 HP (15 KW) | |
| Motor Speed | 1,450 rpm @50 Hz / 1,750 rpm @60 Hz | |
| Working Pressure | 500 bar (7,250 psi) | |
| Flow Capacity | 16 ltr/min. | 19 ltr/min. |
| Dimensions | L1,070 × W550 × H900 mm | |
| Weight | 245 kg | |

Name of Mfr. : Combijet Manufacturing Ltd.

Engine Powered

The petrol and diesel powered series of High-Pressure Cleaners offers total independence of external power supply giving the user a higher degree of mobility. For effective removal of stubborn dirt, stains and other debris. Non corrosive materials are used in pump, fittings and pipes. Self-priming and suction allow water to be drawn from a tank or river. Rugged, flat-proof wheel design and high mobility across any surface. Reliable engines, provided by Honda or Kohler depending on model, ensure long equipment life and high-impact cleaning.



Diesel Engine

MC5DE

Unit Per Set

| CODE | 59 08 61 |
|----------------------|---------------------|
| Model | MC5M-195/1000DE |
| Fuel Oil | Diesel |
| Power Consumption | 10 HP (7.5 kW) |
| Pump Speed | 1,650 r.p.m. |
| Working Pressure | 195 bar (2,800 psi) |
| Flow Capacity | 16.7 ltr/min. |
| Fuel Tank Capacity | 5.5 ltr |
| Dimensions L × W × H | 750 × 680 × 850 mm |
| Weight | 110 kg |

Name of Mfr. : DEN-SIN by Nilfisk

Petrol Engine (Gasoline)

MC5PE



Unit Per Set

| CODE | 59 08 63 | 59 08 62 |
|-----------------------|---------------------|---------------------|
| Model | MC5C-240/940PE | MC5M-280/110PE |
| Fuel Oil | Petrol (Gasoline) | |
| Power Consumption | 9 HP (6.6 kW) | 13 HP (9.5 kW) |
| Pump Speed | 3,400 r.p.m. | |
| Working Pressure | 240 bar (3,500 psi) | 280 bar (4,000 psi) |
| Flow Capacity | 15.7 ltr/min. | 18.4 ltr/min. |
| Fuel Tank Capacity | 5.3 ltr | 6.0 ltr |
| Dimensions L×W×H (mm) | 546 × 615 × 1,021 | 713 × 572 × 1,021 |
| Weight | 45 kg | 61 kg |

Name of Mfr. : DEN-SIN by Nilfisk

Combijet JP Series 200-250 bar



| CODE | 59 08 78 | 59 08 79 | Unit Per Set |
|-----------------------|---------------------|---------------------|--------------|
| Model | JP 9-200 | JP 13-250 | |
| Pressure | 200 bar (2,900 psi) | 250 bar (3,625 psi) | |
| Power (Petrol Motor) | 9 HP (6.6 KW) | 13 HP (9.7 KW) | |
| Flow Rate | 13 ltr/min. | 17 ltr/min. | |
| Electric Supply | Petrol Engine | Petrol Engine | |
| Motor Speed | 3,400 rpm | 1,700 rpm | |
| Dimensions LxWxH (mm) | 1,030 x 500 x 670 | 1,000 x 660 x 920 | |
| Weight | 45 kg | 61 kg | |

Name of Mfr.: DEN-SIN by Nilfisk

High Pressure Water Blasters

Heavy Duty

Lanzas de agua a alta presión 高压洗净机 高压射水器

Powerful & cost efficient cleaning for MARINE users.

Applications: General cleaning, washing of salt spray, removal of loose paint & rust. Cleaning in holds & transfer pipes. Cleaning scaffolding material. Removal of lime scale deposits and marine growth. Removal of oil & grease from decks & machinery. Dust free wet abrasive sand blasting & pipe cleaning with accessories.



| CODE | 59 08 44 | 59 08 58 | 59 08 59 | Unit Per Set |
|-----------------------|------------------------|------------------------|------------------------|--------------|
| Model | CE20-200 | MC 9P 350/1260 | MC 9P 500/960 | |
| Pressure | 170 bar (2,500 psi) | 350 bar (5,075 psi) | 500 bar (7,250 psi) | |
| Power (Elec. Motor) | 20 HP (15 kW) | 24 HP (18 kW) | | |
| Flow Rate | 45 ltr/min. | 21 ltr/min. | 16 ltr/min. | |
| Electric Supply | AC 440V 3 ph 60 Hz | | | |
| Motor Speed | 1,750 rpm | 1,760 rpm | | |
| Dimensions LxWxH (mm) | 90 x 500 x 850 | 1,100 x 500 x 980 | | |
| Weight | 170 kg | 245 kg | 255 kg | |
| Manufacturer | Den-Jet Marine | DEN-SIN by Nilfisk | | |

Ultra High Pressure Water Blasters

Lanzas de Agua a Ultra Alta Presión

超高压ウォーターブラスター

超高压射水器

Water blasting of decks, tanks, ballast tanks to remove all surface particles & corrosion to a superior standard without the use of abrasives.

Applications: Removal of paint, rust from steel & concrete surfaces. Removal of lime scale deposits & marine growth. Deck cleaning & cargo hold cleaning. Dust free wet abrasive sand blasting & pipe cleaning with rotating nozzle accessories.

Electric Powered

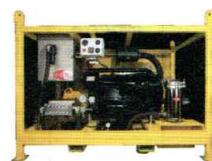


| CODE | 59 08 71 | 59 08 72 | 59 08 74 | 59 06 88 | 59 08 73 | Unit Per Set |
|---------------------------|------------------------|-------------------------|---------------------------|---------------------------|---------------------------|--------------|
| Model | MC 10P 500/1680 | MC 10P 800/1170 | MC 10P 1100/900 | CE40-1380 | UHP C-2500/25E | |
| Pressure | 500 bar (7,250 psi) | 800 bar (11,600 psi) | 1,100 bar (16,500 psi) | 1,380 bar (20,000 psi) | 2,500 bar (36,000 psi) | |
| Power Consumption | (30 KW) | (30 KW) | (30 KW) | (33KW) | (113 KW) | |
| Flow Rate | 28 ltr/min. | 20 ltr/min. | 15 ltr/min. | 13.8 ltr/min. | 25 ltr/min. | |
| Electric Supply | | | | 440/3ph 60Hz | | |
| Motor Speed | 1,765 rpm | 1,175 rpm | 1,175 rpm | 1,200 rpm | 540 rpm | |
| Current Consumption | 54 amps | 54 amps | 54 amps | 57 amps | 125 amp | |
| Dimensions L x W x H (mm) | | | | 1,600 x 1,050 x 1,150 | 2,300 x 1,400 x 1,800 | |
| Weight | 470 kg | 565 kg | 565 kg | 650 kg | 1,700 kg | |
| Manufacturer | DEN-SIN by Nilfisk | | | Den-Jet Marine | DEN-SIN by Nilfisk | |

Diesel Powered



C-500/30D & C-800/20D



C2500/25D

| CODE | 59 08 75 | 59 08 76 | 59 08 80 | 59 08 77 | Unit Per Set |
|---------------------------|------------------------|-------------------------|---------------------------|---------------------------|--------------|
| Model | C-500/30D | C-800/20D | C-1100/16D | C-2500/25D | |
| Pressure | 500 bar (7,500 psi) | 800 bar (11,600 psi) | 1,100 bar (15,950 psi) | 2,500 bar (36,000 psi) | |
| Power (Diesel Engin) | 50 HP (36.7 KW) | 50 HP (36.7 KW) | 50 HP (36.7 KW) | 150 HP (113 KW) | |
| Flow Rate | 30 ltr/min. | 20 ltr/min. | 18 ltr/min. | 25 ltr/min. | |
| Fuel Tank Capacity | 124 ltr | 124 ltr | 124 ltr | 140 ltr | |
| Dimensions L x W x H (mm) | | | | 2,600 x 1,450 x 1,800 | 1,800 |
| Weight | | | | 970 kg | 1,950 kg |

Name of Mfr.: DEN-SIN by Nilfisk

Explosion Proof Type

Electric devices enclosed in a solid cabinet type is also available as explosion proof for tankers & chemical carriers.



CEX Series



EXP Series

| CODE | 59 07 13 | 59 07 14 | 59 07 29 | 59 07 98 | Unit Per Set |
|---------------------------|------------------------|------------------------|------------------------|------------------------|--------------|
| Model | CEX-20-200 | CEX20-280 | CEX20-350 | CEX20-500 | |
| Pressure | 170 bar (2,500 psi) | 250 bar (3,600 psi) | 350 bar (5,075 psi) | 500 bar (7,250 psi) | |
| Power Rating | 20 HP (15 kW) | | | | |
| Flow Rate | 45 ltr/min. | 32ltr/min. | 23ltr/min. | 16ltr/min. | |
| Electrical Supply | | 440V 60Hz | | | |
| EP Grade | EExde IIC T4 | EExde IIC T4 | EExde IIC T4 | EExde IIC T4 | |
| Dimensions L × W × H (mm) | | 1,085 × 500 × 1,080 | | | |
| Weight | | 235 kg | | | |
| Manufacturer | | DEN-JET Marine | | | |

| CODE | 59 08 50 | 59 07 99 | 59 08 82 | 59 08 00 | Unit Per Set |
|---------------------------|--------------------------|---------------------------|---------------------------|---------------------------|--------------|
| Model | EXP20-14KEMC | CEX40-1380 | EXP30-22KEMC | CEX40-1800 | |
| Pressure | 1,100bar (16,500 psi) | 1,380 bar (20,000 psi) | 1,500 bar (21,750 psi) | 1,800 bar (26,100 psi) | |
| Power Rating | 20 HP (15 kW) | 45HP (33 kW) | 30 HP (22 kW) | 45 HP (33 kW) | |
| Flow Rate | 8 ltr/min. | 13.8ltr/min. | 8 ltr/min. | 10ltr/min | |
| Electrical Supply | 3-440V/ 60Hz/27A | 3-440/400V/ 60Hz/57A | 3-440V/ 60Hz/32A | 3-440/400V/ 60Hz/57A | |
| EP Grade | Ex d IIB T4 | EExde IIC T4 | Ex d IIB T4 | EExde IIC T4 | |
| Dimensions L × W × H (mm) | 1,250 × 880 × 1,270 | 1,600 × 1,050 × 1,150 | 1,250 × 880 × 1,270 | 1,600 × 1,050 × 1,150 | |
| Weight | 630 kg | 680 kg | 670 kg | 680 kg | |
| Manufacturer | BC Taechang | Den-Jet Marine | BC Taechang | Den-Jet Marine | |

Vertical type

Designed to use for any narrow passage, suitable on Container Vessels.



Unit Per Set

| CODE | 59 08 42 | 59 08 90 | 59 09 00 | Unit Per Set |
|---------------------------|------------------------|---------------------------|---------------------------|--------------|
| Model | CE20-500 | MJ20-14KEV | HJ30-22KEV | |
| Pressure | 500 bar (7,250 psi) | 1,100 bar (16,500 psi) | 1,500 bar (21,750 psi) | |
| Power Rating | 20 HP (15 kW) | 20 HP (15 kW) | 30 HP (22 kW) | |
| Flow Rate | 16 ltr./mn. | | 8 ltr/min. | |
| Electrical Supply | 3-440V/60Hz/28A | 3-440V/60Hz/27A | 3-440V/60Hz/32A | |
| IP Protection | 55 | | 54 | |
| Dimensions L × W × H (mm) | 950 × 500 × 850 | | 950 × 550 × 1,440 | |
| Weight | 170 kg | 486 kg | 526 kg | |
| Manufacturer | Den-Jet Marine | | BC Taechang Corp. | |

Hot Box

Ideal tool for cargo hold cleaning to reduce use of chemicals. Connects to any type of water blaster up to 500 bar and heats up the water to create hot water, enhancing the efficiency of cleaning works.



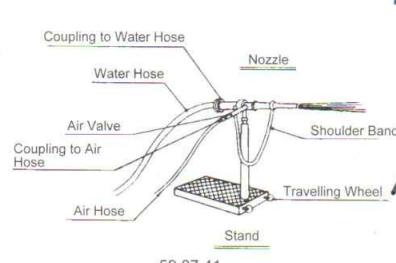
| CODE | 59 08 43 |
|-----------------------------------|------------------------|
| Model | HOT BOX 220 VAC - 500 |
| Pressure | MAX 500 bar (7,250psi) |
| Flow Rate | MAX 45 ltr/min |
| Heating source | Diesel burner |
| Heat Energy | 90,000 kcal/h / 105 KW |
| Electrical Supply | 220 V/230 V |
| Heat Transfer Temp. at 10 lpm: °C | 98 |
| Heat Transfer Temp. at 20 lpm: °C | 75 |
| Heat Transfer Temp. at 30 lpm: °C | 50 |
| Heat Transfer Temp. at 40 lpm: °C | 37 |
| Heat Transfer Temp. at 45 lpm: °C | 33 |
| Dimensions L × W × H (mm) | 800 × 600 × 1,045 |
| Weight | 150 kg |
| Manufacturer | Den-Jet Marine |

13. Hold Cleaning Guns**Hold Cleaning Guns**

Lanzas de Presión para Limpieza Bodegas/Tanques

ホールドクリーニングガン 气力清洁枪

For cleaning of bulk carrier holds by a high pressure water stream. A strong stream of water can be projected a distance of up to 25 mtrs for the removal of any loose rust, flaking paint, or cargo residue. Supplied complete with a tripod stand, the lightweight design is ideal for a one-man operation. Please specify type and size of water hose coupling to be connected, when ordering.



59 07 41



59 07 43

| CODE | 59 07 41 | 59 07 43 | Unit Per Set |
|---------------------|-------------------------------|--|--------------|
| Model | Water Tobey | VP Water Gun & Tripod | |
| Effective Jet Reach | 20 - 25 mtr | 25 mtr | |
| Working Pressure | 5 - 7 kgf/cm² | 5 - 6 kgf/cm² | |
| Water Consumption | 28 ton/hour | 12 - 28 m³/hour | |
| Water Hose | 50 mm or 65 mm | 50 mm BSP male connection | |
| Hose Coupling | Nakajima type | BSP Plus Any other type | |
| Air Hose | 15 mm | 3/4" / 1" claw coupling or 1" BSP female | |
| Weight | Gun : 4.7 kg Stand : 18 kg | Gun with tipod 10.5 kg | |
| Name of Mfr. | Exeno Yamamizu | Victor Marine Ltd. | |

Hold Cleaners

Trelawny Hydraflex

Mantenga Limpiadores ホールドクリーナー 保持清潔

Specifically designed for hold cleaning on bulk carriers and cargo vessels of all sizes. Operated by a combination of water and compressed air, the gun throws a solid, tightly compressed jet of water of up to 30 mtr (100 ft).

Features and Benefits

- Stainless steel construction
- Compact design
- Low maintenance



Unit Per Set

| CODE | 59 07 42 |
|----------------------------|--|
| Type | Standard kit |
| Model | 342.HY50 |
| Effective Jet Reach | 30 mtr |
| Recommended Water Pressure | 6 kgf/cm ² |
| Recommended Air Pressure | 7 kgf/cm ² |
| Water Consumption | 300 gal/min. |
| Water Hose | 2" |
| Hose Coupling | Instantaneous |
| Air Hose | 3/4" |
| Weight | 15 kg (Gun & Tripod) |
| Including | Gun, Tripod, Water hose coupling (2-1/2" x 2-1/2" and 1-1/2" x 2"), and Instantaneous water hose adapter |

Name of Mfr. : Trelawny SPT Ltd.

Spare Parts for Hydraflex Hold Cleaning Gun

Unit Per P.c.

| CODE | Description | Part No. | Weight Kg (lb) |
|----------|-------------------------------------|----------|----------------|
| 59 07 46 | Water hose coupling 2-1/2" x 2-1/2" | 342.HY03 | 1.70 (4.3) |
| 47 | Water hose coupling 2-1/2" x 2" | 342.HY04 | 1.95 (0.75) |
| 48 | Instantaneous water hose adapter | 342.HY05 | 0.30 (0.66) |
| 49 | Ball valve | 342.HY07 | 1.40 (3.10) |

Hold Cleaning Guns

Maxi-Gun

Lanzas de Presión para Limpieza

ホールドクリーニングガン 固定式清潔栓

It consists of a uniquely designed series of air and water nozzles with 2 special swivel units in the vertical and horizontal planes. It is designed to give the highest and strongest solid water jet possible up to about 60 meters. It can be easily operated by one man using the normal service mains available on most Bulk



carriers and OBO type vessels.

It requires air pressures of 7 bar and can simply be connected to the normal water-on-deck line and the service air line.

For safety, the Maxi-Jet incorporates 3 easily mounted water ballast tanks. These form a weighted, self-supporting stand for the nozzle and swivel units. With the ballast tanks full one man can easily and safely operate the equipment from a standing position, controlling jet direction and cleaning pattern from the nozzle handle.

| Unit Per Set | |
|-----------------------------|--|
| CODE | 59 07 45 |
| Recommended Air Pressure | 7 bar |
| Minimum Air Supply | 5 m ³ /min. |
| Estimated Water Consumption | 20 – 100 m ³ /hr. |
| Effective Washing Height | 35 – 60 meters |
| Air Hose | Minimum 1" |
| Water Hose | Minimum 2-1/2" |
| Accessories | Twin water hose inlet, Water-filled ballast tank x 3 |
| Total Weight | 180 kg |
| Name of Mfr. | Stromme |

Hold Cleaner Guns

VULCAN

Lanzas de Presión para Limpieza

ホールドクリーニングガン 固定式清潔栓

Designed for cleaning cargo holds, operated by combination of water and electric motor which makes working condition more steady. Due to high flow, water can reach at high position on the cargo holds easily.



Unit Per Set

| CODE | 59 07 79 |
|---------------------|--|
| Type | Standard kit With Cleaning Stand & Nozzle |
| Medium | Seawater (or Fresh Water) |
| Effective Jet Reach | 25 mtr |
| Water Pressure | 17-19 Bar |
| Water Consumption | 400 ltr/min. |
| Hose Connection | Inlet 65A / Outlet 40A hydrant nipple |
| Weight | Pump unit: 345 kg/Stand: 50 kg |
| Size L x W x H (mm) | Pump Unit: 1,520 x 650 x 1,310 Stand: 900 x 500 x 1,200 |

Name of Mfr. : BC Taechang Ind. Corp.

Hold Auto Cleaners

Limpiajador automático de la bodega de carga

自動カーゴホールドクリーナー 货舱自动清洁器

Designed for cleaning cargo holds, controlled by DC motors which make the water jets move up and down automatically without crews' operation. Standard kit with DC converter type and portable kit with rechargeable battery type are available.



Unit Per Set

| CODE | 59 06 54 | 59 06 60 |
|----------------------------|---|--|
| Type | Standard Kit with DC Converter | Portable Kit with Rechargeable Battery |
| Effective Jet Reach | 20 - 30 meters | |
| Recommended Water Pressure | 4 - 6 kgf/cm ² | |
| Water Hose | 50 mm or 65 mm | |
| Hose Coupling | 2" or 2-1/2" | |
| Voltage | DC 24V | |
| Accessories | Assembled portable stand, Auto Nozzles, Waterproof Control Box, DC Converter/Rechargeable Battery | |
| Weight | 66 kg | 68 kg |
| Name of Mfr. | Goldbay Marinetech Ltd. | |

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Pneumatic & Electrical Tools

Cargo Hold Application Set

Juego de aplicación para bodegas de carga
カーゴホールドアプリケーションセット
货舱实用工具组合

For applying all kinds of protective coatings, as well as for the application of chemical solutions for cleaning of cargo holds. Suitable for all kinds of chemicals (acids, alkaline, solvent, polymer, chlorine base). The lightweight telescopic applicator lance, made by Carbon Fiber, Glass Fiber, allows for reaching up to 20m height, with a bare pole weight of less than 4 kg. An air-operated double diaphragm pump made by GFR + PP (Glass Fiber + Polypropylene) material is also included, as well as an 50 m delivery hose roll and a 5 m suction hose.



Unit Per Set

| CODE | 59 07 90 | 59 07 92 | 59 07 95 | 59 07 96 | |
|-----------------------|---|----------|----------|----------|--|
| Model | M36 | M42 | L42 | L57 | |
| Consist of: | | | | | |
| Double Diaphragm Pump | 1/2 inch | | 1 inch | | |
| Telescopic Lance | 35 ft | 42 ft | 42 ft | 57 ft | |
| Others | 165 ft (50 m) Delivery hose, 16.5 ft (5 m) Suction hose, 2 pieces Spray nozzles, 1-unit Lance holder with belt, 3 pieces Respirator mask, 3 pairs Protective goggles, Instruction Videos, Manual, Specifications. | | | | |

Name of Mfr.: Chemo Marine Chemicals

Application Set Repair kit

Consists of: Spray nozzles, Spraying head, Hose connectors set, Tap connector and Extension joint.

| | | |
|----------|---|-----|
| 59 07 97 | Repair kit for cargo hold application set, Chemo marine | Set |
|----------|---|-----|

14. Air Line Filters

Air Line Filters

Filtros para Línea de Aire エアフィルター 高压清洗机



Designed for cleaning of compressed air and draining water drips.

The standard filtration is 5 µm and the maximum working pressure is 1.0 MPa. The maximum working temperature is 60°C. The filter case is made of a polycarbonate material and reinforced by a guard. A bracket and auto drain are also available on request.

Unit Per Pcs.

| CODE | Connection | Bowl Capacity (cm ³) | Weight kg |
|----------------------|------------|----------------------------------|-----------|
| 59 08 01 02 | PT 1/4 | 8 | 0.09 |
| | PT 3/8 | 25 | 0.17 |
| 59 08 03 04 05 | PT 1/2 | 45 | 0.35 |
| | PT 3/4 | | 0.39 |
| | PT 1 | | 0.85 |

Air Line Lubricators

Lubricadores para Línea de Aire

エアルブリケーター 空气管路润滑器



For use in adding lubricant into pressurized air. Maximum working pressure is 1.0 MPa and maximum working temperature is 60°C. The filter case is made of a polycarbonate material and reinforced by a guard. The recommended lubricant is turbine oil (ISO VG32). A bracket is also available on request.

Unit Per Pcs.

| CODE | Connection Thread | Min. Flow for Drop (ltr/min) | Lubricant Storage Volume (cm ³) | Weight kg |
|----------------------------|-------------------|------------------------------|---|-----------|
| 59 08 11 12 13 14 | PT 1/4 | 15 | 25 | 0.10 |
| | PT 3/8 | 40 | 55 | 0.18 |
| | PT 1/2 | 50 | 135 | 0.37 |
| | PT 3/4 | 50 | | 0.41 |
| 15 | PT 1 | 190 | | 0.92 |

Air Line Pressure Regulators

Reguladores de Presión para Línea de Aire

エアレギュレーター 空气管路压力调节器



Non relief valve type regulator for use on airlines to maintain constant pressure. The maximum operating pressure is 1.0 MPa and the maximum operating temperature is 60°C. Available in standard type and a pressure gauge attached type.

Unit Per Pcs.

| CODE | Connection Thread | Set Pressure Range | Type | Weight kg |
|----------------------------------|-------------------|--------------------|---------------------|-----------|
| 59 08 21 22 23 24 25 | PT 1/4 | 0.05 - 0.85 MPa | w/o Pressure Gauge | 0.14 |
| | PT 3/8 | | | 0.27 |
| | PT 1/2 | | | 0.48 |
| | PT 3/4 | | | 0.51 |
| | PT 1 | | | 1.13 |
| 59 08 06 07 08 09 10 | PT 1/4 | | with Pressure Gauge | 0.14 |
| | PT 3/8 | | | 0.27 |
| | PT 1/2 | | | 0.48 |
| | PT 3/4 | | | 0.51 |
| | PT 1 | | | 1.13 |

Air Line F.R.L. Combinations

Combinaciones F.R.L. para Línea de Aire

エアコンビネーション

空气管路过滤器、调节器及润滑器

Comprised of an air filter, regulator with pressure gauge, a lubricator, and intermediate connectors. For use in compressed air filtration, regulation and lubrication. The maximum operating pressure is 1.0 MPa and the maximum operating temperature is 60°C. The standard filtration is 5 µm.



Unit Per Pcs.

| CODE | Connection Thread | Min. Flow of Drop (ltr/min) | Set Pressure Range | Weight kg |
|----------|-------------------|-----------------------------|--------------------|-----------|
| 59 08 31 | PT 1/4 | 15 | | 0.38 |
| 32 | PT 3/8 | 40 | | 0.75 |
| 33 | PT 1/2 | 50 | 0.05 - 0.85 MPa | 1.42 |
| 34 | PT 3/4 | 50 | | 1.55 |
| 35 | PT 1 | 190 | | 3.34 |

Mobile Air Filter Lubricators

Rustibus® Air Pro

Lubricadores Portátiles para Filtros de Aire Rustibus Aire Pro

可動式エアフィルターブリケーター

移动式润滑机空气过滤器

Designed for easy use and operation. The counter balance system makes the filter-lubricator unit remain ideally positioned as the operator moves around while working. A regulator is used to maintain the pressure at a level suitable for the equipment in use.



It can be used with any pneumatic hand tool, giving a safe, more flexible and efficient working position.

Unit Per Set

| CODE | 59 08 45 |
|----------------------|--------------------|
| Model | Air-Pro |
| Air Pressure | 6 – 8 bar |
| Dimensions L × H × W | 300 × 400 × 300 mm |
| Weight | 5.8 kg |

Name of Mfr.: Rustibus®

In-Line Lubricators

Lubricador en Línea インラインブリケーター

同軸润滑器

Heavy duty in-line lubricators to be installed 1.5 – 2 meters from the tool. Designed for use with tools that are in use too far away from the compressor to be lubricated but a permanently mounted unit. This units can be used on everything from an air scribe to a paving breaker.



Technical features:

- Meter valve for adjusting oil flow.
- Slight disk in housing for visual oil inspection.
- Heavy duty and robust.
- Repair kits available.

| CODE | Model | Capacity Ltr | Hose Size cm | Weight kg | Max. Working Press. bar | Air Flow Cap. at 4.8 bar m³/min |
|----------|-------|--------------|--------------|-----------|-------------------------|---------------------------------|
| 59 08 46 | TX-0L | 0.04 | 1.27 | 0.681 | 34.47 | 0.849 |
| 47 | TX-1L | 0.11 | 1.9 | 0.704 | 17.93 | 1.982 |
| 48 | TX-2L | 0.33 | 1.9 | 1.090 | 17.24 | 1.982 |
| 49 | TX-3L | 0.47 | 2.54 | 1.977 | 20.68 | 4.247 |

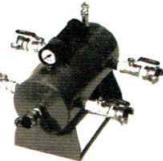
Name of Mfr. : TXP/Rustibus®

15. Air Distributors

Four-Way Air Distributor

Distribuidor de Aire con Cuatro Vías

エアー四方分配器 气动管四通



Constructed of carbon steel pipe. Permits the simultaneous connection of 4 pneumatic tools at to a single air line while maintaining constant feed pressure. Equipped with carrying handle, support skids, and safety valve pressure gauge. Air inlet and outlets are fitted with bronze ball valves and variable universal couplers. Maximum pressure: 10 bar (140 psi), Unit weight: 17 kg.

| | | |
|----------|-------------------------|-----|
| 59 08 91 | Distributor, air, 4-way | Set |
|----------|-------------------------|-----|

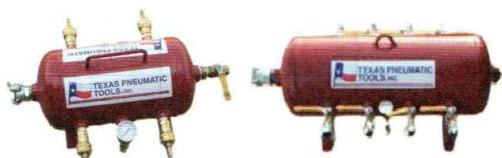
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Tank Style Air Manifolds

Múltiples de Aire en Forma de Tanque

タンク式エアーマニホールド 简型空气管

Keep your work site uncluttered by having only one hose going to the work area. Both sizes can be used in tandem to provide as many outlets as needed. With ASME approved tanks and POP-OFF safety valves; pressure gauge and brass draining valve to vent droplets, both models meet OSHA guidelines.



TX-3AMF

TX-2AMF

| CODE | 59 08 92 | 59 08 93 |
|-------------------|--------------------|--------------------|
| Model | TX-3AMF | TX-2AMF |
| Capacity | 9.46 ltr | 56.77 ltr |
| No. of Outlet | 4 | 8 |
| Working Pressure | 13.79 bar | |
| Test Pressure | 20.68 bar | |
| Inlet Size | 2.54 cm (1") | 5.08 cm (2") |
| Tank Diameter | 20.3 cm | 30 cm |
| Size L × W × H cm | 58.4 × 35.5 × 25.4 | 87.6 × 55.8 × 45.7 |
| Weight | 10.4 kg | 28.6 kg |

Name of Mfr. : TXP / Rustibus®

16. Electric Hand Tools

Cordless Drill Drivers

Taladro sin Cable
コードレス（充電式）ドリルドライバー 无绳钻孔机

Designed for continuous use and easy service. Compact and lightweight for increased maneuverability. Battery charger and plastic case are included as standard accessories.



How to order: CODE

Cordless drill driver, NOMINAL CAPACITY,
MODEL

Unit Per Set

| CODE | 59 09 01 | 59 09 02 | 59 09 05 | 59 09 06 |
|----------------------|---------------|----------|--------------|-------------|
| Power Source | 110V | 220V | 110V | 220V |
| Nominal Capacity | 6.5 mm (1/4") | | 10 mm (3/8") | |
| Drilling Capacity mm | Steel | 6.5 | 10 | |
| | Wood | 9 | 15 | |
| Chuck Size | | UNF 3/8 | | UNF 3/8 |
| No Load Speed R.P.M. | | 500 | | 1,100 / 320 |
| Voltage | | 4.8 | | 9.6 |
| Weight kg | | 1.0 | | 1.5 |

Unit Per Set

| CODE | 59 09 10 | 59 09 11 | 59 09 12 |
|----------------------------|----------|--------------------------|----------|
| Battery Voltage | | 20 V | |
| Battery Current | | 4.0 Ah / 6.0 Ah / 8.0 Ah | |
| Diameter of Grinding Wheel | Φ100 mm | Φ115 mm | Φ125 mm |
| Maximum Aperture | | Φ16 mm | |
| Spindle Thread | | M10 | |
| No-load Speed | | 8,500 r/min. | |

Unit Per Set

| CODE | 59 09 13 | 59 09 14 | 59 09 15 |
|----------------------------|----------|--------------------------|----------|
| Battery Voltage | | 20 V | |
| Battery Current | | 4.0 Ah / 6.0 Ah / 8.0 Ah | |
| Diameter of Grinding Wheel | Φ100 mm | Φ115 mm | Φ125 mm |
| Maximum Aperture | | Φ16 mm | |
| Spindle Thread | | M10 | |
| No-load Speed | | 11,000 r/min. | |

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Cordless Impact Wrenches

Llaves de Impacto sin Cable
コードレス（充電式）インパクトレンチ 无绳冲击式扳手

For fast tightening or loosening of bolts. Compact and well-balanced design for positive control. Battery charger and plastic case are prepared as standard accessories.



How to order: CODE

Cordless impact wrench, SQUARE DRIVE,
MODEL

Unit Per Set

| CODE | 59 09 21 | 59 09 22 | 59 09 25 | 59 09 26 |
|----------------------|----------|----------|-----------|----------|
| Power Source | 110V | 220V | 110V | 220V |
| Square Drive | 3/8" | | 1/2" | |
| Bolt Size | M5 - M12 | | M6 - M14 | |
| Torque kg. m | 700 | | 1,200 | |
| No Load Speed R.P.M. | 2,200 | | 0 - 1,500 | |
| Stroke | 2,900 | | 0 - 2,300 | |
| Voltage | 9.6 | | 12 | |
| Weight kg | 1.5 | | 2.3 | |

Unit Per Set

| CODE | 59 09 16 | 59 09 17 |
|------------------------|--------------|--------------------------|
| Battery Voltage | | 20 V |
| Battery Current | | 4.0 Ah / 6.0 Ah / 8.0 Ah |
| Saw Blade Diameter | Φ180 mm | Φ185 mm |
| Maximum Cutting Depth | 60 mm at 90° | 62.5 mm at 90° |
| Maximum Beveling Depth | 46 mm at 45° | - |
| No-load Speed | | 4,800 r/min. |

Cordless Angle Grinders

Amoladoras angulares sin cables
コードレス（充電式）アングルグラインダー 充电式角磨机

A rechargeable handheld power tool for grinding or cutting for various purposes with spinning of grinding or cutting wheel by the motor and gears when the tool is activated. This product uses



new technology from EV(electrical vehicle), the direct-drive exterior-rotor could reduce the consumption of tool gearing and current, breathable brushless motor to reduce the temperature rise of motor. These two tools and upgraded rechargeable lithium battery could make battery life last longer than normal batteries. Even after several years of storage, the battery is still charged normally.



Cordless Circular Saws

Sierras circulares sin cable
コードレス（充電式）電動丸鋸 充电式圆锯

Rechargeable powerful hand-held or table-mounted tool for cutting with a flat disc shape blade. It adopts the new technologies, the direct-drive exterior rotor which has excellent high rigidity, high response, high precision, higher torque and efficiency, the brushless motor which reduces the temperature rise of the motor and lowers the current, and the lithium battery used in EV (electrical vehicle) which is more durable, safer than the normal type, greatly improve the lifetime and stability.



Cordless Reciprocating Saws

Sierras de sable sin cable
コードレス（充電式）電動往復鋸 充电式往复锯

Versatile power tool for cutting a wide range of materials such as wood, metal, plastic and more. It adopts the new technologies, the direct-drive exterior rotor which has excellent high rigidity, high response, high precision, higher torque and efficiency, the brushless motor which reduces the temperature rise of the motor and lowers the current,

and the lithium battery used in EV (electrical vehicle) which is more durable, safer than the normal type, greatly improve the lifetime and stability.

| Unit Per Set | |
|----------------------|--------------------|
| CODE | 59 09 18 |
| Battery Voltage | 20 V |
| Battery Current | 4.0 / 6.0 / 8.0 Ah |
| Reciprocating Stroke | 28 mm |
| No-load Speed | 0-3,000 r/min. |

Cordless Paint Mixers

Mezcladores de pintura sin cable

コードレス(充電式)ペイントミキサー



Electrical mixing tool for paint with rechargeable battery, useful tool for dealing with large amounts of paint. It adopts the new technologies, the direct-drive exterior rotor which has excellent high rigidity, high response, high precision, higher torque and efficiency, the brushless motor which reduces the temperature rise of the motor and lowers the current, and the lithium battery used in EV (electrical vehicle) which is more durable, safer than the normal type, greatly improve the lifetime and stability.

| Unit Per Set | |
|------------------------|--|
| CODE | 59 09 19 |
| Battery Voltage | 20 V |
| Battery Current | 4.0/6.0/8.0 Ah |
| Max. Clamping Capacity | Φ13 mm |
| Max. Screw Diameter | Φ10 mm |
| No-load Speed | L: 0 - 400 r/min., H: 0 - 2,000 r/min. |
| Standard Torque | 80 N.m |
| Impact Frequency | L: 0 - 7,200/min., H: 0 - 36,000/min. |

Cordless Blowers

Sopladores sin cable

コードレス(充電式)ブロワー



Rechargeable mechanical apparatus used for making airflow or increase air pressure to move air or gas from one place to another. It adopts the new technologies, the direct-drive exterior rotor which has excellent high rigidity, high response, high precision, higher torque and efficiency, the brushless motor which reduces the temperature rise of the motor and lowers the current, and the lithium battery used in EV (electrical vehicle) which is more durable, safer than the normal type, greatly improve the lifetime and stability.

| Unit Per Set | |
|-----------------|---|
| CODE | 59 09 20 |
| Battery Voltage | 20 V |
| Battery Current | 4.0 / 6.0 / 8.0 Ah |
| Rated Speed | Low - 11,000 r/min. High - 16,000 r/min. |
| Air Volume | Low - 1.9 m³/min. High - 2.6 m³/min. |

Portable Electric Drills

Taladros Eléctricos Portátiles 電気ドリル 便携式钻孔机

Designed for precision and reliability for marine and industrial use. To be used for all conventional drilling of steel or wood. Furnished for a 110 volt power supply or 220 volt power supply. Further detailed data on the complete line of the drills, ask your local distributor.

The specifications listed here are for your reference. If you wish to order electric drills from a specific manufacturer, please refer to the comparison table listing major international manufacturers and product model numbers on page 59-64.



For 6.5 – 10.0 mm



For 16.0 – 32.0 mm

Specifications

| Drilling Capacity mm | Chuck Size mm | Spindle | Motor | No Load Speed R.P.M. | Weight kg |
|-------------------------|---------------|------------|------------|----------------------|-----------|
| Steel | Wood | | | | |
| 6.5 | 13 | 0.5 - 6.5 | 3/8"-24UNF | 305 W | 2,700 |
| 10.0 | 21 | 0.8 - 10.0 | 1/2"-20UNF | 390 W | 1,700 |
| 13.0 | 30 | 1.2 - 13.0 | J.T.#6 | 620 W | 780 |
| 16.0 | 36 | 3.2 - 16.0 | J.T.#3 | 670 W | 700 |
| 20.0 | - | - | M.T.#2 | 730 W | 500 |
| 25.0 | - | - | M.T.#3 | 1,300 W | 370 |
| 32.0 | - | - | M.T.#3 | 1,600 W | 330 |

Note: J.T. denotes Jacobs Taper.
M.T. denotes Morse Taper.

How to order: CODE

Drill, electric portable, DRILLING CAPACITY, POWER SOURCE VOLTAGE, MODEL

Unit Per Set

| AC 110V Single Phase | | AC 220V Single Phase | |
|----------------------|----------------------|----------------------|----------------------|
| CODE | Drilling Capacity mm | CODE | Drilling Capacity mm |
| 59 10 01 | 6.5 | 59 10 11 | 6.5 |
| 02 | 10.0 | 12 | 10.0 |
| 03 | 13.0 | 13 | 13.0 |
| 04 | 16.0 | 14 | 16.0 |
| 05 | 20.0 | 15 | 20.0 |
| 59 10 06 | 25.0 | 59 10 16 | 25.0 |
| 07 | 32.0 | 17 | 32.0 |

Portable Magnetic Base Drill Machines

Taladro de base magnética portátil

ポータブル磁気固定式穴あけ機 便携式磁性底座钻孔机

A portable drilling machine with a magnet base, geared to drilling mild steel (or equivalent), using one-touch type "JETBROACH" or "HI-BROACH" cutter. The machine will be mounted on the workpiece to be drilled with the magnet securely fastening the machine onto the workpiece while drilling takes place. Pilot pins and broach cutters are sold separately.

Model WOJ-3200 - Cord Type

Designed to use Jetbroach cutters or twist drill. Loosening the pillar clamp allows the complete frame to be lifted up to a maximum of 60 mm for specific drilling. The use of Jet-broach cutters require the frame to be at the lowest position, while twist bit drilling required the appropriate amount of elevation to be adjusted for safe operation. The pillar clamp is required to be tightened before drilling safely. Feed handles can be positioned on the right or left hand side for ease of drilling and mounting in confined spaces.

Note: Always engage the magnet before adjusting the body height.



| | | | Unit Per Set | | |
|---------------------------------|--|---|--|----------------|---------|
| CODE | | 59 10 08 | 59 10 09 | | |
| Power Source (Single Phase) | | 110-120V AC, 50/60 Hz | 220-240V AC, 50/60 Hz | | |
| Model | | | WOJ-3200 | | |
| Electric Drill | Rated power consumption (W) | 950 | | | |
| | Rated current (A) | 8.6 | 4.3 | | |
| | No-load speed min ⁻¹ (rpm) | 870 | | | |
| Magnet Power Consumption (W) | | 38 | 30 | | |
| One-touch type JETBROACH | | | | | |
| Hole Capacity (mm) | Hole Dia. | Plate Thick | Hole Dia | Plate Thick | |
| | 25L | 12 to 17 | 9 to 25 | 12 to 17 | 9 to 25 |
| | 35L | 17.5 to 32 | 9 to 35 | 17.5 to 32 | 9 to 35 |
| Accessories included | 50L | 12 to 32 | 9 to 50 | 12 to 32 | 9 to 50 |
| | Twist drill | Max. 13 mm dia. | | | |
| | | 130 | | | |
| Max Stroke (mm) | | | | | |
| Magnet Holding Power N (kgf) | | 9,000 (918) | | | |
| Magnet Dimensions (mm) | | 99 × 177 | | | |
| Mass (Weight) (kg) | | 13 | | | |
| | | *Carry Case *Oil Tank *Pilot Pin 08035 *Sub Handle *2 pieces of Hex. Socket Head Bolt 5 × 10 mm *3 pieces of Rod Handle | *Hex. Socket Screw Keys; 3 mm / 4 mm / 6 mm *8 × 10 mm Spanner *Guard *Safety strap | | |
| Optional | | Optional one-touch adapter allows the use of up to 13 mm twist drills to be used in the original arbor. | | | |

Name of Mfr. : Nitto Kohki Co., Ltd.

Replacement Cutters

Replacement is quick and easy with unique push fit self-centering cutter system by pilot pins and broach cutters. Pilot pins and broach cutters are sold separately.

One-Touch Cutter Replacement

Replacement is quick and easy with our unique push fit self-centering cutter system.



Pilot pins:

Hi-Broach cutter: 06025 (C1) or 08025 (A1)

JETBROACH cutter: 06025 (C1), 08035 (A2),
06050 (C2), 08050 (A3)
*for Model WOJ3200

Broach cutters:

HI-BROACH: 12 mm (TK00698) – 17 mm (TK00703)
diameter
17.5 mm (TK01391) – 27 mm (TK1407)
diameter

JETBROACH: 12 mm (TK01148/TK01154) –
17 mm (TK01153 / TK01159) diameter
17.5 mm (TK01249/TK01282) –
32 mm (TK01273/TK01305) diameter

Combination of Pilot Pins and Broach Cutters

| Pilot pins | 06025 (C1) | 08025 (A1) | 06025 (C1) | 08035 (A2) | 06050 (C2) | 08050 (A3) |
|-------------------|-----------------|-----------------|---|-----------------|-----------------|-----------------|
| | P/N. TK01167 | P/N. TK01486 | P/N. TK01167 | P/N. TK01487 | P/N. TK01166 | P/N. TK01488 |
| Broach cutters | | | One-touch type HI-BROACH (High speed steel) | | | |
| Diamet- | Depth 25 mm | | Depth 25 mm | Depth 35 mm | Depth 50 mm | |
| 12 | TK00698 | | TK01148 | | TK01154 | |
| 13 | TK00699 | | TK01149 | | TK01155 | |
| 14 | TK00700 | | TK01150 | | TK01156 | |
| 15 | TK00701 | | TK01151 | | TK01157 | |
| 16 | TK00702 | | TK01152 | | TK01158 | |
| 17 | TK00703 | | TK01153 | | TK01159 | |
| 17.5 | | TK01391 | | TK01249 | | TK01282 |
| 18 | | TK01392 | | TK01250 | | TK01283 |
| 18.5 | | | | TK01251 | | |
| 19 | | TK01393 | | TK01252 | | TK01284 |
| 19.5 | | TK01394 | | TK01253 | | TK01285 |
| 20 | | TK01395 | | TK01254 | | TK01286 |
| 20.5 | | | | TK01255 | | TK01287 |
| 21 | | TK01396 | | TK01256 | | TK01288 |
| 21.5 | | TK01397 | | TK01257 | | TK01289 |
| 22 | | TK01398 | | TK01258 | | TK01290 |
| 22.5 | | TK01399 | | TK01259 | | TK01291 |
| 23 | | TK01400 | | TK01260 | | TK01292 |
| 23.5 | | TK01401 | | TK01261 | | TK01293 |
| 24 | | TK01402 | | TK01262 | | TK01294 |
| 24.5 | | TK01403 | | TK01263 | | TK01295 |
| 25 | | TK01404 | | TK01264 | | TK01296 |
| 25.5 | | | | TK01265 | | TK01297 |
| 26 | | TK01405 | | TK01266 | | TK01298 |
| 26.5 | | | | TK01267 | | TK01299 |
| 27 | | TK01407 | | TK01268 | | TK01300 |
| 28 | | | | TK01269 | | TK01301 |
| 29 | | | | TK01270 | | TK01302 |
| 30 | | | | TK01271 | | TK01303 |
| 31 | | | | TK01272 | | TK01304 |
| 32 | | | | TK01273 | | TK01305 |

Electric Angle Grinders

Amoladoras Angulares Eléctricas

電動ディスクグラインダー 电动角向磨光机

Especially designed for continuous heavy duty work for all grinding applications. Furnished for a 110 volt power supply or 220 volt power supply. For further detailed information on the complete line of the grinder, ask a local distributor.

The specifications listed here are for your reference. If you wish to order Angle Grinders from a specific manufacturer, please refer to the comparison table listing major international manufacturers and product model numbers on page 59-65.



Specifications

| For Wheel Diam | Spindle Thread | Motor | No Load Speed R.P.M. | Weight kg |
|----------------|----------------|---------|----------------------|-----------|
| 100 mm | M10 x 15 mm | 510 W | 11,000 | 1.4 |
| 125 mm | M16 x 17 mm | 630 W | 9,500 | 2.3 |
| 150 mm | M16 x 17 mm | 1,050 W | 8,000 | 3.8 |
| 180 mm | M16 x 21 mm | 1,400 W | 6,500 | 4.6 |

How to order: CODE

Angle grinder, electric portable, WHEEL DIAM, POWER SOURCE VOLTAGE, MODEL

Unit Per Set

| AC 110V Single Phase | | AC 220V Single Phase | |
|----------------------|----------------|----------------------|----------------|
| CODE | For Wheel Diam | CODE | For Wheel Diam |
| 59 10 21 | 100 mm | 59 10 31 | 100 mm |
| 22 | 125 mm | 32 | 125 mm |
| 23 | 150 mm | 33 | 150 mm |
| 24 | 180 mm | 34 | 180 mm |

Rubber Pads and Holder Nuts for Electric Grinder

Repuestos Amoladoras Eléctricas, Plato Coma, Portatuerca

アンダルグラインダー用ラバーパッド

胶垫及支架螺母



Rubber Pad

Unit Per P.C.

| CODE | For Wheel Diam | CODE | For Wheel Diam |
|----------|----------------|----------|----------------|
| 59 10 41 | 100 mm | 59 10 45 | 150 mm |
| 43 | 125 mm | 47 | 180 mm |

Holder Nut

Unit Per P.C.

| CODE | For Wheel Diam | CODE | For Wheel Diam |
|----------|----------------|----------|----------------|
| 59 10 42 | 100 mm | 59 10 46 | 150 mm |
| 44 | 125 mm | 48 | 180 mm |

Electric Bench Grinders

Afiladora Eléctrica Sobremesa

卓上用電動グラインダー 电动台式磨床

For sharpening tools and other appliances.

According to safety measures, the grinding must be fitted with a wheel cover and must be firmly secured to a bench stand. Provided with permanently self lubricating ball bearings. Furnished for use with a 110 volt power supply or 220 volt power supply.



The specifications listed here are for your reference. If you wish to order Bench Grinders from a specific manufacturer, please refer to the comparison table listing major international manufacturers and product model numbers on page 59-65.

Specifications

| Wheel Size mm | Motor | No Load Speed R.P.M. | Weight kg |
|------------------|-------|----------------------|-----------|
| 150 x 16 x 12.7 | 300 W | 3,600 | 16 |
| 205 x 19 x 15.88 | 600 W | 3,600 | 28 |

How to order: CODE

Bench grinder, electric, WHEEL DIAM, POWER SOURCE VOLTAGE, MODEL

Unit Per Set

| AC 110V Single Phase | | AC 220V Single Phase | |
|----------------------|----------------|----------------------|----------------|
| CODE | For Wheel Diam | CODE | For Wheel Diam |
| 59 10 51 | 150 mm | 59 10 56 | 150 mm |
| 52 | 205 mm | 57 | 205 mm |

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Electric Straight Grinders

Amoladora Eléctrica Recta

電動ストレートグラインダー 电动直线型磨床

Designed for grinding jobs in tight corners.



The specifications listed here are for your reference. If you wish to order Straight Grinders from a specific manufacturer, please refer to the comparison table listing major international manufacturers and product model numbers on page 59-65.

Specifications

| Wheel Size mm | Motor | No Load Speed R.P.M. | Weight kg |
|-----------------|-------|----------------------|-----------|
| 100 x 19 x 12.7 | 750 W | 9,500 | 5.5 |
| 125 x 19 x 12.7 | 590 W | 4,000 | 5.5 |

How to order: CODE

Straight grinder, electric portable, WHEEL DIAM, POWER SOURCE VOLTAGE, MODEL

Unit Per Set

| AC 110V Single Phase | | AC 220V Single Phase | |
|----------------------|----------------|----------------------|----------------|
| CODE | For Wheel Diam | CODE | For Wheel Diam |
| 59 10 61 | 100 mm | 59 10 66 | 100 mm |
| 62 | 125 mm | 67 | 125 mm |

Electric Die Grinders

Amoladora Eléctrica Recta de 6 mm

電動ダイグラインダー 电动冲膜磨床

For precision grinding. A lightweight, high speed grinder to be used with a 6 mm diameter shaft stone. Furnished for

a 110 volt or 220 volt power source. For further detailed information on the complete line of die grinders, ask your local distributor.



The specifications listed here are for your reference. If you wish to order Die Grinders from a specific manufacturer, please refer to the comparison table listing major international manufacturers and product model numbers on page 59-65.

Specifications

| For Collet Diam | Maximum Wheel O.D. | Motor | No Load Speed R.P.M. | Weight kg |
|-----------------|--------------------|-------|----------------------|-----------|
| 6 mm | 18 mm | 145 W | 30,000 | 0.9 |
| 6 mm | 32 mm | 240 W | 23,000 | 1.9 |

How to order: CODE

Die grinder, electric portable, COLLET DIAM, MAXIMUM WHEEL DIAM, POWER SOURCE VOLTAGE, MODEL

Unit Per Set

| AC 110V Single Phase | | | AC 220V Single Phase | | |
|----------------------|-----------------|--------------------|----------------------|-----------------|--------------------|
| CODE | For Collet Diam | Maximum Wheel Diam | CODE | For Collet Diam | Maximum Wheel Diam |
| 59 10 71 | 6 mm | 18 mm | 59 10 75 | 6 mm | 18 mm |
| 72 | 6 mm | 32 mm | 76 | 6 mm | 32 mm |

Electric Sheet Sanders (Orbital Sanders)

Lijadora Eléctrica Orbital 電動オービタルサンダー 电动钢板磨砂机



Ideal for direct material finishing or sanding painting surfaces. Furnished for a 110 volt power supply or 220 volt power supply. For further detailed information on the complete line of sheet sanders, ask your local distributor.

The specifications listed here are for your reference. If you wish to order Sheet Sanders from a specific manufacturer, please refer to the comparison table listing major international manufacturers and product model numbers on page 59-65.

Specifications

| Sanding Area mm | Motor | No Load Speed R.P.M. | Weight kg |
|-----------------|-------|----------------------|-----------|
| 114 x 280 | 300 W | 10,000 | 2.6 |

How to order: CODE

Sheet sander, electric portable, SIZE of SANDING AREA, POWER SOURCE VOLTAGE, MODEL

Unit Per Set

| AC 110V Single Phase | | AC 220V Single Phase | |
|----------------------|-----------------|----------------------|-----------------|
| CODE | Sanding Area mm | CODE | Sanding Area mm |
| 59 10 81 | 114 x 280 | 59 10 82 | 114 x 280 |

Electric Nibblers

Cizalla Eléctrica 電動ニブラー 电动毛坯下料机

For free hand cutting or cutting by template of all types of heavy sheet metal plates, light alloys, and plastic panel without damaging the material. Can also be used on curved surfaces. Furnished for use with a 110 volt or 220 volt power

supply. For further detailed data on the complete line of the nibbler, ask your local distributor.



The specifications listed here are for your reference. If you wish to order Nibblers from a specific manufacturer, please refer to the comparison table listing major international manufacturers and product model numbers on page 59-66.

Specifications

| Cutting Capacity | | Motor | No Load Speed R.P.M. | Weight kg |
|------------------|--------|---------|----------------------|-----------|
| Mild Steel | Radius | | | |
| 1.6 mm | 40 mm | 400 W | 2,000 | 1.7 |
| 2.3 mm | 50 mm | 335 W | 950 | 3.5 |
| 3.2 mm | 100 mm | 670 W | 900 | 5.8 |
| 4.5 mm | 110 mm | 1,140 W | 850 | 7.5 |

How to order: CODE

Nibbler, electric portable, CUTTING CAPACITY, POWER SOURCE VOLTAGE, MODEL

Unit Per Set

| AC 110V Single Phase | | AC 220V Single Phase | |
|----------------------|------------------|----------------------|------------------|
| CODE | Cutting Capacity | CODE | Cutting Capacity |
| 59 11 01 | 1.6 mm | 59 11 05 | 1.6 mm |
| 02 | 2.3 mm | 06 | 2.3 mm |
| 03 | 3.2 mm | 07 | 3.2 mm |
| 04 | 4.5 mm | 08 | 4.5 mm |

Accessories for Electric Nibbler

Punches and dies differ from manufacturer to manufacturer. When ordering, it is necessary to provide information about the manufacturer and model of the nibbler you are currently using.



Punch



Die

How to order: CODE

PUNCH or DIE, CUTTING CAPACITY mm, for MODEL

Unit Per P.C.

| Punch | | Die | |
|----------|---------------------|----------|---------------------|
| CODE | Cutting Capacity mm | CODE | Cutting Capacity mm |
| 59 11 09 | 1.6 | 59 11 10 | 1.6 |
| 11 | 2.3, 3.2 | 12 | 2.3, 3.2 |
| 13 | 4.5 | 14 | 4.5 |

Electric Shears

Cizalla Eléctrica 電動シャー 电动剪切机



For cutting iron, copper, stainless steel sheeting, etc. Able to cut either straight or curved lines without deformation. Furnished for use with a 110 volt or 220 volt power supply. For further detailed data on the complete line of shears, ask your local distributor.

The specifications listed here are for your reference. If you wish to order shears from a specific manufacturer, please refer to the comparison table listing major international manufacturers and product model numbers on page 59-66.

Specifications

| Cutting Capacity | | Motor | No Load Speed R.P.M. | Weight kg |
|------------------|--------|-------|-------------------------|--------------|
| Mild Steel | Radius | | | |
| 1.6 mm | 25 mm | 440 W | 4,200 | 1.8 |
| 2.0 mm | 70 mm | 240 W | 2,200 | 4.7 |
| 2.9 mm | 100 mm | 335 W | 1,200 | 6.0 |

How to order: CODE

Shear, electric portable, CUTTING CAPACITY, POWER SOURCE VOLTAGE, MODEL

Unit Per Set

| AC 110V Single Phase | | AC 220V Single Phase | |
|----------------------|------------------|----------------------|------------------|
| CODE | Cutting Capacity | CODE | Cutting Capacity |
| 59 11 21 | 1.6 mm | 59 11 24 | 1.6 mm |
| 22 | 2.0 mm | 25 | 2.0 mm |
| 23 | 2.9 mm | 26 | 2.9 mm |

Accessories for Electric Shear

Moving blades and stationary blades differ from manufacturer to manufacturer. When ordering, it is necessary to provide information about the manufacturer and model name of the shear you are currently using.



Moving Blade



Stationary Blade

How to order: CODE

MOVING BLADE or STATIONAL BLADE, CUTTING CAPACITY mm, MODEL

Unit Per Pcs.

| Moving Blade | | Stational Blade | |
|--------------|------------------|-----------------|------------------|
| CODE | Cutting Capacity | CODE | Cutting Capacity |
| 59 11 31 | 1.6 | 59 11 32 | 1.6 |
| 33 | 2.0, 2.9 | 34 | 2.0, 2.9 |

Electric Planers

Cepilladores Eléctricas 電動カンナ 电动刨床

For smoothing and planing wood surfaces. Furnished for use with a 110 volt or 220 volt power supply. For further detailed information on the complete line of the planers, ask your local distributor.



The specifications listed here are for your reference. If you wish to order Planers from a specific manufacturer, please refer to the comparison table listing major international manufacturers and product model numbers on page 59-66.

Specifications

| Planing width | Motor | No Load Speed R.P.M. | Weight kg |
|---------------|-------|-------------------------|--------------|
| 82 mm | 700 W | 16,000 | 2.8 |

How to order: CODE

Planer, electric portable, PLANING WIDTH, POWER SOURCE VOLTAGE, MODEL

Unit Per Set

| AC 110V Single Phase | | AC 220V Single Phase | |
|----------------------|---------------|----------------------|------------------|
| CODE | Planing Width | CODE | Cutting Capacity |
| 59 11 36 | 82 mm | 59 11 37 | 82 mm |

Electric Circular Saws

Sierras Circulares Eléctricas 電動丸のこ 电动圆锯

Blade guard operates automatically in all positions. Easily adjustable for depth cut and mitre. Furnished for a 110 volt or 220 volt power supply.

The specifications listed here are for your reference. If you wish to order Circular Saws from a specific manufacturer, please refer to the comparison table listing major international manufacturers and product model numbers on page 59-66.



Use adjustable guard

Specifications

| Blade Diam | Arbor | Max. Cutting 90° | Motor | No Load Speed R.P.M. | Weight kg |
|------------|-------|------------------------|---------|----------------------------|--------------|
| 160 mm | 19 mm | 55 mm | 670 W | 4,700 | 3.1 |
| 185 mm | 19 mm | 65 mm | 1,050 W | 4,700 | 3.9 |

How to order: CODE

Circular saw, electric portable, BLADE DIAM, POWER SOURCE VOLTAGE, MODEL

Unit Per Set

| AC 110V Single Phase | | AC 220V Single Phase | |
|----------------------|------------|----------------------|------------|
| CODE | Blade Diam | CODE | Blade Diam |
| 59 11 41 | 160 mm | 59 11 42 | 160 mm |
| 44 | 185 mm | 45 | 185 mm |

Spare Blades for Circular Saw

Hojas de Repuesto para Sierra Circulares

丸のこ用替え刃 圆锯的备用刀刃



When ordering, please specify the saw's use, size (O.D. and I.D.), and number of teeth. Also the manufacturer's name and the model number of the circular saw are necessary to assure a proper fit.

How to order: CODE

Spare blade for circular saw, BLADE DIAM (O.D. and I.D.)mm, NUMBER OF TEETH, for MODEL

Unit Per Pcs.

| CODE | Blade Size mm | | Tooth |
|----------|---------------|------|---------|
| | O.D. | I.D. | |
| 59 11 43 | 160 | 19 | 50/inch |
| 47 | 185 | 19 | " |

Electric Tool Sets

Juegos de Herramientas Eléctricas 電動工具セット 电动工具组

Comprising of 1 set each of drill, circular saw and planer in plastic portable case.



Specifications

| Item | Capacity | Watt | No Load Speed | Weight |
|------------------------------|--|-------|---------------|--------|
| Drill | 10 mm for iron 15 mm for wood | 380 W | 0 - 2,800 rpm | 1.8 kg |
| Circular Saw | 160 mm blade diam | 670 W | 4,000 rpm | 3.0 kg |
| Planer | 84 mm blade width | 430 W | 15,000 rpm | 2.8 kg |
| 59 11 46 48 | Tool set electric AC 100 V 3's/set " AC 220 V 3's/set | | | Set " |

Cable Cutters Battery-Operated

Cortacables a batería

電池駆動式ケーブルカッター

电池供电的电缆剪

A powerful battery-operated cable cutter with a 50 mm opening width, which can be safely positioned on the cable even in confined spaces. This is achieved by an LED that illuminates the working area. In addition to Cu and Al cable, the cable cutter also cuts power cables up to a diameter of 50 mm. The crescent-shaped cutting geometry convinces with a clean cutting pattern with low conductor deformation. Thanks to the closed cutting head, the cut is also particularly safe. A real benefit are the balanced ergonomics and the low weight. With this lightweight tool you can work fatigue-free and in any position.



The tool is compatible with 18 V lithium-ion batteries from Makita, which fits seamlessly into your existing tool park. Adapters for other battery systems are available upon request.

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Pneumatic & Electrical Tools

Unit Per Set

| CODE | 59 11 49 |
|------------------------|--------------------|
| Opening Width | 50 mm |
| Battery Voltage | 18 V |
| Construction Form | Straight |
| Head | Closed |
| Dimensions L × W × H | 117 × 197 × 330 mm |
| Weight without battery | 2.1 Kg |

Name of Mfr.: Holger Clasen GmbH & Co. KG

Crimping Tools Battery-Operated

Crimpadoras a bateria

電池駆動式压着工具

Thanks to its balanced and ergonomic design the light and powerful pressing tool with 60kN can be handled with one hand and ensures fatigue-free working. The narrow pressing head, which can be rotated by 180°, also allows pressing in hard-to-reach places. This is achieved by an LED that illuminates the working area. The battery press utilizes commercially available narrow C-shaped crimping die (CS-shape). The crimping dies are firmly locked in the press head by means of a press insert lock for more safety on the construction site. You can crimp with the battery press cross-sections DIN hexagon Cu/Al up to 300 mm².



The tool is compatible with 18 V lithium-ion batteries from Makita, which fits seamlessly into your existing tool park. Adapters for other battery systems are available upon request.

Unit Per Pcs.

| CODE | 59 11 50 |
|-------------------------------|--------------------------|
| Crimping force | 60 kN |
| Crimping width max. | DIN up to 14 mm |
| Crimping dies | C-shaped small (CS) |
| Crimping range DIN hexagon Cu | 6 - 300 mm ² |
| Crimping range DIN hexagon Al | 10 - 300 mm ² |
| Battery voltage | 18 V |
| Stroke | 15 mm |
| Weight without battery | 3.4 kg |
| Dimensions L × W × H | 340 × 82 × 277 mm |
| Construction form | Pistol |
| Head | Closed |
| Lock type | Snap fit |

Name of Mfr.: Holger Clasen GmbH & Co. KG

Electric Rod Cutters

Tronzadora Eléctrica 電動切断機 电动杆状刀具

For cutting steel rods, pipes and angle iron, etc.



Furnished for use with a 110 volt or 220 volt power supply.

For further detailed information on the complete line of rod cutters, ask your local distributor.

The specifications listed here are for your reference. If you wish to order rod cutters from a specific manufacturer, please refer to the comparison table listing major international manufacturers and product model numbers on page 59-66.

Specifications

| Wheel Diam | Cutting Capacity mm | | Motor | No Load Speed R.P.M. | Weight kg |
|------------|---------------------|-----------|---------|----------------------|-----------|
| | Round Bar | Flat | | | |
| 305 mm | ø60 | 100 x 100 | 1,450 W | 3,900 | 16 |
| 355 mm | ø60 | 130 x 130 | 1,450 W | 3,800 | 16 |
| 405 mm | ø65 | 135 x 135 | 1,450 W | 3,100 | 23.6 |

How to order: CODE

Rod cutter, electric, WHEEL DIAM, POWER SOURCE VOLTAGE, MODEL

Unit Per Set

| AC 110V Single Phase | | AC 220V Single Phase | |
|----------------------|------------|----------------------|------------|
| CODE | Wheel Diam | CODE | Wheel Diam |
| 59 11 51 | 305 mm | 59 11 56 | 305 mm |
| 53 | 305 mm | 58 | 355 mm |
| 52 | 405 mm | 57 | 405 mm |

Spare Wheels**for Electric Rod Cutter**

Ruedas de Repuesto para Tronzadoras

電動切断機用替え刃 电动杆状刀具的备用轮

When ordering, please specify the outer diameter, inner diameter, thickness and maximum r.p.m.

| | | |
|----------------|-----|-----|
| Out Diam. (mm) | 305 | 405 |
|----------------|-----|-----|

Unit Per Pcs.

| CODE | Wheel Diam mm | Thick mm | I.D. mm | Max. R.P.M. |
|----------|---------------|----------|---------|----------------|
| 59 11 61 | 305 | 2.5 | 25.4 | 4,800 mtr/min. |
| 63 | 355 | 3.0 | 25.4 | 4,800 mtr/min. |
| 62 | 405 | 3.0 | 25.4 | 4,800 mtr/min. |



Electric Jig Saws

Sierras de Calar Eléctricas 電動ジグソー 电动竖线锯

Used for sawing wood, plastic, mild steel plate, etc.

Able to cut either straight or curved lines without warping the surface.

Furnished for a 110 volt or 220 volt power supply.



For further detailed data on the complete line of jig saws, ask your local distributor.

The specifications listed here are for your reference. If you wish to order jig saws from a specific manufacturer, please refer to the comparison table listing major international manufacturers and product model numbers on page 59-66.

Specifications

| Cutting Capacity mm | | | No Load Speed R.P.M. | Watt | Weight kg |
|---------------------|-------|--------|----------------------|-------|-----------|
| Wood | Steel | Radius | | | |
| 60 | 6 | 25° | 3,200 | 380 W | 2.1 |

How to order: CODE

Jig saw, electric portable, CUTTING CAPACITY, POWER SOURCE VOLTAGE, MODEL

Unit Per Set

| AC 110V Single Phase | | AC 220V Single Phase | |
|----------------------|------------------|----------------------|------------------|
| CODE | Cutting Capacity | CODE | Cutting Capacity |
| 59 11 71 | 60 mm | 59 11 72 | 60 mm |

Spare Blades for Electric Jig Saw

Hojas de Repuesto para Sierra de Calar Eléctrica

電動ジグソー用替刃 备用刀刃

When ordering, please specify the type number of the blade with the manufacture and model name of the jig saw you are currently using. Minimum order quantity is 5 blades per packet for any types.

| | | | |
|------|--|------|--|
| No.1 | | No.4 | |
| No.2 | | No.5 | |
| No.3 | | No.6 | |

Unit Per Pkt

| CODE | Type No. | Application | | | | | |
|----------|----------|-------------|---------|------------|------|------------|-------------|
| | | Wood | Plastic | Mild Steel | Alum | Hard Board | Hard Rubber |
| 59 11 73 | 1 | ○ | | | | | |
| 74 | 2 | ○ | ○ | | | | ○ |
| 75 | 3 | ○ | | | | | |
| 76 | 4 | | ○ | | | | |
| 77 | 5 | | ○ | ○ | ○ | ○ | |
| 78 | 6 | | ○ | ○ | ○ | ○ | |

Electric Blowers

Sopladores Eléctricos 電動送風機

电动鼓风机



Lightweight with high air pressure and displacement. Capable of vacuuming dust. (Dust bag is available as a standard accessory.) Furnished for use with a 110 volt or 220 volt power supply. For further detailed information on the complete line of blowers, ask your local distributor.

Specifications

| Air Volume | Watt | No Load Speed R.P.M. | Overall Length mm | Weight kg |
|-------------|------|----------------------|-------------------|-----------|
| 2.3 m³/min. | 335 | 13,000 | 428 | 1.8 |

How to order: CODE

Blower, electric, AIR VOLUME m³/min, POWER SOURCE VOLTAGE, MODEL

Unit Per Set

| AC 110V Single Phase | | AC 220V Single Phase | |
|----------------------|-------------|----------------------|-------------|
| CODE | Air Volume | CODE | Air Volume |
| 59 11 81 | 2.3 m³/min. | 59 11 82 | 2.3 m³/min. |

Electric Hot Air Blowers

Soplantes eléctricos de aire caliente

電動熱風機 电动热风机



A pistol type hot air blower, also known as heat guns. This can be used safely in a variety of applications, including paint and varnish removal, molding for PVC pipes, and hot air shrinkage for plastic package. Available for 110V or 220V power supply. Standard heating range is 50 – 55°C, but there are variety of heating ranges available from manufacturers, so please specify the further details when ordering.

Specifications

| Air Volume | Watt | Heating Range |
|--------------------|----------------|---------------|
| 100 - 500 ltr/min. | 1,000 - 2,000W | 50 – 600°C |

How to order: CODE

Hot Air Blower, electric, AIR VOLUME Ltr/min, WATT, POWER SOURCE VOLTAGE, HEATING RANGE, MODEL etc

Unit Per Set

| CODE | Voltage | CODE | Voltage |
|----------|---------|----------|---------|
| 59 11 83 | 100V | 59 11 84 | 220V |

Electric Drill Presses

Taladro de Prensa Eléctrica

電動卓上ボーリング盤 电动钻床



Solidly built with the weight and rigidity to maintain the tolerance necessary for metal-working applications. Variable speed drive allows operation at any speed between the listed range.

Specifications

| Drilling Capacity | Watt | Speed R.P.M. | Spindle Taper | Stroke mm | Stroke mm |
|-------------------|------|----------------------------------|--------------------|-----------|-----------|
| 13 mm | 300 | 3,600, 2,400, 1,700, 960, 600 | J.T. #6 (2-1/2) | 360 | 80 |

How to order: CODE

Drill press, electric, DRILLING CAPACITY, POWER SOURCE VOLTAGE, MODEL

Unit Per Set

| AC 110V Single Phase | | AC 220V Triple Phase | |
|----------------------|-------------------|----------------------|-------------------|
| CODE | Drilling Capacity | CODE | Drilling Capacity |
| 59 11 86 | 13 mm | 59 11 87 | 13 mm |

Electric Jet Chisels

Martillete de Aguja Eléctrica 電動ジェットタガネ 喷射凿子の备用針

For use on scaling jobs. Free rotating handle will be fixed at any position to make operation easier.



Unit Per Set

| CODE | 59 12 01 | 59 12 02 | 59 12 03 |
|-------------------|-------------------------|--------------------|--------------------|
| Model | EJC-32A | | |
| Power Supply | AC100V 50/60 Hz | AC115V 50/60 Hz | AC230V 50/60 Hz |
| Power Consumption | 300 W | | |
| Rated Current | 3.2 A | 2.8 A | 1.4 A |
| Stroke Speed | 3,000 min ⁻¹ | | |
| Needle | 2 mm × 32 or 3 mm × 15 | | |
| Power Cord Length | 2.5 mtr | 5 mtr | |
| Weight | 4.5 kg | | |

Name of Mfr.: Nitto Kohki Co., Ltd.

Spare Needles for Jet Chisel**How to order: CODE**

Spare needle for jet chisel, DIAM x LENGTH

Unit Per Box

| CODE | Needle Diam x Lgth mm | Per Box | CODE | Needle Diam x Lgth mm | Per Box |
|----------|-----------------------|---------|----------|-----------------------|---------|
| 59 04 67 | 2 x 180 | 100 | 59 04 68 | 3 x 180 | 100 |

Comparison Table of Electric Tools

Tabla de Comparación de Herramientas Eléctricas

電動工具主要モデル国際比較

电动工具比较表

Various manufacturers and brands are available from around the world. A few products from different manufacturers are listed here for your reference. Please ask for further information with brochures of various models from manufacturers when ordering.

The standard power source voltage differs according to the model and manufacturer. Please acknowledge that it will require several days for rewinding motor coils to convert the power source voltage when the required voltage is not available in standard.

When ordering: Electric drills

1. Select the drilling capacity required : 6.5 mm for steel
2. Select a manufacturer from one of the columns to the right: Black & Decker
3. List the representative code for that size : 59 10 01
4. List the model number of the tool for the manufacturer: 1046
5. Specify required power source voltage to be used: AC 110 volt

Electric Drills

| CODE | Power Source | Drill Capacity | AEG (Germany) | BLACK & DECKER (U.S.A.) | TOSHIBA (Japan) | HiKOKI (Japan) | MAKITA (Japan) |
|----------------------|----------------|----------------------|------------------------------------|-------------------------------------|--------------------------------|-------------------------------|------------------------------|
| 59 10 01 59 10 11 | 110 V 220 V | 6.5 mm for Steel | - | - | DR-6A 260 W, 3,200 rpm | D6SH 240 W, 4,500 rpm | DP2010 370 W 4,200 rpm |
| 59 10 02 59 10 12 | 110 V 220 V | 10.0 mm for Steel | - | TP555-XD 550 W, 0-2,900 rpm | DRD-10C 390 W, 1,700 rpm | D10VC3 600 W, 2,500 rpm | 6412 450 W 3,400 rpm |
| 59 10 03 59 10 13 | 110 V 220 V | 13.0 mm for Steel | SBE 750 RZ 750 W 0-3,000 rpm | HD555K-B1 550 W, 0^-2,800 rpm | DR-13B 620W, 780 rpm | D13VL 860W, 1,100 rpm | 6305 550 W, 1,450 rpm |
| 59 10 04 59 10 14 | 110 V 220 V | 16.0 mm for Steel | - | - | DR-16B 670 W, 700 rpm | - | DS5000 750 W] 600 rpm |
| 59 10 05 59 10 15 | 110 V 220 V | 20.0 mm for Steel | - | - | DR-20S1 730W, 500 rpm | - | - |
| 59 10 06 59 10 16 | 110 V 220 V | 25.0 mm for Steel | - | - | DR-25 1,300W, 370 rpm | - | - |
| 59 10 07 59 10 17 | 110 V 220 V | 32.0 mm for Steel | - | - | DR-32A 1,600W, 330 rpm | - | - |

Angle Grinders

| CODE | Power Source | Wheel Diam. | AEG (Germany) | BLACK & DECKER (U.S.A.) | TOSHIBA (Japan) | HiKOKI (Japan) | MAKITA (Japan) |
|----------------------|----------------|-------------|--|------------------------------|------------------------------------|----------------------------------|----------------------------------|
| 59 10 21 59 10 31 | 110 V 220 V | 100 mm | - | G650-B1 (115 mm) 650 W | DGS-100B 680 W, 11,000 rpm | PDA-100K 705 W, 12,000 rpm | 9553HB 710 W, 11,000 rpm |
| 59 10 22 59 10 32 | 110 V 220 V | 125 mm | WS 10-125S 1,000 W 11,500 rpm | | DGS-125B 680 W, 9,500 rpm | - | 9565H 1,100 W, 12,000 rpm |
| 59 10 23 59 10 33 | 110 V 220 V | 150 mm | - | - | - | - | GA6021 1,050 W, 10,000 rpm |
| 59 10 24 59 10 34 | 110 V 220 V | 180 mm | WS 24-230 GEV (230 mm) 2,400 W, 6,600 rpm | - | DGTH-180B 2,000 W, 8,500 rpm | G18ST 2,000 W, 8500 rp,m | GA7020 2,200 W, 8,500 rpm |

Bench Grinders

| CODE | Power Source | Wheel Diam. | AEG (Germany) | BLACK & DECKER (U.S.A.) | TOSHIBA (Japan) | HiKOKI (Japan) | MAKITA (Japan) |
|----------------------|----------------|-------------|---------------|-------------------------|--------------------------------|----------------|---|
| 59 10 51 59 10 56 | 110 V 220 V | 150 mm | - | - | BGB-150 300 W, 3,600 rpm | - | GB602 250 W, 3,450 rpm (60 Hz) |
| 59 10 52 59 10 57 | 110 V 220 V | 205 mm | - | - | BGB-205 600 W, 3,600 rpm | - | GB801 550 W, 3,450 rpm (60 Hz) |

Straight Grinders

| CODE | Power Source | Wheel Diam. | AEG (Germany) | BLACK & DECKER (U.S.A.) | TOSHIBA (Japan) | HiKOKI (Japan) | MAKITA (Japan) |
|----------------------|----------------|-------------|---------------|-------------------------|-----------------|------------------------------|-------------------------------|
| 59 10 61 59 10 66 | 110 V 220 V | 100 mm | - | - | - | - | - |
| 59 10 62 59 10 67 | 110 V 220 V | 125 mm | - | - | - | GP-13 570 W, 4,800 rpm | GS5000 750 W, 5,600 rpm |

Die Grinders

| CODE | Power Source | Shank Diam. × Maximum Wheel Diam. | AEG (Germany) | BLACK & DECKER (U.S.A.) | TOSHIBA (Japan) | HiKOKI (Japan) | MAKITA (Japan) |
|----------------------|----------------|-----------------------------------|---------------|-------------------------|-----------------|------------------------------|---|
| 59 10 71 59 10 75 | 110 V 220 V | 6 × 18 mm | - | - | - | - | GD0603 (6 x 19 mm) 240 W, 28,000 rpm |
| 59 10 72 59 10 76 | 110 V 220 V | 6 × 32 mm | - | - | - | LDU4 240 W, 23,000 rpm | GD0601 (6 x 38 mm) 400 W, 25,000 rpm |

Sheet Sanders (Orbital Sanders)

| CODE | Power Source | Paper Size | AEG (Germany) | BLACK & DECKER (U.S.A.) | TOSHIBA (Japan) | HiKOKI (Japan) | MAKITA (Japan) |
|----------------------|----------------|--------------|---|-------------------------|-----------------|---------------------------------|----------------------------|
| 59 10 81 59 10 82 | 110 V 220 V | 114 × 280 mm | VS 230 (91 × 185 mm) 150 W, 20,000 rpm | KA300-B1 135 W | - | SV 12SD 300 W, 10,000 rpm | 9046 600 W 6,000 OPM |

OPM denotes Orbits Per Minute

Nibblers

| CODE | Power Source | Cutting Capacity | AEG (Germany) | BLACK & DECKER (U.S.A.) | TOSHIBA (Japan) | HiKOKI (Japan) | MAKITA (Japan) |
|----------|--------------|-----------------------|---------------|-------------------------|-----------------|-------------------------------|--------------------------------|
| 59 11 01 | 110 V | 1.6 mm for Mild Steel | - | - | - | CN16SA 400 W, 2,300 rpm | JN1601 550 W, 2,200 spm |
| 59 11 05 | 220 V | | | | | | |
| 59 11 02 | 110 V | 2.3 mm for Mild Steel | - | - | - | - | - |
| 59 11 06 | 220 V | | | | | | |
| 59 11 03 | 110 V | 3.2 mm for Mild Steel | - | - | - | - | JN-3201 710 W, 1,300 spm |
| 59 11 07 | 220 V | | | | | | |
| 59 11 04 | 110 V | 4.5 mm for Mild Steel | - | - | - | - | - |
| 59 11 08 | 220 V | | | | | | |

Hand Shears

| CODE | Power Source | Cutting Capacity | AEG (Germany) | BLACK & DECKER (U.S.A.) | TOSHIBA (Japan) | HiKOKI (Japan) | MAKITA (Japan) |
|----------|--------------|-----------------------|---------------|-------------------------|-----------------|-------------------------------|--------------------------------|
| 59 11 21 | 110 V | 1.6 mm for Mild Steel | - | - | - | CE16SA 400 W, 4,700 rpm | JS-1601 380 W, 4,500 rpm |
| 59 11 24 | 220 V | | | | | | |
| 59 11 22 | 110 V | 2.0 mm for Mild Steel | - | - | - | - | - |
| 59 11 25 | 220 V | | | | | | |
| 59 11 23 | 110 V | 2.9 mm for Mild Steel | - | - | - | - | - |
| 59 11 26 | 220 V | | | | | | |

Planers

| CODE | Power Source | Planning Width | AEG (Germany) | BLACK & DECKER (U.S.A.) | TOSHIBA (Japan) | HiKOKI (Japan) | MAKITA (Japan) |
|----------|--------------|----------------|------------------------------|-------------------------|-------------------------------|-------------------------------|--------------------------------|
| 59 11 36 | 110 V | 82 mm | H500 500 W, 17,000 rpm | - | SP-82 400 W, 20,000 rpm | P20SF 620 W, 17,000 rpm | KP0800 620 W, 17,000 rpm |
| 59 11 37 | 220 V | | | | | | |

Circular Saws

| CODE | Power Source | Blade Diam. | AEG (Germany) | BLACK & DECKER (U.S.A.) | TOSHIBA (Japan) | HiKOKI (Japan) | MAKITA (Japan) |
|----------|--------------|-------------|---|-----------------------------------|-----------------|----------------|---|
| 59 11 41 | 110 V | 160 mm | K55 1,010 W, 5,200 rpm | - | - | - | HS6101 (165 mm) 1,100 W, 5,600 rpm |
| 59 11 42 | 220 V | | | | | | |
| 59 11 44 | 110 V | 185 mm | K66S (190 mm) 1,500 W, 5,200 rpm | CS1004-B1 1,400 W 5,300 rpm | - | - | HS7101, (190 mm) 1,400 W 5,500 rpm |
| 59 11 45 | 220 V | | | | | | |

Rod Cutters

| CODE | Power Source | Blade Diam. | AEG (Germany) | BLACK & DECKER (U.S.A.) | TOSHIBA (Japan) | HiKOKI (Japan) | MAKITA (Japan) |
|----------|--------------|-------------|---------------|-------------------------|-----------------|--------------------------------|-------------------------------|
| 59 11 51 | 110 V | 305 mm | - | - | - | CC14SF 2,000 W 3,800 rpm | - |
| 59 11 56 | 220 V | | | | | | |
| 59 11 52 | 110 V | 405 mm | - | - | - | - | 2416S 1,430 W 2,300 rpm |
| 59 11 57 | 220 V | | | | | | |

Jig Saws

| CODE | Power Source | Sawing Capacity | AEG (Germany) | BLACK & DECKER (U.S.A.) | TOSHIBA (Japan) | HiKOKI (Japan) | MAKITA (Japan) |
|----------|--------------|-----------------|------------------------------|-------------------------|-----------------|--|--|
| 59 11 71 | 110 V | 60 mm | ST500 500 W, 3,000 rpm | KS600E 450 W | - | CJ65V3 (65 mm) 400 W, 3,000 rpm | 4327, (65 mm) 450 W 3,100 rpm |
| 59 11 72 | 220 V | | | | | | |

Blowers

| CODE | Power Source | Air Volume | AEG (Germany) | BLACK & DECKER (U.S.A.) | TOSHIBA (Japan) | HiKOKI (Japan) | MAKITA (Japan) |
|----------|--------------|------------|---|-------------------------|-----------------|----------------|----------------|
| 59 11 81 | 110 V | 2.8 m³/min | Powertherm 560 1,500 W, 400/450 ltr/min | - | - | - | - |
| 59 11 82 | 220 V | | | | | | |

17. Chain Hoists

Electric Chain Hoists

Polipastos de Cadena Eléctricos

電動チェーンホイスト 电动链式升降机

ED Series

This electric chain hoist is particularly light and is suitable for engine room on ships and facility maintenance. It's double braking system provides protection with a western-style mechanical load brake and a regenerative brake. Features include a high-performance friction clutch integrated with the load brake designed to slip to prevent overwinding or overtravel and nickel-plated load chain with higher corrosion resistance and lower wear compared to conventional load chains. Operating voltage is 120V or 240V. Dual speed models are also available.



Specifications

| Model | Rated Load (kg) | Standard Lift (mtr) | Lifting Speed (m/min.) | Motor Output (kW) | Chain Diam. (mm) | Mass Net Weight (kg) |
|-------|-----------------|---------------------|------------------------|-------------------|------------------|----------------------|
| ED10S | 100 | 3 | 13 | 300 | 4 | 12 |
| ED24S | 240 | 3 | 13.5 | 600 | 4 | 16 |
| ED48S | 480 | 3 | 6.7 | 600 | 4 | 21.5 |

How to order: CODE

Chain hoist, electric, LIFTING CAPACITY, POWER SOURCE VOLTAGE

| AC 120V Single Phase | | AC 240V Single Phase | | Unit Per Set | | | |
|----------------------|-----------------|----------------------|-----------------|--------------|--|--|--|
| CODE | Rated Load (kg) | CODE | Rated Load (kg) | | | | |
| 59 13 01 | 100 | 59 13 06 | 100 | | | | |
| 59 13 02 | 240 | 59 13 07 | 160 | | | | |
| 59 13 03 | 480 | 59 13 08 | 240 | | | | |

Pneumatic Chain Hoists

Polipastos de Cadena Neumáticos

エアホイスト 风动链式升降机

TCRH/TCHH Series

Air Hoists TCRH/TCHH Series reduce the lifting burden for operators and supports improved work efficiency. The speed can be adjusted according to how hard the valves are pressed, allowing intuitive operation.

The possibility of catching fire is low because the motor is powered by air, not electricity.

There is no need for adjusting the hoist to the local power voltage and frequency because no electricity is used. A wide variety of capacities are available, from 250 kg up to 25 t.

How to order: CODE

PNEUMATIC CHAIN HOIST, LIFTING CAPACITY



| CODE | Model | Capacity (Ton) | Standard Lift (mtr) | Lifting Speed (m/min) | Unit Per Set |
|----------|----------|----------------|---------------------|-----------------------|--------------|
| 59 13 52 | TCRH04PS | 0.49 | 3 | 10.0 | |
| 54 | TCRH09PS | 0.98 | 3 | 5.8 | |
| 55 | TCRH20PD | 2 | 3 | 2.9 | |
| 56 | TCHH30PS | 3 | 3 | 5.4 | |
| 58 | TCHH60PD | 5 | 3 | 2.7 | |
| 59 13 59 | TCHH1QPD | 10 | 3 | 1.6 | |
| 61 | TCHH2PPD | 25 | 3 | 1.4 | |

High Speed Pneumatic Chain Hoists

Elevador de cadena neumático de alta velocidad

高速エアホイスト 高速气动葫芦



TCS Series

Designed to be the fastest speed in this lift capacity class, and have following features.

- * Compact and lightweight with aluminium housing.
- * Maximum speed limit is independently adjustable on both lifting and lowering.
- * Excellent inching on both lifting and lowering movement.
- * Unique design of the valve prevents air leakage and malfunction caused by rust when not in operation.
- * Over travelling limit system.
- * Self Cooling Design.
- * Operating air pressure is 0.6 MPa (6kgf/cm²).

Each capacity model has 3 different types of controllers.

P : Pendant type

PE : Pendant + Emergency Button type

C : Cord Type

How to order: CODE

High speed chain hoist, pneumatic, LIFTING CAPACITY tons and mtr

| CODE | Model | Lift Capacity | | Chain Speed mtr/min. | No of chain falls | Hose Size (mm) | Weight kg | Unit Per Set | |
|----------|------------|---------------|-----|----------------------|-------------------|----------------|-----------|--------------|--|
| | | Kg | Mtr | | | | | | |
| 59 13 81 | TCS-250P | 250 | 3.0 | 34 | 1 | 12.7 | 19.0 | | |
| 82 | TCS-250PE | 250 | 3.0 | 34 | 1 | 12.7 | 19.0 | | |
| 83 | TCS-250C | 250 | 3.0 | 34 | 1 | 12.7 | 18.0 | | |
| 59 13 84 | TCS-500P | 490 | 3.0 | 17 | 1 | 12.7 | 19.0 | | |
| 85 | TCS-500PE | 490 | 3.0 | 17 | 1 | 12.7 | 19.0 | | |
| 86 | TCS-500C | 490 | 3.0 | 17 | 1 | 12.7 | 18.0 | | |
| 59 13 87 | TCS-1000P | 990 | 3.0 | 8.5 | 2 | 12.7 | 25.0 | | |
| 88 | TCS-1000PE | 990 | 3.0 | 8.5 | 2 | 12.7 | 25.0 | | |
| 89 | TCS-1000C | 990 | 3.0 | 8.5 | 2 | 12.7 | 24.0 | | |

TMH Series - 3 & 6 ton capacity

Fastest Lifting Speed in this lifting capacity, operating pressure is 0.4 to 0.6MPa.

High efficient 3 step planet gear and original heat reducing structure provides high class durability. Pin mount type of upper hook is for easy maintenance and convention to trolley hoist. Smallest headroom clearance in this capacity class.



| CODE | Model | Unit Per Set | | | | | |
|----------|-------------|---------------------|-------------------------|-------------------------|------------------------|----------------|-----|
| | | Lift Capacity Kg | Chain Speed mtr/min. | No of chain falls | Hose Size (inch) | Weight (kg) | |
| 59 13 90 | TMH-3000PE | 3,000 | 3.0 | 5.4 | 1 | 3/4 | 102 |
| 91 | TMH-3000C | 3,000 | 3.0 | 5.4 | 1 | 3/4 | 101 |
| 92 | TMH-6000P2E | 6,000 | 3.0 | 2.7 | 2 | 3/4 | 133 |
| 93 | TMH-6000C2 | 6,000 | 3.0 | 2.7 | 2 | 3/4 | 132 |

*TMH-6000 P2E/C2 - 2 x Hoist Chain

18. Ventilations/Fans

Electric Portable Ventilation Fans

Ventiladores Portátiles Eléctricos

電動ポータブルファン 电动便携式通风风扇

Highly efficient and portable. Used to ventilate hot air and harmful gases from a tank or work area, and supply fresh air and oxygen. The ideal bell-mouth type casing is highly efficient, creates little noise and is easy to install in an air duct. Related air ducts are sold separately.



Specifications

| Casing Diam | 142Ø | 200Ø | 280Ø | 400Ø | 500Ø |
|--------------------|---|---|----------------------|----------------|----------------|
| Electric Source | 100 V 1P 200 V 1P | 100 V 1P 200 V 1P | 100 V 1P 200 V 1P | 200 V 3P | 200 V 3P |
| Air Volume | 20 m³/min | 20 m³/min | 70 m³/min | 110 m³/min | 190 m³/min |
| Pressure | 40 mm Aq | 25 mm Aq | 30 mm Aq | 50 mm Aq | 70 mm Aq |
| R.P.M. | 2,000 7,000 | 3,000 3,600 | 3,000 3,600 | 3,000 3,600 | 3,000 3,600 |
| Output | 96 W | 155 W | 0.55 kw | 1.5 kw | 3.7 kw |
| Weight | 2 kg | 9 kg | 18 kg | 35 kg | 64 kg |
| Standard Accessory | Speed Control Switch Cabtyre Cable 1 mtr | Motor Breaker Switch Cabtyre Cable 3 mtr | Unfurnished | | |

How to order: CODE

Ventilation fan, portable, electric, CASING DIAM mm, POWER SOURCE VOLTAGE

Unit Per Set

| AC 100 volt ± 10% | | | AC 200 volt ± 10% | | |
|-------------------|------------|--------|-------------------|------------|--------|
| CODE | Case Diam. | Phase | CODE | Case Diam. | Phase |
| 59 14 01 | 142 mm | Single | 59 14 06 | 200 mm | Single |
| 02 | 200 | " | 07 | 280 | " |
| 03 | 280 | " | 08 | 400 | Triple |
| | | | 09 | 500 | " |

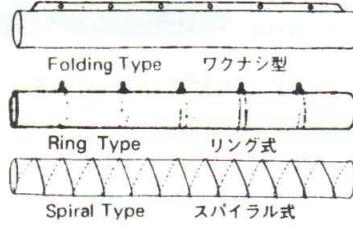
Ventilation Tubes (Air Ducts)

Tubería de Ventilación (Conductos de Aire)

エーダクト 风管(通风管道)

Flexible ventilation tubes made of PVC tarpaulin canvas.

A lightweight, highly flexible duct ideal for improving the efficiency of blowers especially in confined areas. When ordering, specify type of tube and length required.



How to order: CODE

Ventilation tube, TYPE, TUBE DIAM, LENGTH

Unit Per Lgh.

| CODE | Tube Diam. mm | Length mtr | CODE | Tube Diam. mm | Length mtr |
|--------------|---------------|------------|----------|---------------|------------|
| Folding Type | | | | | |
| 59 14 61 | 200 | 10 | 59 14 66 | 700 | 10 |
| 62 | 300 | | 67 | 800 | |
| 63 | 400 | | 68 | 900 | |
| 64 | 500 | | 69 | 1,000 | |
| 65 | 600 | | | | |
| Ring Type | | | | | |
| 59 14 71 | 200 | 10 | 59 14 76 | 700 | 10 |
| 72 | 300 | | 77 | 800 | |
| 73 | 400 | | 78 | 900 | |
| 74 | 500 | | 79 | 1,000 | |
| 75 | 600 | | | | |
| Spiral Type | | | | | |
| 59 14 81 | 200 | 5 | 59 14 91 | 700 | 5 |
| 82 | | | 92 | | |
| 59 14 83 | 300 | 10 | 59 14 93 | 800 | 10 |
| 84 | | | 94 | | |
| 59 14 85 | 400 | 5 | 59 14 95 | 900 | 5 |
| 86 | | | 96 | | |
| 59 14 87 | 500 | 10 | 59 14 97 | 1,000 | 10 |
| 88 | | | 98 | | |
| 59 14 89 | 600 | 5 | | | |
| 90 | | | | | |

Portable Ventilation Fans

Explosion Proof

Ventiladores Portátiles / Antideflagrantes

防爆電動ポータブルファン 防爆便携式通风风扇

Lightweight and robust, non-sparking type electric driven fan. Equipped with an explosion proof switch and 5 meters of cabtyre cable. An explosion proof flexible duct is also available.



How to order: CODE

Ventilation fan, explosion-proof, portable, electric, CASING DIAM mm, POWER SOURCE VOLTAGE

Unit Per Set

| CODE | 59 14 16 | 59 14 17 | 59 14 18 | 59 14 19 |
|--------------|---------------|----------|---------------|----------|
| Casing Diam. | 200 Ø | | 282 Ø | |
| Voltage | AC-100 V | AC-200 V | AC-100 V | AC-200 V |
| Phase | Single | | Single | |
| R.P.M. | 3,000 / 3,600 | | 3,000 / 3,600 | |
| Air Volume | 20 M³/min | | 70 M³/min | |
| Pressure | 25 mm/Aq | | 30 mm/Aq | |
| Weight | 14.5 kg | | 25 kg | |

Ventilation Tubes for Explosion Proof Ventilation Fan

How to order: CODE

Ventilation tube, explosion proof, SIZE

| CODE | Size | Unit Per Set | Suitable Model |
|----------|---------------------|-------------------|----------------|
| 59 14 21 | 200ø x P150 x 5 mtr | 200 mm Case Diam. | |
| 22 | 300ø x P150 x 5 mtr | 300 mm Case Diam. | |

Made of Nylon Tarpaulin with earth grip. P denotes pitch of the spiral wire.

Portable Air Movers

Soplador de Aire Portátil ポータブル送風機

移动式送风机

Lightweight, portable compressed air (or steam) operated flow amplifiers suitable for ventilating crawl areas and confined spaces. Made of single piece cast aluminium inlet housing. Ideal for use in hazardous atmospheres because of no moving parts - important for ventilating hazardous areas - zero maintenance.



Typical applications include: diluting or exhausting fumes from tanks, cargo holds, etc. Can be used with or without flexible duct.

Unit Per Set

| CODE | 59 14 11 | 59 14 12 |
|-------------------------|--------------------------|----------|
| Model | 3-HP | 6-HP |
| Inlet Pressure (kg/cm²) | 4.2 | 4.2 |
| Total Air Flow (m³/hr.) | 2,595 | 6,762 |
| Air Consumed (m³/hr.) | 80 | 167 |
| Outlet Dia (mm) | 185 | 305 |
| Length | 838 | 1,123 |
| Name of Mfr. | Coppus Engineering Corp. | |

Venturi Type Air Movers

Movedor de Aire tipo Venturi ベンチュリ式送風機 VENTURI 式送风机

Used wherever there is a need to disperse and remove fumes or move air into confined spaces.



- Fast, efficient and economic way to ventilate.
- No moving parts. Means minimal maintenance.
- Operates on compressed air or steam.

Technical Specifications based on Standard European Measurements.

| Model | Using 5.5 bar | | Using 4.1 bar | | Using 2.7 bar | |
|----------------|--------------------|--------------------------|--------------------|--------------------------|--------------------|--------------------------|
| | Air Con. M³/min | Total Air Flow M³/min | Air Con. M³/min | Total Air Flow M³/min | Air Con. M³/min | Total Air Flow M³/min |
| TA3AMS (Short) | 1.75 | 33.5 | 1.42 | 28 | 1.02 | 23 |
| TX3AM | 1.75 | 41.5 | 1.27 | 35 | 0.99 | 29 |
| TX6AM | 3.51 | 95 | 2.78 | 82 | 2.07 | 68 |
| TX8AM | 5.46 | 140 | 4.3 | 117.5 | 3.23 | 89 |
| TX10AM | 7.75 | 207 | 5.92 | 175 | 4.4 | 139 |

Unit Per Pcs.

| CODE | Model | Size cm | | Weight kg |
|----------|----------------|---------|-----------|-----------|
| | | Length | Dia. Base | |
| 59 14 30 | TX3AMS (Short) | 42 | 18 | 3 |
| 32 | TX3AM | 76 | 18 | 4 |
| 33 | TX6AM | 111 | 28 | 10 |
| 34 | TX8AM | 115 | 36 | 16 |
| 35 | TX10AM | 120 | 43 | 19 |

Name of Mfr.: TXP/Rustibus®

Jet Fan Air Movers

Ventilador de Aire tipo Jet Fan

ジェットファン式送風機 喷流式送风机



For use wherever there is compressed air available. Designed for ventilation of confined areas, tanks, any place with a need to disperse and remove fumes. This unit is reversible so can become an exhauster within minutes. No air motor required.

Technical Features:

- Rated operating pressure 2.75 bar – 7.58 bar.
- Heat treated to T6 Aircraft Aluminium Spec.
- Six guide vanes to eliminate turbulence.
- Four blades, precision balanced propeller.

Technical Specification

| Air Pressure | | Average R.P.M. | Air IN (Air con.) M³/min. | Air out M³/min. |
|--------------|---------|----------------|---------------------------|-----------------|
| Bar | Kgf/cm² | | | |
| 2.76 | 2.81 | 2,080 | 1.70 | 168 |
| 4.14 | 4.22 | 2,695 | 3.23 | 215 |
| 5.52 | 5.62 | 3,225 | 5.27 | 258 |
| 6.89 | 7.03 | 3,670 | 8.27 | 295 |

TX-JF20

| TX-JF24 | |
|---------|------|
| 2.76 | 2.81 |
| 4.14 | 4.22 |
| 5.52 | 5.62 |
| 6.89 | 7.03 |

TX-JF24

| Unit Per Set | | |
|-------------------|------------------|--------------------------------------|
| CODE | 59 14 13 | 59 14 14 |
| Model | TX-JF20 | TX-JF24 |
| Nominal Dia | 50 cm | 60 cm |
| Max. Bar | 7.58 bar | |
| Mounting Slot Dia | 2.54 cm | |
| Inlet Size | 1.9 cm npt | 2.54 cm npt |
| Bolt Circle Dia | 57.2 cm (22.5") | 69.85 cm – 77.85 cm (27.5" – 30.25") |
| Outside Dia | 62.23 cm (24.5") | 79.4 cm (31.25") |

Name of Mfr.: TXP/Rustibus®

Electric Portable Ventilation Fans

Ventilador Eléctrico Portátil

防爆型電動ポータブルファン 移动式防爆电动鼓风机

Designed for use in work environments where non-sparking equipment is an absolute requirement. Hazardous location electric motors meets NEC Class I, Division 1, Group D; Class II, Division 1, Groups E, F, G ratings.



All housings and main components are molded of special conductive polymers for safe dissipation of static charges.

| Unit Per Set | | | | | | |
|--------------|-------|-------------------|--------|-----------|----------|--------------|
| CODE | Model | Vaneaxial Airflow | | Voltage | Motor HP | Case Diam mm |
| | | cfm | m³/min | | | |
| 59 14 23 | VEP1 | 867 | 24 | 115V 60HZ | 1/2 | 330 |
| 24 | VEP3 | 867 | 24 | 230V 60HZ | 1/2 | 330 |

Name of Mfr : Coppus Engineering Corp.

Pneumatic Portable Ventilation Fans

Ventiladores Portátiles Neumáticos

エア駆動ポータブルファン 风动便携式通风风扇

Compressed air driven ventilators that can be used with or without a duct in hazardous areas such as cooling tanks or hatches. Provides ventilation of gas, paint fumes and other hazardous fumes.



Unit Per Set

| CODE | Model | Case Diam | Capacity m³/hr |
|----------|-------|-----------|----------------|
| 59 14 25 | RF-12 | 368 mm | 3,636 |
| 26 | RF-16 | 416 mm | 8,665 |

Name of Mfr.: Coppus Engineering Corp.

Air Driven Gas Freeing Fans

Conducto de aire para ventiladores para desgasificar

エアー駆動式ガス抜きファン

排气风机用空气导管

A high performance air driven fan constructed from Stainless Steel. These non-sparking (ATEX approved) fans can achieve deep penetration and operate at low pressures. Highly efficient air motors minimize air consumption, supply or extract mode by simple reversal of air supply, and can be supplied for horizontal mounting. High air flow throughput and high static pressure. Integral 'Direct In-Line' drive no gearbox to maintain or fail.

Ancillary equipment is also available (rigid hoses, ducting, fittings, adaptors, transportation trolley) on request. Class Approved for use in hazardous areas.



VP650A



VP950AS

VP650A

Made of 316 Stainless Steel, designed to be lightweight and therefore extremely portable. Suitable for use on all types of vessels, particularly oil, gas, product, chemical, handysize, SR and LPG vessels.

VP950AS

Made of 316 Stainless Steel, suitable for all types of oil, gas, product, chemical, LR2, LR1, MR and LPG vessels.

| CODE | 59 15 35 | 59 14 29 |
|---------------------------------|----------|----------|
| Model | VP650A | VP950AS |
| Max. Air Flow Requirement m³/hr | 6,750 | 9,000 |
| Static Pressure Max. Pa | 1,015 | 700 |
| Max. Flow Requirement m³/hr | 178 | 220 |
| Operating Pressure Max. kg/cm² | 7.0 | 7.0 |

(to be continued)

| | | |
|----------------------|---------------------|---------------------|
| Materials | St. St. 316 | St. St. 316 |
| Casing | PAGAS | Aluminium Alloy LM6 |
| Impeller | N/A | Beryllium Copper |
| Spark Track | St. St. 316 | N/A |
| Air Stator | St. St. 316 | St. St. 316 |
| Fasteners | Bronze | Bronze |
| Couplings | | |
| Motor Type | Air ATEX Approved | Air ATEX Approved |
| Installation | ID 318mm, PCD 389mm | ID 318mm, PCD 389mm |
| Standard Deck Flange | 1" Claw | 1" Claw |
| Standard Connections | | |
| Envelope Dimensions: | H: 410 ø: 559 | H: 368 ø: 580 |
| Weight | 17 kg | 24 kg |

Name of Mfr.: Victor Marine Ltd.

Air Supply Hose - Black - for Gas Freeing Fan

Manguera de Suministro de Aire - Negra - para Ventilador Sin Gas
ガス抜きファン用エアーコンサルタント



Styrene Butadiene Rubber (SBR) reinforced with multiple rayon braids. Available in 19 mm and 25 mm nominal bore. 20 bar working pressure, compliant to BS EN ISO 2398:2016. Available in lengths of up to 30 metres.

| CODE | Nom. Dia x Length | CODE | Nom. Dia x Length |
|----------|-------------------|----------|-------------------|
| 59 15 36 | 19 mm x 10 mtrs | 59 15 41 | 25 mm x 10 mtrs |
| 37 | 19 mm x 15 mtrs | 42 | 25 mm x 15 mtrs |
| 38 | 19 mm x 20 mtrs | 43 | 25 mm x 20 mtrs |
| 39 | 19 mm x 25 mtrs | 44 | 25 mm x 25 mtrs |
| 40 | 19 mm x 30 mtrs | 45 | 25 mm x 30 mtrs |

Name of Mfr.: Victor Marine Ltd.

Water Driven Gas Freeing Fans

Ventilador Portátil para Desgasificar

水圧駆動式ガス抜きファン 水力驱动便携式除气风扇

VP700W / VP1000W / VP1500W

High performance 316 stainless steel axial flow water driven fans. These non-sparking fans offered as either high or medium throughout, can achieve deep tank penetration. Suitable for all types of crude oil, chemical, product, handysize, SR LPG, Suezmax, UL/VLCC, LR2, LR1, MR and gas tankers for fast and complete gas freeing. ATEX approved.



VP1400W

Suitable for use on all types of vessels (oil, product, chemical, suezmax, UL/VLCC, LPG). The VP1400 is specially designed for low pressure systems and large deck openings whilst still maintaining the high static and flow rate for fast and efficient gas freeing. ATEX approved.



VP800W / VP1350W

Non-sparking fans offered as either medium or high flow, can achieve deep penetration suitable for all types of Oil, Gas, Panamax, Aframax, Suezmax, UL/VLCC, and LPG tankers. ATEX approved.

**Key Features**

- * Designed and class approved for use in hazardous areas.
- * Supply or extract mode by simple reversal.
- * Integral 'Direct In-Line' drive, no gearbox to maintain or fail.
- * Alternative deck flanges and fan connections available.
- * Ancillary equipment available (layflat hoses, ducting, fittings, adaptors, transport trolley).

Unit Per Set

| CODE | 59 15 21 | 59 15 22 | 59 15 24 | 59 15 23 |
|--|-------------------------------|--|---|-----------------------------|
| Model | VP700W | VP1000W | VP1400W | VP1500W |
| Max. Air Flow m ³ /hr | 7,000 | 10,540 | 14,000 | 14,800 |
| Static Pressure Pa | 970 Pa | 1,790 Pa | 1,500 Pa | 3,120 Pa |
| Waterflow Capacity m ³ /hr Max | 15 | 27 | 48 | 56 |
| Operating Pressure Max. kg/cm ² | 12 | 12 | 7.0 | 12 |
| Materials Casing Impeller | St/St. 316 Pagas | St/St. 316 LM6 Alloy | St/St. 316 Polymide (PAGAS) | St/St. 316 LM6 Alloy |
| Fastenings Connections Spark Track | St/St. 316 St/St. 316 N/A | St/St. 316 St/St. 316 Beryllium Copper N/A | St/St. 316 St/St. 316 N/A | Beryllium Copper N/A |
| Motor Type | N/A | 3D Francis Turbine | 3D Francis Turbine | N/A |
| Installation To Suite Deck Opening | ID 318mm, PCD 389 mm 1.5" BSP | ID 318mm, PCD 389 mm 2" BSP | ID 400mm, PCD 480 mm 2" BSP or Nakajima | ID 318mm, PCD 389 mm 2" BSP |
| Standard Water Connections | | | | |
| Envelope Dimensions | H: 465 Ø: 365 | H: 572 Ø: 580 | H: 514 Ø: 503 | H: 572 Ø: 580 |
| Weight | 19 kg | 27 kg | 25 kg | 27 kg |

Name of Mfr.: Victor Marine Ltd.

Unit Per Set

| CODE | 59 14 42 | 59 14 43 |
|--|-------------------------------------|-------------------------|
| Model | VP800W | VP1350W |
| Max. Air Flow m ³ /hr | 8,700 | 14,350 |
| Air Velocity m/s | 3.1 @ 25 mtr below deck | 5.0 @ 25 mtr below deck |
| Static Pressure Max. Kpa | 0.72 | 1.7 |
| Operational m ³ /hr | 8,000 @ 250Pa | 13,000 @ 500Pa |
| Waterflow Capacity m ³ /hr | 13 to 19 | 47 to 68 |
| Operating Pressure Max. kg/cm ² | | 10.5 |
| Materials Casing Impeller | | Aluminium Alloy LM6 |
| Spark Track | | Aluminium Alloy LM6 |
| Air Stator | | N/A |
| Fasteners | | Aluminium Alloy LM6 |
| Couplings | | St. St. 316 |
| Motor Type | | Bronze |
| Installation Standard Deck Flange | ID 318 mm, PCD 389 mm 2.5" NPT (BW) | 2D Francis Turbine |
| Standard Connections | | |
| Envelope Dimensions | H: 690 Ø: 580 | H: 689 Ø: 580 |
| Weight | | 31 kg |

Name of Mfr.: Victor Marine Ltd.

Layflat Hoses for Gas Freeing Fan**Red Heavy Duty Supply and Blue Medium Duty Exhaust**

Perfil plano Mangueras para Gas Liberación Ventilador
ガス抜き ファン用 平状ホース

用于气体冷却风扇的 Layflat 软管

Reinforced woven polyester encased in polyurethane internal and external liner. Available in 38 mm and 50 mm nominal bore and available in multiples of 5 metres, up to 30 metre lengths. Supplied fitted with an extensive range of various connections.



Unit Per Lgh.

| CODE | | Nom. Diam x Length |
|-------------------------|----------------------------|--------------------|
| Red – Heavy Duty Supply | Blue – Medium Duty Exhaust | |
| 59 15 51 | 59 15 61 | 38 mm x 10 metres |
| 52 | 62 | 38 mm x 15 metres |
| 53 | 63 | 38 mm x 20 metres |
| 54 | 64 | 38 mm x 25 metres |
| 55 | 65 | 38 mm x 30 metres |
| 59 15 56 | 59 15 66 | 50 mm x 10 metres |
| 57 | 67 | 50 mm x 15 metres |
| 58 | 68 | 50 mm x 20 metres |
| 59 | 69 | 50 mm x 25 metres |
| 60 | 70 | 50 mm x 30 metres |

Name of Mfr.: Victor Marine Ltd.

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Water Driven Turbine Fans

Ventiladores de Turbina por Agua
ウォーターハーベシングファン
水力驱动涡轮式风扇

Designed for high performance ventilation of gas from large enclosed areas or other tank openings. Works effectively providing penetration deep into the tank for complete ventilation. Made of a non-spark construction with a line impeller and integral water motor that are coated against corrosion.



Inlet/outlet water hoses are sold separately.

How to order: CODE

Turbine fan, water driven, OUTLET BORE DIAM mm, CAPACITY m³/min., MODEL

| CODE | 59 14 36 | 59 14 37 | 59 14 40 | 59 14 41 |
|--------------------------------------|------------------|-----------|--------------------|-----------|
| Model | KWF-300M | KWF-400M | C-12AW | C-15AW |
| Outlet Bore Dia. mm | 300 mm | 400 mm | 318 mm | 387 mm |
| Capacity m ³ /min. | 70 - 220 | 100 - 290 | 83 - 142 | 123 - 210 |
| Water Pressure kgf/cm ² | 1 - 7 | 1 - 7 | MAX 10.5 | MAX 10.5 |
| Water Consumption m ³ /hr | 20 - 43 | 24 - 58 | 19.8 | 27.3 |
| Hose Dia. | 65A | 65A | 1-1/2" | 1-1/2" |
| Weight kg | 24 | 28 | 18 | 24 |
| Name of Mfr | Exeno - Yamamizu | | Coppus Engineering | |

Compressed Air or Steam Driven Turbine Fans

Ventiladores de Turbina por Aire Comprimido o Vapor
エア・スチーム両用タービンファン 压缩空气或蒸汽驱动涡轮式风扇

Powerful turbine fan for efficient drying and ventilating of large areas on tankers and other vessels. These fans are turbine driven by steam pressure or compressed air.

Inlet/exhaust steam hoses, coupling and air duct hoses are sold separately.



How to order: CODE

Turbine fan, compressed air or steam driven, AIR OUTLET DIAM mm, CAPACITY m³/min., MODEL

| CODE | 59 14 46 | 59 14 47 | Unit Per Set |
|---|------------------|----------|--------------|
| Model | KTF-300 | KTF-400 | |
| Air Outlet Diam mm | 300 | 400 | |
| Capacity m ³ /min. | 130 | 210 | |
| Operating Stream Pressure kgf/cm ² | 8 | 8 | |
| Steam Inlet Diam mm | 19 | 19 | |
| Hose Diam | 50 | 50 | |
| Weight kg | 32 | 38 | |
| Name of Mfr | Exeno - Yamamizu | | |

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Pneumatic & Electrical Tools

Portable Gas Freeing Fans

Jetfan Series

Ventiladores Portátiles de Gas Libre
ポータブルガス抜きファン 便携式除气风扇喷气风扇系列

Jetfan 65

For small to mid tonnage vessels. Totally portable and capable of being used in virtually any location, making it ideally suited to vessels with severely restricted space.



To be used not only for general tank gas freeing but also the ventilation of confined spaces such as cofferdams and double bottoms for inspection and repair work. The air flow can be changed from penetration to extraction in a simple operation.

Available in three drive mediums, compressed air, steam or hydraulic.

| CODE | 59 14 51 | 59 14 52 | 59 14 59 | Unit Per Set |
|---------------------------------|----------------|----------|-------------|--------------|
| Model | Jetfan 65 | | | |
| Drive Medium | Compressed Air | Steam | Hydraulic | |
| Supply Connection | Claw type | 1" BSP | As required | |
| Discharge Connection | 2" Plain tube | 2" BSP | As required | |
| Deck Opening | 318 mm | | | |
| Size Height x Width | 523 x 394 mm | | | |
| Weight | 17 kg | | | |
| Name of Mfr.: Dasic Marine Ltd. | | | | |

Jetfan 70

For 'mid' range vessels as a penetration fan. Ideally suited to the environment and can be easily manoeuvred and positioned by one man, a particular advantage on smaller tonnage where deck space is limited. Can choose from water or compressed air as the drive medium. A hand transport trolley is also available.



| CODE | 59 14 53 | 59 14 54 | Unit Per Set |
|---------------------------------|--|----------------|--------------|
| Model | Jetfan 70 | | |
| Drive Medium | Water | Compressed Air | |
| Supply Connection | 2" 7-1/2 TPI Male (ASA B26) | 3/4" Claw | |
| Discharge Connection | 2-3/4" BSP Male | 3/4" NB Tube | |
| Deck Opening | Standard 318 mm stud bolt deck opening | | |
| Size Height x Width | 520 x 436 mm | | |
| Weight | 25 kg | | |
| Name of Mfr.: Dasic Marine Ltd. | | | |

Jetfan 125

Most efficient deep penetration or extraction gas freeing fan. Has been used successfully on vessels of up to 550,000 dwt tons, drastically reducing time spent on gas freeing operations.



To change from penetration to extraction is a one-man operation and can take barely 10 minutes to perform. There is a choice of water, compressed air or steam as the driven medium.

A handy transport trolley is also available.

| CODE | 59 14 56 | 59 14 57 | 59 14 58 | Unit Per Set |
|---------------------------------|--|----------------|-------------|--------------|
| Model | Jetfan 125 | | | |
| Drive Medium | Water | Compressed Air | Steam | |
| Supply Connection | 2" 7-1/2 TPI Male (ASA B26) | 3/4" Claw | 1" BSP Male | |
| Discharge Connection | 2-3/4" BSP Male | 3/4" NB Tube | 2" BSP Male | |
| Deck Opening size | Standard 318 mm stud bolt deck opening | | | |
| Size Height x Width | 736 x 500 mm | | | |
| Weight | 44 kg | | | |
| Name of Mfr.: Dasic Marine Ltd. | | | | |

Gas Freeing Fan Trolley

Carrito con ventilador para desgasificar

ガス抜きファン用トロリー

排气风机用手推车



Fan Trolley manufactured in a lightweight tubular construction, this trolley is available to ease the transportation of fans in restricted areas. Complete with durable wheels and a fan retaining strap for added protection. Also available in 316 stainless steel.

| | | |
|----------|-----------------------------|-----|
| 59 14 60 | Trolley for gas freeing fan | Pc. |
|----------|-----------------------------|-----|

| | | |
|----------|-----------------------------|-----|
| 59 14 60 | Trolley for gas freeing fan | Pc. |
|----------|-----------------------------|-----|

Air Ducting for Gas Freeing Fan

Conductos de aire para ventilador de gas

ガスフリーファン用エアダクト 气体释放风机的空气管道

Heavy duty, anti-static, flame resistant spiral wound PVC coated, flexible fabric ducting. Produced in standard 300/400 mm diameter nominal bore or special purpose diameters and lengths. These ducts are suitable for both supply and exhaust mode operation and fitted with deck flange to suit 318/400 mm deck opening. Specially designed for marine "hazardous areas". Outlet ducts are available in many sizes ex-stock. Also available as a detachable option.



Unit Per Lgh

| CODE | Nom. Diam. x Length | CODE | Nom. Diam. x Length |
|----------|---------------------|----------|---------------------|
| 59 15 15 | 300 mm x 10 metres | 59 15 20 | 400 mm x 10 metres |
| 16 | 300 mm x 15 metres | 25 | 400 mm x 15 metres |
| 17 | 300 mm x 20 metres | 26 | 400 mm x 20 metres |
| 18 | 300 mm x 25 metres | 27 | 400 mm x 25 metres |
| 19 | 300 mm x 30 metres | 28 | 400 mm x 30 metres |

Name of Mfr.: Victor Marine Ltd.

Electric Blowers/Exhausters

Soplador/Extractor Eléctrico 電気給排気ファン 电动抽送机

Portable blower/exhauster with turbine blades to deliver a constant source of clean air in even the most difficult to ventilate conditions. These rugged industrial blowers have corrosion and chemical resistant ABS (Acrylonitrile Butadiene Styrene copolymer) housings, cast aluminium turbine fan blades and heavy duty cycle switched motors. Anti-static intrinsically safe models are recommended for use in hazardous atmospheres containing explosive and combustible gases and vapors.

Standard Models

59 15 01
EFi7559 15 02
EFi50

Intrinsically Safe Models

59 15 06
EFi75xx59 15 07
EFi150xx

Standard Models

Unit Per Pcs.

| CODE | 59 15 01 | 59 15 02 |
|----------------------|--|--|
| Model | EFi75 | EFi50 |
| Fan Size | 12"/30 cm x 17 blade impeller | 16"/40 cm x 21 blade impeller |
| Free Airflow | 2,500 CFM/ 4,250 m³/hr | 3,200 CFM/ 5,440 m³/hr |
| Motor | 3/4 HP | 1/2 HP |
| | 115 / 230 V 50 / 60 Hz 1P | |
| Amps | 115V : Start : 37, Run : 7.2 230V : Start : 14, Run : 3 | 115V : Start : 21, Run : 6 230V : Start : 10, Run : 3 |
| Switch Enclosure | IP65 rain tested | |
| Housing Material | Glass-reinforced ABS | |
| Weight | 46 lbs / 21 kg | 46 lbs / 21 kg |
| Dimensions H x W x D | 16 x 15 x 16 inches 406 x 381 x 406 mm | 19 x 18 x 12 inches 480 x 460 x 305 mm |
| Name of Mfr. | Euramco Safety | |

Intrinsically Safe Models

Unit Per Pcs.

| CODE | 59 15 06 | 59 15 07 |
|----------------------|--|---|
| Model | EFi75xx | EFi150xx |
| Fan Size | 12"/30 cm x 17 blade impeller | 16"/40 cm x 7 blade impeller |
| Free Airflow | 2,500 CFM/ 4,250 m³/hr | 4,459 CFM/ 7,580 m³/hr |
| Motor | 3/4 HP | 1.5 HP |
| | 115 / 230 V 50 / 60 Hz 1P | |
| Amps | 115V : Start : 37, Run : 7 230V : Start : 14, Run : 3 | 115V : Start : 57, Run : 15 230V : Start : 32, Run : 7.5 |
| | Totally enclosed hazardous location motor rated UL Class I – Group D, UL Class II – Group E,F,G | |
| Housing Material | Glass-reinforced, carbon-filled, anti-static ABS | |
| Weight | 44 lbs / 20 kg | 61 lbs / 28 kg |
| Dimensions H x W x D | 16 x 15 x 16 inches 406 x 381 x 406 mm | 19 x 18 x 12 inches 480 x 460 x 305 mm |
| Name of Mfr. | Euramco Safety | |

Air Driven Blowers

Soplador de Aire エアー駆動送風機

气动式送风机

These air driven blowers are engineered specifically for hazardous work environments where intrinsically safe equipment is absolutely required. The anti-static, glass-reinforced ABS (Acrylonitrile Butadiene Styrene copolymer) housing is corrosion and chemical resistant. Complete with filter, motor lubricator, exhaust muffler, air control valve and static grounding cord. Motor exhausts outside of duct; compressed air not in air stream.



59 15 11 AFi75xx



59 15 12 AFi50xx

Unit Per Pcs.

| CODE | 59 15 11 | 59 15 12 |
|----------------------|---|---|
| Model | AFi75xx | AFi50xx |
| Fan Size | 12"/30 cm x 17 blades | 16"/40 cm x 21 blades |
| Free Airflow | 2,042 CFM / 3,471 m³/hr | 3,200 CFM / 5,440 m³/hr |
| Air Motor | GAST 4AM-NRV-50C | |
| Duct Adaptor | Integral 12" | Reversible 16" |
| Housing Material | Anti-static, glass-reinforced ABS | |
| Weight | 33 lbs / 15 kg | 43 lbs / 20 kg |
| Dimensions H x W x D | 16 x 17 x 16 inches 410 x 430 x 410 mm | 19 x 21 x 12 inches 480 x 530 x 305 mm |
| Name of Mfr. | Euramco Safety | |

Portable Electric Industrial Fan Heaters

Ventilador calefactor portátil eléctrico de uso industrial

ポータブル電動ファンヒーター 便携式电动暖风机加热器

Used for warming up the cold areas and rooms. They can be also used as drying wet surfaces and atmospheres. Fitted with fan blades that can blow hot air out a few meters away. Heater includes; Overheat protection, Adjustable thermostat control, Cool blows thermostat control (fan blades), Carrying handle and mounting foot and can be wall mounted by own's fabrication. CE certified.



Unit Per Pc.

| CODE | 59 15 31 |
|-------------------|-----------------------|
| Model | CFH-30 |
| Voltage / Phase | 230 V/Single |
| Frequency | 50/60 Hz |
| Power | 3,000 Watts |
| Temperature Range | 0 – 40°C continuously |
| Heater I.D. | 200 mm |
| Size | 28 x 39 x 31 cm |
| Weight | 8.8 kg |

Name of Mfr.: Cobolt – KM Kinley

Pump casing materials and elastomer selection options

| Casing | Diaphragms | P.025 | P1 | P2 | P4 | P8 |
|-----------------|------------|-------|----|----|----|----|
| Stainless Steel | TF | O | O | O | O | O |
| | WFS | O | O | O | O | O |
| | VTS | X | O | O | O | O |
| | BNS | O | O | O | O | O |
| Hastelloy | TF | X | O | X | X | X |
| | WFS | X | X | X | X | X |
| | VTS | X | O | X | X | X |
| | BNS | X | X | X | X | X |
| Cast Iron | TF | X | X | X | O | O |
| | WFS | X | X | X | O | O |
| | VTS | X | X | X | O | O |
| | BNS | X | X | X | O | O |

Ordering other material options by adding suffix letter to the end of the pump code.

Casing

| | |
|---|--|
| S | Stainless steel casing. |
| W | Cast iron casing. Unavailable for P.025, P1 & P2 series. |
| H | Hastelloy casing. Standard with PTFE elastomers. |

Diaphragms

| | |
|-----|---|
| WFS | Diaphragm : Wil-Flex (Light chemicals) Low cost alternative to Teflon in acidic and caustic applications. Has long flex life and handle abrasives well. |
| TF | Diaphragm : PTFE material for aggressive chemicals. Excellent in acidic & caustic applications with long flex life and handles abrasives well. |
| VTS | Diaphragm : Viton. Good flex life at extremely high temperature. Handle aggressive fluids such as acids & chlorinated hydrocarbons well. |
| BNS | Diaphragm : Buna-N for oil & petroleum based fluids. |

Example:

59 16 02 W/WFS P4 pump with cast iron casing & Wil-Flex diaphragms, balls, and valve seats.



19. Pumps/Ejectors

Pneumatic Diaphragm Pumps

**Metal range with Plo-flo air valve system
(Formerly known as the M series, T series)** 气动隔膜泵

Bombas Neumáticas de Diafragma ダイヤフラムポンプ

An air operated diaphragm pump designed for simplicity in operation and maintenance.

Safe for use in explosive environments.

The Metal pump lines provides the durability, chemical resistance, abrasion resistance, and temperature range required for a variety of process and waste applications.

The standard material combination is composed of aluminium casing and neoprene diaphragm, balls and valve seat for general purpose non aggressive applications such as in oil and petroleum based fluids. Cast iron, 316 stainless steel and hastelloy casing materials are available as well.

Wilden pump features:

- Ease of operation
- Variable speed
- Variable pressure
- Dead head capability
- Plastic Center Block
- Lube-free operation
- Intrinsically safe
- Ability to pass solids
- Ability to run dry
- No dynamic seals
- No-stalling unbalanced spool

Unit Per Set

| CODE | 59 16 07 | 59 16 05 | 59 16 01 | 59 16 02 | 59 16 03 | |
|-----------------|--------------|----------|----------|----------|----------|--|
| Model | P.025 | P1 | P2 | P4 | P8 | |
| Standard Casing | Aluminium | | | | | |
| Suction | Dry | 10.8' | 19' | 19' | 24' | |
| Lift | Wet | 30.6' | 31' | 28' | 39' | |
| Air Inlet NPT | 1/8" | 1/4" | 1/4" | 1/2" | 3/4" | |
| Water | Inlet | 1/4" | 1/2" | 1" | 1-1/2" | |
| | BSP/NPT | Female | | | | |
| Outlet | 1/4" | 1/2" | 3/4" | 1-1/4" | 2" | |
| | BSP/NPT | Female | | | | |
| Size | Height | 5.8" | 8.8" | 11" | 17.4" | |
| | Width | 6.5" | 8.2" | 10.5" | 15.4" | |
| | Depth | 4.5" | 7" | 7.3" | 11.2" | |
| | Weight Lbs | 4 | 13 | 26 | 38 | |
| | Name of Mfr. | Wilden | | | | |



Plastic range with Proflo air valve system

Plastic pump lines provides the durability, chemical resistance, abrasion resistance, and temperature range required for a variety of process and waste applications.

The standard material combination is composed of polypropylene casing and Teflon diaphragm balls and valve seat. PTFE diaphragm are extremely suitable for aggressive chemicals. Excellent in acidic & caustic applications with long flex life and handles abrasives well.

| CODE | 59 16 10 | 59 16 11 | 59 16 12 | 59 16 13 | 59 16 14 | |
|-----------------|---------------|----------|----------|----------|----------|--|
| Model | P.025 | P1 | P2 | P4 | P8 | |
| Standard Casing | Polypropylene | | | | | |
| Suction | Dry | 9' | 20' | 18' | 16' | |
| Lift | Wet | 31' | 31' | 29' | 26' | |
| Air Inlet NPT | 1/8" | 1/4" | 3/4" | 1/2" | 3/4" | |
| Water | Inlet | 1/4" | 1/2" | 1" | 1-1/2" | |
| | BSP/NPT | Female | | | | |
| Outlet | 1/4" | 1/2" | 1" | 1-1/2" | 2" | |
| | BSP/NPT | Female | | | | |
| Size | Height | 6.4" | 8.6" | 14" | 20.8" | |
| | Width | 5.7" | 8.2" | 11.6" | 15.5" | |
| | Depth | 4.5" | 8" | 9.1" | 11.2" | |
| | Weight Lbs | 3 | 9 | 18 | 37 | |
| | Name of Mfr. | Wilden | | | | |

Ordering other materials options by adding suffix letter to the end of the pump code.

Casing

| | | |
|---|--------------|----------------------------------|
| K | Kynar (PVDF) | For temperatures up to 107 deg.C |
|---|--------------|----------------------------------|

Diaphragms

| | |
|----|---|
| WF | Diaphragm : Wil-Flex (Light chemicals) Low cost alternative to Teflon in acidic and caustic applications. Has long flex life and handle abrasives well. |
| VT | Diaphragm : Viton. Good flex life at extremely high temperature. Handle aggressive fluids such as acids & chlorinated hydrocarbons well. |
| BN | Diaphragm : Buna-N for oil & petroleum based fluids. |

Example:

XX XX XX K/VT

Note: VT (Viton) Unavailable for P.025.

High Pressure Double Diaphragm Pump

The introduction of the H800 expands Wilden's application range to include head pressures up to 250 psig. Wilden's patent pending high pressure technology yields a 250 psig discharge pressure designed for solid laden slurries. Capable of generating 250 psig with only 85 psig air supply.



Standard material composes of stainless steel casing with PTFE backed diaphragm. Suitable for boosting air line pressure over long distances.

| | | | Unit Per Set |
|-----------------|---------|--------------------------------|--------------|
| CODE | | 59 16 16 | 59 16 17 |
| Model | | H800 | |
| Pressure Ratio | | 3 : 1 | |
| Standard Casing | | Stainless steel Ductile iron | |
| Suction Lift | Dry | 12' | |
| | Wet | 29.5' | |
| Air Inlet NPT | | 3/4" | |
| Water | Inlet | 2" ANSI 300# Flanges | |
| | BSP/NPT | Female | |
| | Outlet | 2" ANSI 300# Flanges | |
| | BSP/NPT | Female | |
| Size | Height | 29.9" | |
| | Width | 19.3" | |
| | Depth | 21.5" | |
| Weight Lbs | | 283 | |
| Name of Mfr. | | Wilden | |

*Hastelloy Casing is also available upon request.

| | | | Unit Per Set |
|-----------------|---------|-------------------|--------------|
| CODE | | 59 16 18 | 59 16 19 |
| Model | | H400 S | |
| Pressure Ratio | | 2 : 1 | |
| Standard Casing | | Stainless steel | Aluminium |
| Suction | Dry | 10.1' | 10.2' |
| Lift | Wet | 30.6' | 29.5' |
| Air Inlet NPT | | 3/4" | 1/2" |
| Water | Inlet | 1-1/2" | 1" |
| | BSP/NPT | ANSI 300# Flanges | BSP/NPT |
| | Outlet | 1-1/2" | 1" |
| | BSP/NPT | ANSI 300# Flanges | BSP/NPT |
| Size | Height | 23.8" | 20.8" |
| | Width | 13.6" | 15.1" |
| | Depth | 12.2" | 12.2" |
| Weight Lbs | | 60 | 82 |
| Name of Mfr. | | Wilden | |

Plo-flow SHIFT air valve system

Wilden Pro-Flo Shift Air Distribution System (ADS) is energy-efficient type model and achieves up to 60% savings in air consumption. It delivers more yield per SCFM versus competitive AODD pumps, has fewer operating parts, meaning less downtime and simplified maintenance. Available in a single point exhaust option (for submersible applications), and has drop-in configuration capacity (compatible with M,T, and P models).



| | | Unit Per Set | | | |
|-----------------|---------|--------------|----------|-------------|----------|
| CODE | | 59 16 08 | 59 16 09 | 59 16 04 | 59 16 06 |
| Model | | PS4 | | PS15 | PS20 |
| Standard Casing | | Aluminium | | Cast iron | |
| Suction | Dry | 23.3' | | 21.6' | 14.4' |
| | Wet | 28.4' | | 28.4' | 28.4' |
| Air Inlet NPT | | 3/4" | | | |
| Water | Inlet | 1-1/2" | 2" | 3" | 4" |
| | BSP/NPT | Female | | ANSI Flange | |
| | Outlet | 1-1/4" | 2" | 3" | 4" |
| | BSP/NPT | Female | | ANSI Flange | |
| Size | Height | 16.9" | 26.3" | 32.1" | 32.5" |
| | Width | 14.5" | 15.9" | 20.2" | 37" |
| | Depth | 12.9" | 13.3" | 16.7" | 13" |
| Weight Lbs | | 46 | 78 | 121 | 492 |
| Name of Mfr. | | Wilden | | | |

Pump casing materials and elastomer selection options

| Casing | Diaphragms | PS4 | PS8 | PS15 | PS20 |
|-----------------|------------|-----|-----|------|------|
| | | TF | O | O | X |
| Stainless Steel | WFS | O | O | O | X |
| | VTS | O | O | O | X |
| | BNS | O | O | O | X |
| Hastelloy | TF | O | X | X | X |
| | WFS | X | X | X | X |
| | VTS | X | X | X | X |
| Cast Iron | BNS | X | X | X | X |
| | TF | O | O | O | O |
| | WFS | O | O | O | O |
| BNS | VTS | O | O | O | O |
| | BNS | O | O | O | O |

Ordering other material options by adding suffix letter to the end of the pump code.

Casing

| | |
|---|--|
| S | Stainless steel casing. Unavailable for PS20 series. |
| W | Cast iron casing. |
| H | Hastelloy casing. Standard with PTFE elastomers. |

Diaphragms

| | |
|-----|---|
| WFS | Diaphragm : Wil-Flex (Light chemicals) Low cost alternative to Teflon in acidic and caustic applications. Has long flex life and handle abrasives well. |
| | TF |
| TF | Diaphragm : PTFE material for aggressive chemicals. Excellent in acidic & caustic applications with long flex life and handles abrasives well. |
| | VTS |
| VTS | Diaphragm : Viton. Good flex life at extremely high temperature. Handle aggressive fluids such as acids & chlorinated hydrocarbons well. |
| | BNS |
| BNS | Diaphragm : Buna-N for oil & petroleum based fluids. |

Example:

59 16 04 S/TF PS15 pump with stainless steel casing & PTFE diaphragms, balls, and SS valve seats.

W/WFS PS4 pump with cast iron casing & Wil-Flex diaphragms, balls, and valve seats.

Pneumatic Diaphragm Pumps

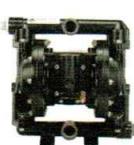
Bombas neumáticas de diafragma

空気ダイアフラムポンプ 气动隔膜泵

ARO advanced series with excellent reliability, high efficiency and easy serviceability features. EXP metallic pumps are available from 1/2" to 3" port sizes, including Aluminium, Stainless Steel, Cast Iron and Hastelloy pump body material to optimize fluid compatibility.

For the purpose of making ordering easier, provided the following ordering table composed of the most practical specifications for marine use. For any further detailed information please contact local sales or distributors.

1" Metallic EXP Pump (port size 25 mm)

Seat Material
Same as HousingBall
G Nitrile
T PTFE Diaphragm
G Nitrile
T PTFE

PD10 X - X X - X X X

| Center Section | Connection | Wetted Material | Hardware |
|-------------------|----------------------------------|-------------------|-------------------|
| A Aluminum | A NPTF Thread | S Stainless Steel | S Stainless Steel |
| P Polypropylene | B BSP Thread | A Alminium | P Plated Steel |
| S Stainless Steel | F 1" ANSI/DIN Flange (Side) | C Cast Iron | |
| | Y 1" ANSI/DIN Flange (Center) | H Hastelloy-C | |
| | | P Polypropylene | |
| | | K PVDF | |

Unit Per Set

| CODE | 59 17 01 | 59 17 02 |
|--------------------------|----------------------------------|---------------------------------|
| Recommended Model | PD10X-XXX-XXX | PD10P-XXX-XXX |
| Description | 1" Pump | |
| Central Section Material | Aluminium/ Stainless Steel | Polypropylene |
| Connection Thread | BSP / NPT | BSP / NPT / ANSI, DIN Flange |
| Wetted Material | Aluminium/ Stainless Steel | Polypropylene/PVDF |
| Hardware | Plated Steel/ Stainless Steel | Stainless Steel |
| Seat Material | Same as Housing | |
| Ball Material | Nitrile / PTFE | |
| Diaphragm Material | Nitrile / PTFE | |

Performance Specification

| | |
|-------------------------------------|---|
| Max. Flow GPM (Liters) | 52 (197) |
| Max. Operating Pressure psi (bar) | 120 (8.3) |
| Maximum Dry Suction Lift ft (meter) | 19 (5.7) |
| Max. Solids Inches (mm) | 1/8" (3.3) |
| Air Inlet | 1/4" – 18 NPT |
| Recommended Filter / Regulator | P39124-600 |
| Pump Weight (kg) | 9.4 (AL), 27.8 (SS), 8.78 (PP), 11.72 (PV) |
| Air Line Kit | 66073-2 |
| Fluid Service Kit | 637401-XX 637396-XX |
| Air Motor Service Kit | 637397 |
| Manufacturer | Ingersoll Rand ARO |

Remark : If you require another material of pump, please refer to the ordering guide for material selection of components.

1.5" Metallic EXP Pump (port size 40 mm)

Seat Material
Same as HousingBall
G Nitrile
T PTFE Diaphragm
G Nitrile
T PTFE

PD15 X - X X - X X X

| Center Section | Connection | Wetted Material | Hardware |
|-------------------|----------------------------------|-------------------|-------------------|
| A Aluminium | A NPTF Thread | S Stainless Steel | S Stainless Steel |
| P Polypropylene | B BSP Thread | A Alminium | P Plated Steel |
| S Stainless Steel | F 1" ANSI/DIN Flange (Side) | C Cast Iron | |
| | Y 1" ANSI/DIN Flange (Center) | H Hastelloy-C | |
| | | P Polypropylene | |
| | | K PVDF | |

Unit Per Set

| CODE | 59 17 03 | 59 17 04 |
|--------------------------|----------------------------------|--------------------|
| Recommended Model | PD15X-XXX-XXX | PD15P-XXX-XXX |
| Description | 1.5" Pump | |
| Central Section Material | Aluminium/ Stainless Steel | Polypropylene/PVDF |
| Connection Thread | BSP / NPT | ANSI, DIN Flange |
| Wetted Material | Aluminium/ Stainless Steel | Polypropylene/PVDF |
| Hardware | Plated Steel/ Stainless Steel | Stainless Steel |
| Seat Material | Same as Housing | |
| Ball Material | Nitrile / PTFE | |
| Diaphragm Material | Nitrile / PTFE | |

Performance Specification

| | |
|-------------------------------------|-----------------------|
| Max. Flow GPM (Liters) | 123 (465) |
| Max. Operating Pressure psi (bar) | 120 (8.3) |
| Maximum Dry Suction Lift ft (meter) | 14 (4.2) |
| Max. Solids Inches (mm) | 1/4" (6.4) |
| Air Inlet | 1/2" – 14 NPT |
| Recommended Filter / Regulator | P39124-600 |
| Pump Weight Lbs (kg) | 64.28 (29.2) |
| Air Line Kit | 66084-1 |
| Fluid Service Kit | 637375-XX 637391-XX |
| Air Motor Service Kit | 637389 |
| Manufacturer | Ingersoll Rand ARO |

Remark : If you require another material of pump, please refer to the ordering guide for material selection of components.

2" Metallic EXP Pump (port size 50 mm)

Seat Material
Same as HousingBall
G Nitrile
T PTFE Diaphragm
G Nitrile
T PTFE

PD20 X - X X - X X X - (B)

| Center Section | Connection | Wetted Material | Hardware |
|-------------------|--------------------------------|-------------------|-------------------|
| A Aluminium | A NPTF Thread | S Stainless Steel | S Stainless Steel |
| P Polypropylene | B BSP Thread | A Alminium | P Plated Steel |
| S Stainless Steel | F 2" ANSI/DIN Flange (Side) | C Cast Iron | |
| | | H Hastelloy-C | |
| | | P Polypropylene | |
| | | K PVDF | |

Unit Per Set

Remark : If you require another material of pump, please refer to the ordering guide for material selection of components.

| CODE | 59 17 06 | 59 17 07 |
|--------------------------|----------------------------------|--------------------|
| Recommended Model | PD20X-XXX-XXX-B | PD20P-XXX-XXX |
| Description | 2" Stainless Steel Pump | |
| Central Section Material | Aluminium/ Stainless Steel | Polypropylene |
| Connection Thread | BSP / NPT | ANSI, DIN Flange |
| Wetted Material | Aluminium/ Stainless Steel | Polypropylene/PVDF |
| Hardware | Plated Steel/ Stainless Steel | Stainless Steel |
| Seat Material | Same as Housing | |
| Ball Material | Nitrile/PTFE | |
| Diaphragm Material | Nitrile/PTFE | |

Performance Specification

| | |
|-------------------------------------|--------------------|
| Max. Flow GPM (Liters) | 172 (651) |
| Max. Operating Pressure psi (bar) | 120 (8.3) |
| Maximum Dry Suction Lift ft (meter) | 14 (4.2) |
| Max. Solids Inches (mm) | 1/4" (6.4) |
| Air Inlet | 3/4" - 14 NPTF |
| Recommended Filter / Regulator | P39354-610 |
| Pump Weight Lbs (kg) | 149.8 (68) |
| Air Line Kit | 66312 |
| Fluid Service Kit | 637309-XX |
| Air Motor Service Kit | 637421 |
| Manufacturer | Ingersoll Rand ARO |

Remark : If you require another material of pump, please refer to the ordering guide for material selection of components.

Performance Specification

| | |
|-------------------------------------|--------------------|
| Max. Flow GPM (Liters) | 275 (1,041) |
| Max. Operating Pressure psi (bar) | 120 (8.3) |
| Maximum Dry Suction Lift ft (meter) | 14 (4.2) |
| Max. Solids Inches (mm) | 3/8" (9.5) |
| Air Inlet | 3/4" - 8 NPTF |
| Recommended Filter / Regulator | P39354-610 |
| Pump Weight Lbs (kg) | 228.8 (103.8) |
| Air Line Kit | 66109 |
| Fluid Service Kit | 637303-XX |
| Air Motor Service Kit | 637421 |
| Manufacturer | Ingersoll Rand ARO |

Remark : If you require another material of pump, please refer to the ordering guide for material selection of components.

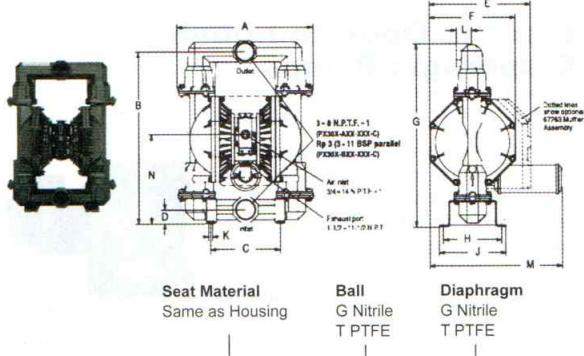
Air Operated Double Diaphragm Pumps

Bombas de Doble Diafragma Operada con Aire
エアー式ダブルダイヤフラムポンプ 气动式双隔膜泵浦

Versa-Matic® pumps deliver non-stalling, non-icing, lubrication free on / off reliability. Available with patented longer-life diaphragm designs and the exclusive Elima-Matic® air valve system. The products are designed with ease of maintenance in mind, for reduced downtime. They are available in a wide array of materials, construction choices, and porting options to handle virtually any requirement.



3" Metallic EXP Pump (port size 80 mm)



PD30 X - X X X - X X X - C

| | | | |
|-------------------|----------------------|-------------------|-------------------|
| Center Section | Connection | Wetted Material | Hardware |
| A Aluminium | A NPTF Thread | S Stainless Steel | S Stainless Steel |
| S Stainless Steel | B BSP Thread | A Aluminium | P Plated Steel |
| | F 2" ANSI/DIN Flange | C Cast Iron | |
| | | H Hastelloy-C | |

Unit Per Set

| CODE | 59 17 08 |
|--------------------------|---|
| Recommended Model | PD30X-XXX-XXX-C |
| Description | 3" Stainless Steel Pump |
| Central Section Material | Aluminium / Stainless Steel |
| Connection Thread | BSP / NPT /ANSI, DIN Flange |
| Wetted Material | Aluminium / Stainless Steel / Cast Iron / Hastelloy-C |
| Hardware | Plated Steel / Stainless Steel |
| Seat Material | Same as Housing |
| Ball Material | Nitrile / PTFE |
| Diaphragm Material | Nitrile / PTFE |

E1 1" Bolted Metallic Pumps

Unit Per Set

| CODE | 59 17 15 | 59 17 16 | 59 17 17 |
|-------------------------------|-------------------------------------|-----------------|-------------|
| Body Material | Aluminium | Stainless steel | Hastelloy C |
| Flow Rate | 0-35 gpm (0-132 lpm) adjustable | | |
| Port Size | 1.0" Female NPT (BSP) | | |
| Discharge | 1.0" Female NPT (BSP) | | |
| Air Inlet | 0.375" NPT | | |
| Air Exhaust | 0.50" NPT | | |
| Suction Lift | 15' dry / 25' wet (4.57 m / 7.62 m) | | |
| Max. Particle Size (Diameter) | 0.125" (3.17 mm) | | |
| Weight lbs (kg) | 31 (14.07) | 42 (19.05) | |

Remark : Do not exceed 125 psig (8.5 bars) air supply or liquid pressure.
Name of Mfr. : Versa-Matic Pump Company

E4 1-1/4" Clamped Metallic Pumps

Unit Per Set

| CODE | 59 17 18 | 59 17 19 | 59 17 20 | 59 17 21 |
|-------------------------------|-------------------------------------|------------|-------------|-----------------|
| Body Material | Aluminium | Cast iron | Hastelloy C | Stainless steel |
| Flow Rate | 0-70 gpm (0-265 lpm) adjustable | | | |
| Port Size | 1.50" FNPT (BSP) | | | |
| Discharge | 1.25" FNPT (BSP) | | | |
| Air Inlet | 0.50" NPT | | | |
| Air Exhaust | 0.75" NPT | | | |
| Suction Lift | 15' dry / 25' wet (4.57 m / 7.62 m) | | | |
| Max. Particle Size (Diameter) | 0.1875" (4.76 mm) | | | |
| Weight lbs (kg) | 41 (18.6) | 57 (25.85) | | |

Remark : Do not exceed 125 psig (8.5 bars) air supply or liquid pressure.

Name of Mfr. : Versa-Matic Pump Company

E2 2" Clamped Metallic Pumps

| CODE | 59 17 22 | 59 17 23 | 59 17 24 | 59 17 25 | Unit Per Set | |
|-------------------------------|-----------------------------------|--------------------------------|-------------|-----------------|--------------|--|
| Body Material | Aluminium | Cast iron | Hastelloy C | Stainless steel | | |
| Flow Rate | 0-155 gpm (0-586 lpm) adjustable | | | | | |
| Port Size | Inlet Discharge | 2" FNPT (BSP) 2" FNPT (BSP) | | | | |
| Air Inlet | 0.50" NPT | | | | | |
| Air Exhaust | 0.75" NPT | | | | | |
| Suction Lift | 20' dry/25' wet (6.10 m / 7.62 m) | | | | | |
| Max. Particle Size (Diameter) | 0.25" (6.35 mm) | | | | | |
| Weight lbs (kg) | 70 (31.75) | 115 (52.16) | | | | |

Remark : Do not exceed 125 psig (8.5 bars) air supply or liquid pressure.
 Name of Mfr. : Versa-Matic Pump Company

E3 3" Clamped Metallic Pumps

| CODE | 59 17 26 | 59 17 27 | 59 17 28 | 59 17 29 | Unit Per Set | |
|-------------------------------|-----------------------------------|--------------------------------|-------------|-----------------|--------------|--|
| Body Material | Aluminium | Cast iron | Hastelloy C | Stainless steel | | |
| Flow Rate | 0-230 gpm (0-984 lpm) adjustable | | | | | |
| Port Size | Inlet Discharge | 3" FNPT (BSP) 3" FNPT (BSP) | | | | |
| Air Inlet | 0.5" NPT | | | | | |
| Air Exhaust | 1.0" NPT | | | | | |
| Suction Lift | 20' dry/25' wet (6.10 m / 7.62 m) | | | | | |
| Max. Particle Size (Diameter) | 0.375" (9.52 mm) | | | | | |
| Weight lbs (kg) | 115 (52.16) | 210 (95.25) | | | | |

Remark : Do not exceed 125 psig (8.5 bars) air supply or liquid pressure.
 Name of Mfr. : Versa-Matic Pump Company

Plastic Diaphragm Pumps**Husky**

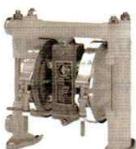
Bombas con diafragma de plástico

プラスティック製ダイフラムポンプ 塑料隔膜泵

Polypropylene casing pneumatic double diaphragm pumps with polypropylene center section for chemical compatibility.



Husky 205



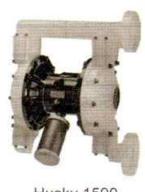
Husky 307



Husky 515



Husky 1050



Husky 1590

**Electric Operated Double Diaphragm Pumps**

Bombas de doble diafragma de propulsión eléctrica
 電動式ダブルダイアフラムポンプ 电动双隔膜泵

The electric operated double diaphragm pump uses a new technology that allows the pump to stall under pressure preventing failures from clogged lines or closed valves. The energy efficient electric drive reduces energy consumption up to 5x compared to traditional air operated diaphragm pumps. Seal-less diaphragm pump design eliminates leaking and failures due to run-dry pump conditions.

<Model Range>

| | Motor | Center Section | Fluid Section | Compressor / Cart | |
|--------------|-----------------|-----------------|---------------|-------------------|--|
| AC | Aluminium | Aluminium | | Option | |
| | | Polypropylene | | | |
| | | Stainless Steel | | | |
| | Stainless Steel | Aluminium | | | |
| | | Polypropylene | | | |
| | | Stainless Steel | | | |
| AC Atex | Aluminium | Aluminium | | Option | |
| | | Polypropylene | | | |
| | | Stainless Steel | | | |
| | Stainless Steel | Aluminium | | | |
| | | Polypropylene | | | |
| | | Stainless Steel | | | |
| DC Brushless | Aluminium | Aluminium | | Option | |
| | | Polypropylene | | | |
| | | Stainless Steel | | | |
| | Stainless Steel | Aluminium | | | |
| | | Polypropylene | | | |
| | | Stainless Steel | | | |

| CODE | 59 17 70 | Unit Per Set |
|------------------|---|--------------|
| Model | Husky 1050E | |
| Casing | Aluminium | |
| Center | Aluminium | |
| Connection Size | 1" NPT(f) or BSPT | |
| Max. Flow Rate | 48 gpm (148 lpm) | |
| Max. Pump Speed | 280 cpm | |
| Max. Solids | 1/8" (3.2 mm) | |
| AC Motor Power | 2 HP | |
| BLDC Motor Power | 2.2 HP | |
| Dimension | 73.2 x 26.1 x 34.8 cm (AC Motor) | |
| Weight | 33.6 kg – 49.7 kg (depending on configuration) | |

Name of Mfr.: Graco

QUANTM Electric Pumps

Bombas eléctricas QUANTM QUANTM 電動ポンプ QUANTM 电动泵

QUANTM features a revolutionary electric motor design that will reduce operational costs and keeps your production lines

running. A perfect fit for nearly any fluid applications and a drop-in replacement for existing pumping technologies. Up to 80% less energy, requires no compressed air, enable you to make sustainable operations.



| CODE | 59 17 71 | 59 17 72 | 59 17 73 | Unit Per Set |
|--------------------------|--|--|----------------------|------------------|
| Model | QUANTM i30 | QUANTM i80 | QUANTM i120 | (1") (1.5") (2") |
| Material of Construction | Hastelloy, Aluminium, Polypropylene, Conductive Polypropylene, Stainless Steel, PVDF | Aluminium, Polypropylene, Conductive Polypropylene, S.Steel, Cast Iron, PVDF | | |
| Pressure | 7 bar (100 psi, 0.7 MPa) | 4.2 bar (60 psi, 0.42 MPa) | | |
| Flow | 115 lpm (30 gpm) | 300 lpm (80 gpm) | 450 lpm (120 gpm) | |
| Voltage | | 120 V, 240 V single and 3 phase | | |

Name of Mfr.: Graco

Cross Reference of Diaphragm Pumps

| Inlet / Outlet Port Size | Wilden | Yamada | Aro | Versa-Matic Pump | Warren Rupp | Graco |
|---|---|---|---|------------------|-------------|---|
| Air Inlet 1/8" Inlet/Outlet Port Size 1/4" x 1/4" | P.025 59 16 07 Aluminium Stainless Steel (BSPT/NPT) 59 16 10 Polypropylene PVDF Flow Rate: 18 LPM | NDP-5 Aluminium Stainless Steel Polypropylene, PVDF (PT/NPT) Max Flow Rate: 11 LPM Air Inlet 1/4" *Cannot be used for slurry liquid | PD01P Polypropylene, PVDF (NPT) Flow Rate: 20 LPM | - | - | Husky 205 59 17 65 Polypropylene (BSPT/NPT) Flow Rate: 19 LPM |
| Air Inlet 1/4" Inlet/Outlet Port Size 1/2" x 1/2" | - | G15 Aluminium Stainless Steel Polypropylene, PVDF (PT/NPT) Max Flow Rate: 56 LPM | - | - | - | Husky 307 Acetal 59 17 66 Polypropylene (BSPT/NPT) Flow Rate: 26 LPM |
| Air Inlet 1/4" Inlet/Outlet Port Size 1/2" x 1/2" | P1 59 16 05 Aluminium Stainless Steel 59 16 11 Polypropylene PVDF (BSPT/NPT) Flow Rate: 57 LPM | - | PD05X Aluminium Stainless Steel Polypropylene, PVDF (BSP/NPT) Max Flow Rate 54.5 LPM | - | - | Husky 515 59 17 67 Polypropylene (BSPT/NPT) Flow Rate: 57 LPM |
| Air Inlet 1/4" Inlet/Outlet Port Size 3/4" x 3/4" | - | NDP-20 Aluminium Stainless Steel Polypropylene, (PT/NPT) Max Flow Rate: 110 LPM | - | - | - | Husky 716 Aluminium Stainless Steel (ANSI Flange) Flow Rate: 61 LPM |
| Air Inlet 1/4" Inlet/Outlet Port Size 1" x 3/4" | P2 59 16 01 Aluminium Stainless Steel 59 16 12 Polypropylene PVDF (BSPT/NPT) Flow Rate: 145 LPM | - | 6661XX(1") Aluminium Stainless Steel (BSP/NPT) Polypropylene PVDF (1"ANSI Flange #150) | - | - | Husky 1050 Aluminium Stainless Steel Polypropylene 59 17 68 (ANSI/DIN Flange) Flow Rate: 189 LPM |

(to be continued)

| Inlet / Outlet Port Size | Wilden | Yamada | Aro | Versa-Matic Pump | Warren Rupp | Graco |
|--|---|---|--|--|--|--|
| Air Inlet 1/4" Inlet/Outlet Port Size 1" x 1" | P220 Aluminium Stainless Steel (BSPT/NPT) Polypropylene PVDF (ANSI Flange) Flow Rate: 190 LPM | NDP-25 Aluminium Stainless Steel Cast Iron Polypropylene, PVDF (PT/NPT) Air Inlet 3/8" Max Flow Rate: 160 LPM | 59 17 01 PD10X Aluminium Stainless Steel Cast Iron Hastelloy C (BSP/NPT) 59 17 02 Polypropylene PVDF (BSP/NPT/ ANSI,DIN Flange) Max. Flow Rate 197 LPM | E1 (BSPT/NPT) 59 17 15 Aluminium 59 17 16 Stainless Steel 59 17 17 Hastelloy C Flow Rate 0-35 GPM (0-132 LPM) | S1F AL Aluminium (NPT) Flow Rate: 170 LPM | |
| Air Inlet 1/2" Inlet/Outlet Port Size 1-1/2" x 1-1/4" | P4 59 16 02 Aluminium Stainless Steel Cast Iron 59 16 13 Polypropylene PVDF (BSPT/NPT) 59 16 08 PS4 Aluminium Flow Rate: 370 LPM | NDP-32 Aluminium Air Inlet 1/4" (PT/NPT) Max Flow Rate: 190 LPM | 6661XX(1.5") Aluminium Stainless Steel (BSP/NPT) Polypropylene PVDF (1-1/2"ANSI Flange #150) | E4 (BSPT/NPT) 59 17 18 Aluminium 59 17 19 Cast Iron 59 17 20 Hastelloy C 59 17 21 Stainless Steel Flow Rate 0-70 GPM (0-265 LPM) | | Husky 1590 Aluminium Polypropylene 59 17 69 (ANSI Flange) Flow Rate: 379 LPM |
| Air Inlet 1/2" Inlet/Outlet Port Size 1-1/2" x 1-1/2" | PS420 Aluminium Stainless Steel Cast Iron Polypropylene PVDF (ANSI Flange) Flow Rate: 450LPM | NDP-40 Aluminium Stainless Steel Cast Iron (PT/NPT) Polypropylene, PVDF (ANSI/JIS Flange) Max Flow Rate: 400 LPM | 59 17 03 PD15X Aluminium Stainless Steel Cast Iron Hastelloy C (BSP/NPT) 59 17 04 Polypropylene PVDF (1-1/2"ANSI Flange #150) Max. Flow Rate 465 LPM | | S15 AL Aluminium (NPT) Flow Rate: 401 LPM | |
| Air Inlet 3/4" Inlet/Outlet Port Size 2" x 2" | P8 59 16 03 Aluminium Stainless Steel Cast Iron 59 16 14 Polypropylene PVDF PS8 59 16 09 Aluminium (BSPT/NPT) Flow Rate: 650LPM | NDP-50 Aluminium Stainless Steel Cast Iron(PT/NPT) Polypropylene, PVDF (ANSI/JIS Flange) Max Flow Rate: 630 LPM | 59 17 06 PD20X Aluminium Stainless Steel Cast Iron Hastelloy C (BSP/NPT) 59 17 07 Polypropylene PVDF (2" ANSI Flange #150) Max. Flow Rate 651 LPM | E2 (BSPT/NPT) 59 17 22 Aluminium 59 17 23 Cast Iron 59 17 24 Hastelloy C 59 17 25 Stainless Steel Flow Rate 0-155 GPM (0-586 LPM) | S20 AL Aluminium (NPT) Flow Rate: 568 LPM | Husky 2150 Aluminium Stainless Steel Polypropylene (ANSI Flange) Flow Rate: 568 LPM |

| Inlet / Outlet Port Size | Wilden | Yamada | Aro | Versa-Matic Pump | Warren Rupp | Graco |
|--|---|--|--|--|--|--|
| Air Inlet 3/4" Inlet/Outlet Port Size 3" x 3" | PS15 59 16 04 Aluminium Stainless Steel Cast Iron (BSPT/NPT) Flow Rate: 850 LPM | NDP-80 Aluminium Stainless Steel Cast Iron(PT/NPT) Polypropylene, (ANSI/JIS Flange) Max Flow Rate: 840 LPM | PD30X 59 17 08 Aluminium Stainless Steel Cast Iron Hastelloy C (BSP/NPT) | E3 (BSPT/NPT) 59 17 26 Aluminium 59 17 27 Cast Iron 59 17 28 Hastelloy C 59 17 29 Stainless Steel Flow Rate 0-230 GPM (0-984 LPM) | S30 AL Aluminium (NPT) Flow Rate: 901 LPM | Husky 3300 Aluminium Stainless Steel Polypropylene (ANSI Flange) Flow Rate: 1,059 LPM |
| Air Inlet 3/4" Inlet/Outlet Port Size 4" x 4" | PS20 59 16 06 Cast Iron (ANSI Flange) Flow Rate: 1,048 LPM | - | - | - | - | - |

High Pressure Diaphragm Valve

| Inlet/Outlet Port Size | Wilden | Yamada | Aro | Versa-Matic Pump | Warren Rupp | Graco |
|--|---|--------|--|------------------|-------------|-------|
| Air Inlet 3/4" Inlet/Outlet Port Size 2" x 2" | H800 (250 psig) (ANSI 300#Flanges) Pressure Ratio: 3:1 59 16 16 Stainless Steel Hastelloy 59 16 17 Ductile Iron Flow Rate: 350 LPM | - | PH20F (2:1) Stainless Steel (BSP/NPT/ ANSI,DIN Flange) | - | - | - |
| Air Inlet 3/4" Inlet/Outlet Port Size 1-1/2" x 1-1/2" | H400S (250 psig) (ANSI 300#Flanges) Pressure Ratio: 2:1 59 16 18 Stainless Steel 59 16 19 Aluminium Flow Rate: 180 LPM | - | PH15F (2:1) Stainless Steel (BSP/NPT/ ANSI,DIN Flange) | - | - | - |
| Air Inlet 1/2" Inlet/Outlet Port Size 1" x 1" | 59 16 20 H200 (250 psig) Pressure Ratio: 3:1 Ductile Iron Stainless Steel Flow Rate: 90 LPM | - | PH10A (3:1) Stainless Steel (BSP/NPT) | - | - | - |

*Actual Flow Rate may vary depending on conditions

Electric Sump Pumps

Bombas Eléctricas Sumergibles

電気式排水ポンプ 电动排水泵

For permanent or portable application and ideal for loading anywhere there is an accumulation of water. Furnished for a 100 volt, 200 volt and 440 volt power supply.



How to order: CODE

Sump pump, electric, LIFTING CAPACITY mtr and m³/min., POWER SOURCE VOLTAGE, MODEL

| CODE | Lift Capacity | | | Discharge Diam mm | Weight kg | Unit Per Set |
|---------------------------------|---------------|----------------------|--|----------------------|--------------|--------------|
| | Mtr | m ³ /min. | | | | CODE |
| AC 100 Volt-Single Phase | | | | | | |
| 59 16 21 | 6.5 | 0.08 | | 40 | 6.7 | |
| 22 | * 9.3/10.0 | 0.08 | | 50 | 6.7 | |
| 23 | 8.0 | 0.13 | | 50 | 17 | |
| AC 200 Volt-Triple Phase | | | | | | |
| 59 16 26 | 10.0 | 0.6 | | 80 | 34 | |
| 27 | * 15.0/16.5 | 0.25 | | 50 | 30 | |
| 28 | 20.0 | 0.5 | | 80 | 63 | |
| 29 | 26.0 | 0.5 | | 80 | 54 | |
| AC 440 Volt-Triple Phase | | | | | | |
| 59 16 24 | 26.0 | 0.5 | | 80 | 54 | |
| 30 | * 35.0/30.0 | 0.3/0.5 | | 80 | 89 | |

*Mtr: A/B = 50 Hz/60 Hz

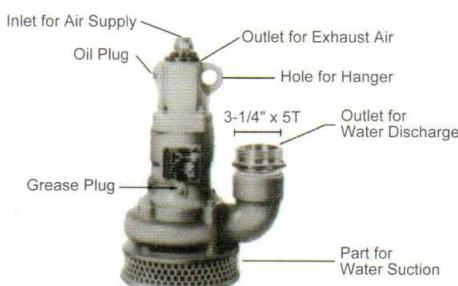
59

Pneumatic & Electrical Tools

Pneumatic Sump Pumps

Bombas neumáticas sumergibles エア式排水ポンプ 气动式潜水泵

Suitable to empty ballast tanks, bilge wells, etc. in emergency cases. Often used for draining cargo holds during and after the washing procedure. Especially preferred where an electric spark may risk ignition or explosion. Required air pressure is 0.59 MPa (6 kgf/cm²).



How to order: CODE

Sump pump, pneumatic, TOTAL HEAD CAPACITY mtr, DISCHARGE CAPACITY m³/hr., MODEL

| CODE | Unit Per Set | | | | | | |
|----------|--------------|----------------------|-------------------------|-------------------------|-----------------|---------------|-----------|
| | Capacity | Total Head | Discharge | Max. Air Consumption | Water Hose Size | Air Hose Size | Weight kg |
| 59 16 35 | 15 mtr | 22 m ³ /H | 2.0 m ³ /min | 2.0 m ³ /min | 63.5 mm | 3/4 | 19 |
| 36 | 20 | 28 | 3.4 | 3.4 | 63.5 | 3/4 | 22 |
| 37 | 25 | 38 | 4.4 | 4.4 | 63.5 | 1 | 32 |

Sludge Master SMA3-A

Air-powered trash pump handles mud, leaves, twigs, sand, sludge, trash-laden water and soft solids to 1.5" (3.8 cm). High capacity - low head. It weighs only 59 pounds (26 kg), and can fit through an opening as small as 14" (35 cm). Sturdy construction for rough handling and long life. Optional rock screen available.



Unit Per Set

| CODE | 59 16 38 |
|-------------------------|-----------------------|
| Model | SMA3-A |
| Displacement Per Stroke | 300 gal/1,140 ltr |
| Max. Solids Handling | 1.5"/38 mm |
| Air Inlet | 1/2" NPT (12.5 mm) |
| Discharge Pipe Thread | 3" (75 mm) NPT female |
| Weight | 59 lbs (26 kg) |

Name of Mfr.: Warren Rupp, Inc.

Two Ball Double Acting Pumps

Air Operated

Bomba Neumática de Doble Acción

エアー駆動 2 ボール複動ポンプ 气动双球型复动泵

For transferring of material from original containers or bulk storage to the point of use, and the two-ball pumps are primarily designed for the high volume transfer of light and medium viscosity fluids. Stainless steel construction offers compatibility with a wide range of fluids.



Unit Per Set

| CODE | 59 16 41 |
|--------------------------------------|--|
| Type | Air operated two ball double acting pump |
| Model | AF0810XXXXXX-XX-X |
| Ratio | 10 : 1 |
| Air Motor Diameter | 8" (20.3 cm) |
| Stroke | 6" (15.2 cm) |
| Air Inlet (Female) | 3/4 – 14 N.P.T.F. – 1 |
| Air Exhaust (Female) | 1-1/4 – 11-1/2 N.P.T.F. – 1 |
| Lower Pump Material | Inlet (Male) 2 – 11-1/2 N.P.T.F. – 1 |
| Output (Female) | 1-1/4 – 11-1/2 N.P.T.F. – 1 |
| Air Inlet Pressure Range | 30 – 120 p.s.i. (2.1 – 8.3 bar) |
| Fluid Pressure Range | 300 – 1,200 p.s.i. (20.7 – 82.8 bar) |
| Max. Rec'd Cycles / Minute | 70 |
| Displacement in 3 per Cycle | 59.8 |
| Volume / Cycle | 33.1 oz (979.6 ml) |
| Cycles per Gallon | 3.9 |
| Flow at 70 cycles / Minute | 18.1 g.p.m. (86.6 l.p.m.) |
| Noise Level at 60 p.s.i. - 40 c.p.m. | 89.8 db |
| Weight | 102 lbs (46.3 kg) |
| Name of Mfr. | Ingersoll-Rand |

Portable Pumps

Battery Powered

Bomba Portátiles con Batería

バッテリー式排水ポンプ 移动式泵浦电池供电

A battery-powered pump operates using any 12-volt car or truck battery. It comes equipped with cables and battery clips. Extremely portable, the pump weighs only 33 pounds (15 kg) and can fit through openings as small as 10" (25 cm). Electrically safe and whisper quiet.



Suitable for all of onsite dewatering needs such as ditches, manholes, and caissons. The pump is available with an optional handy carrying case for convenient safe storage. Furnished with remote waterproof controller integrated into the pump cable for simple safe operation. The pump is submersible by the watertight o-ring seals.

Performance

| Capacity | | Discharge Height | |
|----------------|---------------|------------------|-------|
| Gallons/Minute | Liters/Minute | Feet | Meter |
| 41.6 | 157.4 | 5 | 1.5 |
| 34.0 | 128.7 | 10 | 3.0 |
| 25.0 | 94.6 | 15 | 4.5 |
| 21.3 | 80.6 | 20 | 6.0 |
| 0.0 | 0.0 | 25 | 7.6 |

| Unit Per Set | | |
|------------------|--------------------------|---------------------------------|
| CODE | 59 16 43 | 59 16 44 |
| Model | Porta Pump (SPA 1-1/2-E) | |
| Delivering up to | 43 gpm (163 lpm) | |
| Connections | 1-1/2" NPT | 1-1/2" BSPT (Tapered thread) |
| Motor | 1/3 hp | |
| Power Source | 12 volt battery | |
| Weight | 33 lbs (14.9 kgs) | |

Name of Mfr.: Warren Rupp, Inc.

Diesel Engine Water Pumps

Bomba de agua de motor diésel

ディーゼルエンジンウォーターポンプ 柴油机水泵

Strong and lightweight die-cast aluminium water pump with diesel engine operated. Highly effective mechanical seal made with special carbon ceramics provides extra durability. Entire unit is protected by sturdy rollover pipe frame.



| Unit Per Set | | | |
|-------------------|-----------------------------------|-----------------------------|-------------|
| CODE | 59 16 48 | 59 16 49 | 59 16 50 |
| Model | SE-50XD | SE-80XD | SE-100XD |
| Connecting Dia | 50 mm (2") | 80 mm (3") | 100 mm (4") |
| Connecting Thread | Outer Pipe Thread BSP | | |
| Delivery Volume | 560 L/min | 900 L/min | 1,100 L/min |
| Max. Suction Head | 8 m (26 ft) | | |
| Exhaust Volume | 230 cc | 265 cc | |
| Rated Output | 3.1 kW (4.2 PS) / 3,600 rpm | 3.7 kW (5.0 PS) / 3,600 rpm | |

(to be continued)

| | | | |
|---------------------------|--|-----------------------------|--------------------|
| Max. Output | 3.5 kW (4.2 PS) / 3,600 rpm | 4.4 kW (5.0 PS) / 3,600 rpm | |
| Continuous Operating Time | Approx. 3.5 hrs | Approx. 3 hrs | Approx. 2.5 hrs |
| Weight | 47 kg | 50 kg | 64 kg |
| Size (L x W x H mm) | 573 x 413 x 500 | 573 x 413 x 500 | 664 x 445 x 698 |
| Accessories | 1 x Strainer, 2 x Hose Couplings, 3 x Hose Bands, 1 x Engine Tool Set | | |

Name of Mfr.: Koshin

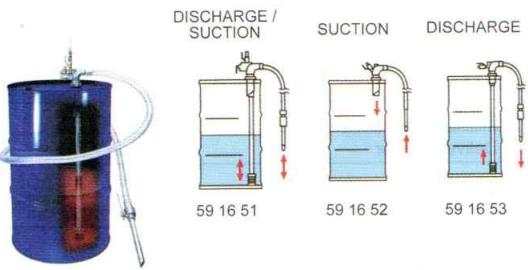
Pneumatic Drum Pumps

Bombas para Bidones Neumáticas

エア式ドラムポンプ 风动式回转泵

Capable of pumping and discharging water, oil and bottom sludge. And also any explosive material can be sucked when the pump is properly grounded. No oil mist is produced and the pumping and discharge action is very speedy (about 2 minutes for 200 ltrs of water). Available in three types.

Furnished with 3 mtrs of oil-resistant hose and 300 mm of discharge nozzle.



| Unit Per Set | | | |
|---------------------------------------|---------------------|--------------|--------------|
| CODE | 59 16 51 | 59 16 52 | 59 16 53 |
| Type | QTO | Q | TO |
| Application | Suction & Discharge | Suction | Discharge |
| Pressure of Compressed Air | 5 kgf/cm² | 5 kgf/cm² | - |
| Vacuum Degree | 4,600 mm/H₂O | 4,600 mm/H₂O | - |
| Recovery Time for 100 ltr Clean Water | 60 sec | 60 sec | - |
| Discharge Pressure | 0.55 kgf/cm² | - | 0.55 kgf/cm² |
| Recovery Time for 100 ltr Clean Water | 60 sec | - | 60 sec |
| Hose | ø32 mm×3M | ø32 mm×3M | ø32 mm×3M |

Name of Mfr.: Blovac Co. Ltd.

Pneumatic Piston Pumps

Bombas de Pistón Neumáticas (Travase)

ピストンポンプ 风动式活塞泵

Ideal for delivering fuel to oil burners as well as to take out water or oil from drums or other containers.

Furnished air valve cock and air hose nipple, however, the related drum joint and pipe for the drum can be sold separately.



Specifications

| Capacity ltr / min | Piston Dia | Overall Length | Weight kg |
|-----------------------|------------|----------------|-----------|
| 40 - 60 | 50 mm | 608 mm | 4.6 |

| | | |
|----------|---|-----|
| 59 16 61 | Pneumatic piston pump complete w/drum joint & pipe for drum can | Set |
| 59 16 62 | Piston pump only | Pc. |
| 59 16 63 | Drum joint and pipe for drum can | Set |

Pneumatic Portable Transfer Pumps

Bombas neumáticas portátiles de transferencia
エアー式ポータブル移送ポンプ 气动式便携传送泵

Suitable for rapid transfer of oil, acid, and solvent fluids (in the stainless steel version). Strongly built, it has the motor body in light alloy. Available in turbine or piston version.

**Turbine Type**

Unit Per Set

| CODE | 59 16 66 | 59 16 67 |
|---------------------|---------------------------|-----------------|
| Model | 500-0 | 500-00 |
| Tubset Material | Steel | Stainless Steel |
| Max Head | 10 - 15 mtr | |
| Max. Delivery Water | 240 ltr/min. | |
| Max. Delivery Oil | 135 ltr/min. | |
| Tubset Dia x Length | 40 mm or 48 mm x 1,000 mm | |
| Feeding Pressure | 7 bar | |
| Air Consumption | 1,200 ltr/min. | |
| Weight | 8 kg | 7 kg |

Name of Mfr.: I.CO. s.r.l.

Piston Type

Unit Per Set

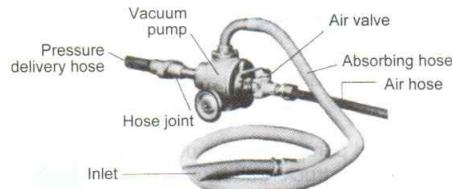
| CODE | 59 16 68 | 59 16 69 |
|---------------------|------------------|-----------------|
| Model | 17,000-0 | 17,000-00 |
| Piston Material | Steel | Stainless Steel |
| Max Head | 60 mtr | |
| Max. Delivery Water | 35 ltr/min. | |
| Max. Delivery Oil | 25 ltr/min. | |
| Tubset Dia x Length | 54 mm x 1,000 mm | |
| Feeding Pressure | 7 bar | |
| Air Consumption | 75 ltr/min. | |
| Weight | 8.5 kg | 8 kg |

Name of Mfr.: I.CO. s.r.l.

Vacuum Pumps Suction & Pressure System

Bombas de Sistema de Aspiración y Vacío
吸引圧送式バキュームポンプ 真空泵吸嘴及压力系统

Using high pressure compressed air this vacuum/boiler pump creates strong suction and diffusion power for all types of materials. Best used for vacuuming or displacing dust, grit, sand, water, oil, paint, etc. A suction hose 50 mmØ x 4 mtr and a suction nozzle are furnished as standard accessories.

**Specifications**

| | |
|-----------------------------------|--|
| Air Pressure | 5 - 7 kgf/cm ² |
| Vacuum Pressure | 4.5 Hg (Mercury) 6,100 m/mAq (Water) |
| Capacity of Transferring | 2,100 kg/hour (Steel grit) |
| Dimensions | W300 x L750 x H450 mm |
| Weight | 21 kg |
| Hose | Suction Dispersion |
| | 50 mm Ø x 4 mtr 50 mm Ø x 20 mtr |
| Usual accessories included in set | Suction hose 50 mm Ø x 4 mtr - 1 pc Suction nozzle - 1pc |

| | | |
|----------|---|-----|
| 59 16 71 | Vacuum Pump, suction and pressure system, 2,100 kg/hour | Set |
|----------|---|-----|

Portable Ejectors

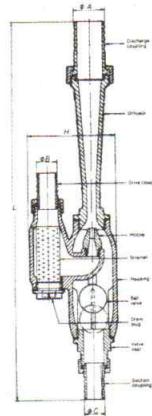
Eyectores Portátiles ポータブルイジェクター

便携式喷射器

Portable ejectors have been found to be indispensable on bulk carriers, lube-oil tankers and chemical carriers where it is essential to empty tanks completely.

It is also extremely useful on all other types of ships for mopping up the last few barrels of liquid from tanks, holds, cofferdams or other compartments when stripping is required.

These ejectors are powered either by water or by the liquid which is being pumped. Normally made of bronze with a stainless steel nozzle. One standard nozzle and an extra nozzle for lower driving pressure are attached as standard accessories.



Unit Per Set

| CODE | Type | Hose Connections | | | Dimension | Wgt. |
|----------|-----------------------|------------------|--------|--------|-----------|-------|
| | | A | B | C | | |
| 59 16 76 | 1 x 1 x 1-1/2 | 1" | 1" | 1-1/2" | 47 cm | 10 cm |
| 59 16 77 | 1-1/4 x 1-1/4 x 2 | 1-1/4" | 1-1/4" | 2" | 55 cm | 12 cm |
| 59 16 78 | 1-1/2 x 1-1/2 x 2-1/2 | 1-1/2" | 1-1/2" | 2-1/2" | 70 cm | 14 cm |

Name of Mfr.: Teamtec A/S

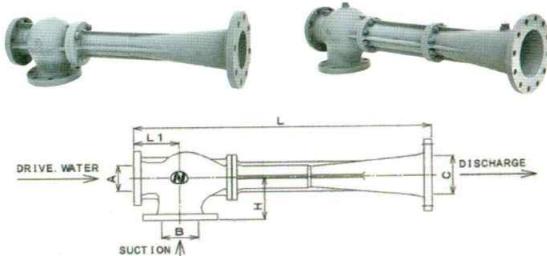
Equipped with standard nozzle :

| Type | Suction Capacity | Required driving pressure against various discharge heads | | | | | Nozzle Size |
|-----------------------|------------------|---|------------------------|------------------------|------------------------|-------------------------|-------------|
| | | 5 m | 10 m | 15 m | 20 m | 25 m | |
| 1 x 1 x 1-1/2 | 3 tons | 5.0 kp/cm ² | 6.5 kp/cm ² | 8.0 kp/cm ² | 9.5 kp/cm ² | 11.0 kp/cm ² | 6.4 mm |
| 1-1/4 x 1-1/4 x 2 | 6 tons | 5.0 " | 6.5 " | 8.0 " | 9.5 " | 11.0 " | 8.5 mm |
| 1-1/2 x 1-1/2 x 2-1/2 | 9 tons | 5.0 " | 6.5 " | 8.0 " | 9.5 " | 11.0 " | 11.1 mm |

Water Jet Ejectors

Ejector de chorro de agua
ウォータージェットエダクター 喷水式電動ポンプ

Using pressurized-water as driving force, jetting it from nozzle at a high-speed, ejector sucks in bilge or ballast-water existing at lower level than body by the vacuum force generated inside and discharges them outside. It belongs to a type of water jet pump. Flange size is JIS 10K.



Unit Per Pcs.

| CODE | MODEL | A×B×C (mm) | SQ (m³/h) | DQ (m³/h) | L | L1 | H |
|----------|------------|-----------------|-----------|-----------|------|-----|-----|
| 59 16 79 | FC-ER-065 | 50 × 65 × 80 | 20 | 25- 45 | 560 | 100 | 110 |
| 80 | FC-ER-080 | 65 × 80 × 100 | 30 | 35- 65 | 660 | 115 | 130 |
| 87 | FC-ER-100 | 80 × 100 × 125 | 40 | 40- 80 | 860 | 135 | 135 |
| 88 | FC-ER-125 | 100 × 125 × 150 | 55 | 65-105 | 1000 | 155 | 165 |
| 89 | FC-ER-150 | 125 × 150 × 200 | 100 | 110-200 | 1300 | 160 | 200 |
| 56 16 90 | FC-ER-200S | 150 × 200 × 250 | 120 | 140-250 | 1700 | 200 | 250 |
| 97 | FC-ER-200 | 150 × 200 × 250 | 160 | 170-320 | 1960 | 225 | 275 |
| 98 | FC-ER-250 | 200 × 250 × 300 | 240 | 260-480 | 2200 | 290 | 300 |

Name of Mfr.: Niikura Kogyo Co., Ltd.

Air Operated Wash Pumps

Bomba Neumática de Limpieza

エアー式洗浄用ポンプ 气动式清洗泵

Designed for heavy duty cleaning with detergents, caustics, and dilute acid type cleaners. May be directly mounted in the two inch bung of a standard 55 gallon drum or, when using the mounting bracket, the pump can be mounted on the wall or in a 55 gallon open head drum. All metal parts in the pumping section are manufactured from 316 stainless steel.



Component

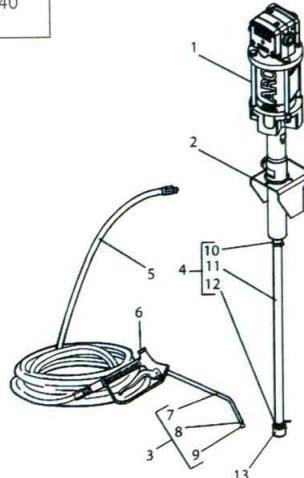
4-1/4" High pressure wall-mounted spray package

| Item | Description | Part No. |
|------|--|---------------|
| 1 | Basic pump assembly | AF0409C8XXXXX |
| 2 | Pump bracket assembly (2" bung) | 61113 |
| 3 | Bent pipe assembly (includes 7, 8 & 9) | 61133 |
| 4 | Suction tube assembly (includes 10, 11, 12 & 13) | 61139-1 |
| 5 | Hose assembly (3/8 i.d. 2 fabric) | 622427-40 |
| 6 | Control handle assembly | 641523 |
| 7 | Bent pipe | 76821 |
| 8 | Nozzle cover | 76330 |
| 9 | Spray tip | TP6250-18 |
| 10 | Hose clamp | 76315 |
| 11 | Tube | 92249-26 |
| 12 | Hose clamp | 76315 |
| 13 | Screen assembly | 61138 |

| CODE | 59 08 81 |
|--|---|
| Type | Air operated wash pump (Model : WP0409C8XXXXXX) |
| Ratio | 10 : 1 |
| Air Motor Diameter | 4-1/4" (10.795 cm) |
| Stroke (Double Acting) | 4" (10.16 cm) |
| Air Inlet | 1/2 - 14 NPTF - 1 (f) |
| Air Exhaust | 1-1/4 - 11-1/2 NPTF - 1 (f) |
| Material Outlet | 3/8 - 18 NPTF - 1 (f) |
| Material Inlet | Barbed |
| Pump Construction | Series 316 stainless steel |
| Air Inlet Pressure Range | 0 - 150 p.s.i. (0 - 10.3 bar) |
| Fluid Pressure Range | 0 - 1,500 p.s.i. (0 - 103 bar) |
| Displacement in ³ per Cycle | 11.0 (0.18 ltr) |
| Cycle per Gallon | 21 (5.5 ltr) |
| Maximum Delivery / Min. | 3.9 gallons (14.8 ltr) |
| Name of Mfr. | Ingersoll-Rand |

#WP0409C8XXXXXX is assembled with the following components; (4-1/4" High pressure wall-mounted spray package).

| | |
|--|--------------------------|
| #AF0409C8XXXXX : Pump | #641523 : Control handle |
| #61113 : Wall bracket | #61133 : Spray wand |
| #61139-1 : 55 gallon suction tube assembly | #TP6250-18 : Spray tip |
| #622427-40 : Material hose (40 feet) | |



Internal Gear Pumps

Bomba de Engranaje Interior インターナルギアポンプ 内转齿轮泵

Internal gear pumps will handle high viscosity, hot or abrasive fluids, or a combination of all these. Built to extend seal life, improve reliability and prevent leaks by utilizing an internal seal chamber vent and oversized shaft diameters that minimize shaft detection. Back pull-out design provides ease of maintenance. Viscosities to 1,000,000 ssu (220,000 cst).



When order please specify the required seal type selecting from the following applications, in addition to suitable pump capacity.

Application of Seals :

| | |
|-------------------------------|--|
| Tuffseal cartridge lip seals | : for viscous liquids |
| Hard face seals | : for abrasive or tacky fluids |
| High pressure cartridge seals | : for handling high system pressure |
| Double cartridge seals | : for containing potentially hazardous liquids |
| High temperature seals | : for handling liquids such as hot oil |

Cast Iron Construction**How to order: CODE**

Pump, Internal gear, cast iron, MODEL, with TYPE OF SEALS

| CODE | | 59 17 31 | 59 17 32 | 59 17 33 | 59 17 34 | 59 17 35 |
|---------------|-------|--------------------|----------|----------|----------|----------|
| Model | | GG015 | GG030 | GG050 | GG070 | GG080 |
| Max. Capacity | USGPM | 15 | 30 | 50 | 70 | 80 |
| | LPM | 57 | 114 | 189 | 265 | 303 |
| Max. Pressure | | 13.8 bar (200 PSI) | | | | |
| Max. RPM | | 1,800 | | 1,500 | | |
| Weight kg | | 22.7 | | 49.9 | | |

Name of Mfr. : Tuthill

| CODE | | 59 17 36 | 59 17 37 | 59 17 38 | 59 17 39 | |
|---------------|-------|--------------------|----------|----------|----------|--|
| Model | | GG090 | GG120 | GG130 | GG200 | |
| Max. Capacity | USGPM | 90 | 120 | 130 | 200 | |
| | LPM | 341 | 454 | 492 | 757 | |
| Max. Pressure | | 13.8 bar (200 PSI) | | | | |
| Max. RPM | | 1,500 | 1,200 | 1,000 | | |
| Weight kg | | 49.9 | 78.1 | | 116 | |

Name of Mfr. : Tuthill

| CODE | | 59 17 40 | 59 17 41 | 59 17 42 | 59 17 43 | |
|---------------|-------|--------------------|----------|----------|----------|--|
| Model | | GG210 | GG250 | GG500 | GG550 | |
| Max. Capacity | USGPM | 210 | 250 | 500 | 550 | |
| | LPM | 795 | 946 | 1,968 | 2,081 | |
| Max. Pressure | | 13.8 bar (200 PSI) | | | | |
| Max. RPM | | 800 | 640 | 520 | 500 | |
| Weight kg | | 116 | 125 | | 318.2 | |

Name of Mfr. : Tuthill

Stainless Steel Construction**How to order: CODE**

Pump, Internal gear, stainless steel, MODEL, with TYPE OF SEALS

| CODE | | 59 17 45 | 59 17 46 | 59 17 47 | 59 17 48 | |
|---------------|-------|--------------------|----------|----------|----------|--|
| Model | | GG015 | GG030 | GG050 | GG070 | |
| Max. Capacity | USGPM | 10 | 20 | 33 | 46 | |
| | LPM | 38 | 75 | 125 | 174 | |
| Max. Pressure | | 10.3 bar (150 PSI) | | | | |
| Max. RPM | | 1,200 | | 1,000 | | |
| Weight kg | | 22.7 | | 49.9 | | |

Name of Mfr. : Tuthill

| CODE | | 59 17 49 | 59 17 50 | 59 17 51 | 59 17 52 | |
|---------------|-------|--------------------|----------|----------|----------|--|
| Model | | GG080 | GG090 | GG120 | GG130 | |
| Max. Capacity | USGPM | 53 | 60 | 80 | 86 | |
| | LPM | 200 | 227 | 303 | 325 | |
| Max. Pressure | | 10.3 bar (150 PSI) | | | | |
| Max. RPM | | 1,000 | | 800 | 640 | |
| Weight kg | | 49.9 | | | 78.1 | |

Name of Mfr. : Tuthill

| CODE | | 59 17 53 | 59 17 54 | 59 17 55 | | |
|---------------|-------|--------------------|----------|----------|--|--|
| Model | | GG200 | GG210 | GG250 | | |
| Max. Capacity | USGPM | 133 | 140 | 160 | | |
| | LPM | 503 | 530 | 632 | | |
| Max. Pressure | | 10.3 bar (150 PSI) | | | | |
| Max. RPM | | 640 | | 520 | | |
| Weight kg | | 116 | | 125 | | |

Name of Mfr. : Tuthill

Axial Piston Pumps

Bombas de pistones axiales

アキシャルピストンポンプ 轴向柱塞泵

The simple construction of the axial piston pump with fewer parts allows highly reliable operation with long service intervals and easy maintenance. The axial piston pumps are positive displacement pumps with axial pistons that move a fixed amount of water in each cycle. Flow is proportional to the number of input shaft revolutions (rpm). Unlike centrifugal pumps, they produce the same flow at a given speed no matter what the discharge pressure.



Oil lubricants are replaced with the pumped medium, water, so there is no contamination risk from the pump.

Efficient design and all-stainless steel construction ensure exceptionally long life. Service is easy, and can be carried out on-site due to the simple design and few parts. Service intervals of 8,000 hours can be expected.

All parts are made of high corrosion resistant materials e.g. Duplex (EN1.4462/UNS S31803/SAF 2205) and Super Duplex (EN1.4410/UNS S32750/SAF 2207) stainless steel and carbon reinforced PEEK (Poly Ether Ether Keton).

| CODE | | 59 17 56 | 59 17 57 | 59 17 58 |
|---------------------------------|----------------------|----------|------------|----------|
| Model | | APP0.6 | APP0.8 | APP1.0 |
| Geometric Displacement | cm ³ /rev | 4.07 | 5.08 | 6.30 |
| Max. Outlet Pressure Continuous | barg | | 83 | |
| | psig | | 1,200 | |
| Min. Outlet Pressure | barg | | 20 | |
| | psig | | 290 | |
| Inlet Pressure Continuous | barg | | 0.5 - 5 | |
| | psig | | 7.3 - 72.5 | |
| Max. Inlet Pressure Peak | barg | | 10 | |
| | psig | | 145 | |
| Min. Speed Continuous | rpm | | 700 | |
| Max. Speed Continuous | rpm | | 3,450 | |

(to be continued)

| CODE | | 59 17 56 | 59 17 57 | 59 17 58 |
|------|--|----------|----------|----------|
|------|--|----------|----------|----------|

Typical Flow

| | | | | |
|----------------------------|------|------|------|------|
| 1,000 rpm at Max. Pressure | m³/h | 0.22 | 0.29 | 0.36 |
| 1,500 rpm at Max. Pressure | m³/h | 0.34 | 0.43 | 0.54 |
| 1,200 rpm at Max. Pressure | gpm | 1.18 | 1.52 | 1.90 |
| 1,800 rpm at Max. Pressure | gpm | 1.78 | 2.28 | 2.84 |
| Weight (Dry) | kg | 5.2 | | |

Typical Motor Size

| | | | | |
|--------------------------------|----|-----|-----|-----|
| Max. Speed at Max. Pressure | kW | 2.2 | 3.0 | 4.0 |
| 3,000 rpm at Max. Pressure | HP | 3 | 5 | 5 |
| Torque at Max. Outlet Pressure | Nm | 5.8 | 7.2 | 8.9 |

Name of Mfr. : Danfoss Engineering

| CODE | | 59 17 59 | 59 17 60 | 59 17 62 | 59 17 63 |
|---------------------------------|---------|------------|----------|----------|----------|
| Model | | APP 1.5 | APP 1.8 | APP 2.2 | APP 2.5 |
| Geometric Displacement | cm³/rev | 9.31 | 10.04 | 12.52 | 15.35 |
| Max. Outlet Pressure Continuous | barg | 83 | | | |
| | psig | 1,200 | | | |
| Min. Outlet Pressure | barg | 20 | | | |
| | psig | 290 | | | |
| Inlet Pressure Continuous | barg | 0.5 – 5 | | | |
| | psig | 7.3 – 72.5 | | | |
| Max. Inlet Pressure Peak | barg | 10 | | | |
| | psig | 145 | | | |
| Min. Speed Continuous | rpm | 700 | | | |
| Max. Speed Continuous | rpm | 3,450 | | 3,000 | |

Typical Flow

| | | | | | |
|----------------------------|------|------|------|------|------|
| 1,000 rpm at Max. Pressure | m³/h | 0.53 | 0.57 | 0.73 | 0.90 |
| 1,500 rpm at Max. Pressure | m³/h | 0.79 | 0.86 | 1.09 | 1.34 |
| 1,200 rpm at Max. Pressure | gpm | 2.80 | 3.03 | 3.83 | 4.73 |
| 1,800 rpm at Max. Pressure | gpm | 4.19 | 4.55 | 5.75 | 7.09 |
| Weight (Dry) | kg | 8.6 | | | |

Typical Motor Size

| | | | | |
|--------------------------------|----|------|------|------|
| Max. Speed at Max. Pressure | kW | 5.5 | | 7.5 |
| 3,000 rpm at Max. Pressure | HP | 7.5 | | 10.0 |
| Torque at Max. Outlet Pressure | Nm | 13.0 | 13.9 | 17.4 |
| | | 21.3 | | |

Name of Mfr. : Danfoss Engineering

End Suction Bare Shaft Pumps

Bomba de Extremo de Eje Libre de Succión en el Extremo

ペアシャフトポンプ 端吸式裸軸泵



Volute casing centrifugal end suction pump with Back Pull-Out (BPO) feature, main dimensions and performance according to EN 733/DIN24255 standards.

| | |
|-----------------------|---|
| Type | End Suction centrifugal, Black Pull-Out (BPO) |
| Design | EN733/DIN24255 |
| Flange | DIN2332 PN 10RF |
| Direction of Rotation | Clockwise as viewed from the drive side |

Material :

| | |
|------------|---|
| Casing | Cast iron, Ductile iron, Bronze and Stainless steel |
| Impeller | Cast iron, Ductile iron, Bronze and Stainless steel |
| Shaft | SS420, optional AISI304 & AISI316 |
| Shaft Seal | Mechanical seal and Gland packing |

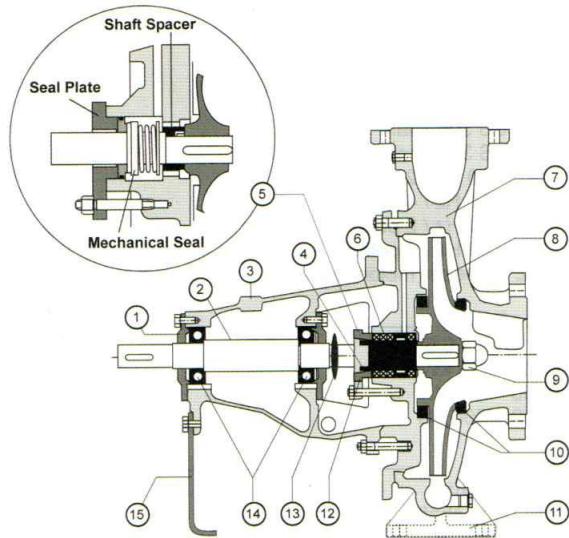
Operating Range :

| | |
|--------------------|--|
| Flow Rate (Q) | Up to 1,100 m³/h |
| Head (H) | up to 150 m |
| Speed | 1,450 – 2,900 rpm (50 Hz) 1,750 – 3,600 rpm (60 Hz) |
| Operating Temp. | -10 °C to 105 °C standard, optional 140 °C |
| Operating Pressure | 10 bar standard; optional 16 bar |

Range of Application:

EUROFLO pumps can be used for the following services in the Commercial, Residential, Agricultural, Industrial, Process, Petroleum and Food & Beverage industries.

Water treatment & supply, Sea water transfer, Fire fighting & protection, Bilging & ballasting, Pressure boosting, Air conditioning, Cooling towers, Refrigeration, Plumbing, Circulating, Transfer, Irrigation, Drainage



Parts;

| No. | Name | No. | Name |
|-----|--|-----|--------------------------------|
| 1 | Bearing cover (Shaft end) | 8 | Impeller |
| 2 | Shaft | 9 | Impeller nut |
| 3 | Bearing housing | 10 | Casing wear rings |
| 4 | Shaft protection sleeve (with Gland packing only) | 11 | Front foot support |
| 5 | Mechanical seal | 12 | Seal plate |
| 6 | Gland packing (option) | 13 | Slinger |
| 7 | Volute casing | 14 | Ball bearings (Deep groove) |
| | | 15 | Rear foot support |

How to order: 59 - 17 - 61

Pump, end suction bare shaft, with further information as ordering guide

Ordering Guide:

EU 32 / 13 MBC DB
EUM 100 / 26 MBC A2 – 0110

XXX XX / XX X XX XX - XXXX - X
Series _____
 EU = Bareshaft pumps
 EUM = Monoblock pumps

Discharge Size _____
Impeller Nominal Size _____

Seal Type _____
 M = Carbon – Ceramic / NBR
 *P = Gland packing
 M1 = Carbon – SiC/Viton (Optional)
 M2 = Carbon – SiC/EPDM

Impeller / Body Casing Material _____
 BC = Bronze impeller and Cast iron body
 BD = Bronze impeller and Ductile iron body
 BB = Bronze impeller and body
 CC = Cast iron impeller and body
 CD = Cast iron impeller and Ductile iron body
 KK = SS316 impeller and body
 KC = SS316 impeller and Cast iron body
 SS = SS 304 impeller and body
 SC = SS 304 impeller and Cast iron body

Special Code _____
 *DB = Double bearing – 6307 / 5307
 *HH = Bigger shaft and bearing frame
 *OL = Oil lubricator
 S4 = SS 304 shaft
 K6 = SS 316 shaft
 **A2 = 50 Hz / 2 poles
 **A4 = 50 Hz / 4 poles
 **B2 = 60 Hz / 2 poles
 **B4 = 60 Hz / 4 poles
 **ZZ = Special motor / voltage

Motor Rating _____
 Eg. 0005 = 0.55 kW
 0055 = 5.5 kW
 0500 = 50 kW
 5000 = 500 kW

Motor Type _____
 Eg. Stub shaft
 Extended shaft
 Barepump (B)

Note:

- * Only for EU series of pump
- ** Applicable to EUM pumps only
- † All shaft are in 2Cr13

Sea Water Desalination Machines

Desalinizadoras de agua de mar 造水機 海水淡化机

Simple, direct feed to your current water maker. This machine works with your RO system to convert sea water to double purified water. It's reliable piping connection allows direct feed that activates an automatic operation and produces spot-free water when water is directly fed into the system. Ultra-pure water is 99% free of water solids. Perfect for rinsing hulls, windows, and extends the life of your boating equipment. It gently lifts debris and dries spot-free.



| CODE | Unit Per Set |
|---------------------|-------------------|
| Production per hour | 59 17 76 |
| Production per day | 11 Gal/41 ltr |
| Number of membranes | 264 Gal/1,000 ltr |
| Voltage | 1 |
| Frequency | AC 110 – 240V |
| Full Load Amps | 60 Hz |
| Dimensions (mm) | 5.2 A |
| Weight | 390 x 180 x 280 |
| | 83.5 lbs/37.9 kg |

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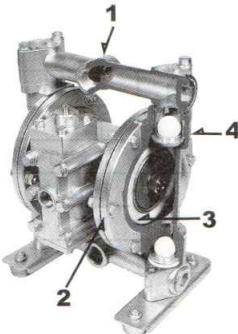
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Double Diaphragm Pumps Series

Basic Model Variations

- Eight sizes of pumps
- Six types of wetted parts as a main body
- Seven types of materials for a diaphragm

Total of 150 or more basic models are provided as a result of combination of the size, wetted part type and diaphragm material type. In addition, the DP-F series for semiconductor manufacturing process and the non-metal pump series all composed of basic components made of resin are added to the conventional models to allow you to transfer various types of solutions and/or handle the various use conditions.



| Material of a diaphragm ball valve sheet | Material of the main body (wetted part) | | | | | | |
|---|--|---|--|---|---|-----------------------------------|---|
| | A: Aluminium alloy (ADC12) | F: Cast iron (FC250/S45C) | S: Stainless (SCS14/SUS316) | P: Polypropylene (PPG) * See Note. | T: Fluorocarbon resin (PTFE) | V: Polyvinylidene-fluoride (PVDF) | D: Polyacetal (POM) |
| C: Chloroprene rubber (CR) | Glost Bilge wastewater | Argil agent Ferrite slurry Activated sludge Sewage water | Ammonia water Calcium hydroxide | Ferrous chloride Glost | | | Methanol Sodium sulfate Ammonium sulfate |
| N: Nitrile-butadiene rubber (NBR) | Lubricant Kerosene Wax Cutting oil | | L.P.G. Ethyl chloride Sodium peroxide | Whisky Sodium silicate Methanol | | | Ethanol Methanol Ammonium nitrate |
| H: Thermoplastic elastomer polyester (TPEE) | Lubricant, heavy oil Break oil Naphtha, kerosene Mold lubricant | | | | | | Ethanol Ammonium chloride Calcium chloride |
| E: Ethylene propylene (EPDM) | Acetone aqueous solution | | Coal slurry CMP | Sulfuric acid (less than 20 %) | | | Acetaldehyde Butyl nitrile Chromium acid |
| S: Thermoplastic elastomer polyolefin (TPO) | Acetone bilge wastewater | | | | | | Acetone Ammonia water Butyl acetate |
| V: Fluorine contained rubber (FKM) | Ethanol Xylene Jet fuel | | Methylene chloride Lactic acid Trichloroethylene | Ethanol Tetrachlorethylene | | | Copper sulfate (II) Sodium sulfate Barium sulfate |
| T: Fluorocarbon resin (PTFE) | Latex Paint Ink | | Sulfuric acid (98 %) Nitric acid (less than 25 %) MEK Acetone | Plating solution Developer Benzene Hydrogen peroxide | Fluorine, nitric acid, hydrochloric acid, sulfuric acid, chromium acid, aqua regalis, CMP | Sodium hypochlorite | Ammonium sulfate Barium sulfate Dimethyl ether |

yamada Classification of the model names

- To allow you to select our pump easily, model names of our diaphragm pumps are classified as shown below according to the combination of its "diameter," "material of the main body" and "material of the diaphragm."
- When you are to use a pump at 70 °C or higher, the material of the switching mechanism and other parts has to be changed. Contact us for details.

NDP- **B**

4 Valve type

B: Ball valve

F: Flat valve (NDP-5, NDP-15)

1 Pump size (Bore diameter)

- 5: 5 Series (Bore diameter: 1/4B)
- 10: 10 Series (Bore diameter: 3/8B)
- 15: 15 Series (Bore diameter: 1/2B)
- 20: 20 Series (Bore diameter: 3/4B)
- 25: 25 Series (Bore diameter: 1B)
- 40: 40 Series (Bore diameter: 1-1/2B)
- 50: 50 Series (Bore diameter: 2B)
- 80: 80 Series (Bore diameter: 3B)

2 Main body wetted part

- P: Polypropylene (PPG) (* See Note 1.)
- A: Aluminium alloy (ADC-12/AC4C-T6)
- F: Cast iron (FC250/S45C)
- S: Stainless (SUS14/316)
- T: Fluorocarbon resin (PTFE)
- V: Polyvinylidene-fluoride (PVDF)
- D: Polyacetal (POM)

3 Material of a diaphragm and other parts

- C: Chloroprene rubber (CR)
- N: Nitrile-butadiene rubber (NBR)
- H: Thermoplastic elastomer polyester (TPEE)
- E: Ethylene propylene rubber (EPDM)
- S: Thermoplastic elastomer polyolefin (TPO)
- V: Fluorine-contained rubber (FKM)
- T: Fluorocarbon resin (PTFE)

Temperature range table for various materials

| Material of the main body | Solution temperature range |
|---------------------------|----------------------------|
| Aluminium | 0 to 100°C |
| Cast Iron | |
| Stainless | |
| Polypropylene | 0 to 60°C |

| Material of a diaphragm | Solution temperature range |
|-------------------------|----------------------------|
| NBR CR | 0 to 70°C |
| TPEE EPDM | 0 to 80°C |
| FKM TPO | 0 to 100°C |
| PTFE | |

Note 1: Glass-reinforced polypropylene

Conversion Table

| [Length] | m | km | in | ft | yd | mile |
|----------|-----------------|------------------------|---------------------|-------|-------|------------------------|
| m | 1 | 1×10^{-3} | 39.37 | 3.28 | 1.093 | 6.214×10^{-4} |
| km | 1×10^3 | 1 | 3.937×10^4 | 3,280 | 1,093 | 0.621 |
| in | 0.0254 | 2.54×10^{-5} | 1 | 1/12 | 1/36 | 1.58×10^{-5} |
| ft | 0.305 | 3.048×10^{-4} | 12 | 1 | 1/3 | 1.894×10^{-4} |
| yd | 0.914 | 9.144×10^{-4} | 36 | 3 | 1 | 5.682×10^{-4} |
| mile | 1,609 | 1.609 | 63,360 | 5,280 | 1,760 | 1 |

| [Mass (Weight)] | g | kg | t | lb | oz |
|-----------------|-----------------|--------------------|------------------------|------------------------|--------|
| g | 1 | 1×10^{-3} | 1×10^{-6} | 2.204×10^{-3} | 0.0352 |
| kg | 1×10^3 | 1 | 1×10^{-3} | 2.204 | 35.27 |
| t | 1×10^6 | 1×10^3 | 1 | 2,204 | 35,270 |
| lb | 453.6 | 0.4536 | 4.536×10^{-4} | 1 | 16 |
| oz | 28.35 | 0.02835 | 2.835×10^{-5} | 1/16 | 1 |

| [Volume] | cm ³ (cc or ml) | m ³ | l | in ³ | qt | pt | fl-oz | ft ³ | gal |
|----------------------------|-------------------------------|----------------|--------|-----------------|---------|--------|--------|-----------------|---------|
| cm ³ (cc or ml) | 1 | 0.000001 | 0.001 | 0.061 | 0.00088 | 0.0018 | 0.035 | - | 0.00022 |
| m ³ | 1,000,000 | 1 | 1,000 | 61,024 | 880 | 1,760 | 35,195 | 35.314 | 220 |
| l | 1,000 | 0.001 | 1 | 61.024 | 0.880 | 1.760 | 35.195 | 0.035 | 0.220 |
| in ³ | 16.387 | 0.000016 | 0.016 | 1 | 0.014 | 0.029 | 0.577 | 0.00058 | 0.0036 |
| qt | 1,136.52 | 0.0011 | 1.137 | 69.355 | 1 | 2 | 40 | 0.033 | 0.25 |
| pt | 568 | 0.00057 | 0.568 | 34.677 | 0.5 | 1 | 20 | 0.017 | 0.125 |
| fl-oz | 28.413 | 0.000028 | 0.028 | 1.734 | 0.025 | 0.05 | 1 | 0.0008 | 0.00625 |
| ft ³ | 28,316 | 0.0283 | 28.316 | 1,728 | 29.922 | 59.844 | 958 | 1 | 7,481 |
| gal | 4,546 | 0.0045 | 4.546 | 277 | 4 | 8 | 160 | 0.134 | 1 |

| [Pressure] | bar | kgf/cm ² | lbf/cm ² | mmHg (0°C) | Pa (SI) |
|---------------------|--------------------|-----------------------|-----------------------|-----------------------|---------|
| bar | 1 | 1.020 | 14.50 | 750.1 | 100,000 |
| kgf/cm ² | 0.9807 | 1 | 14.22 | 753.6 | 98,066 |
| lbf/cm ² | 0.0689 | 0.0703 | 1 | 51.72 | 6,895 |
| mmHg (0) | 0.00133 | 0.0013 | 0.0193 | 1 | 133.3 |
| Pa (SI) | 1×10^{-5} | 1.02×10^{-5} | 1.45×10^{-4} | 10.2×10^{-4} | 1 |

| [Stress] | Pa (SI) | MPa | kgf/mm ² | kgf/cm ² |
|---------------------|-----------------------|--------------------------|--------------------------|--------------------------|
| Pa (SI) | 1 | 1×10^{-6} | 1.01972×10^{-7} | 1.01972×10^{-5} |
| MPa | 1×10^6 | 1 | 1.01972×10^{-1} | 1.01972×10 |
| kgf/mm ² | 9.80665×10^6 | 9.80665 | 1 | 1×10^2 |
| kgf/cm ² | 9.80665×10^4 | 9.80665×10^{-2} | 1×10^{-2} | 1 |

| [Force] | kW | kgf · m/sec | HP |
|-------------|----------|-------------|---------|
| kW | 1 | 102.0 | 1.341 |
| kgf · m/sec | 0.009807 | 1 | 0.01315 |
| HP | 0.7457 | 76.04 | 1 |