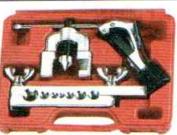
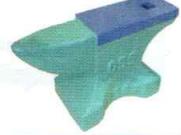


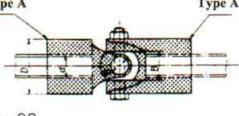
61

Hand Tools

Socket Wrenches P. 61-1 ~ 9		Wrenches/Spanners P. 61-9 ~ 19		Torque Tools/Torque Wrenches P. 61-19 ~ 20	
Pliers P. 61-20 ~ 26		Scissors and Knives P. 61-26 ~ 27		Cutters/Shears P. 61-27 ~ 30	
Packing Hooks & Pipe Cutters P. 61-30		Tube Expanders P. 61-31		Screwdrivers P. 61-31 ~ 35	
Hammers P. 61-35 ~ 37		Glass Cutters P. 61-37 ~ 38		Bars/Nail Pullers P. 61-38	
Chisels P. 61-38 ~ 39		Punches/Stencils P. 61-39 ~ 41		Anvils/Blacksmith's Tongs P. 61-41	
Scrapers/Scribers P. 61-41 ~ 42		Magnets P. 61-42		Saws/Hacksaws P. 61-42 ~ 44	
Pin Vises/Hand Drills P. 61-44		Auger Bits/Gimlets P. 61-44 ~ 45		Planes/Wood Gauges P. 61-45	
Trowels/Putty Knives P. 61-45		Shovels P. 61-45		Tool Belts P. 61-45 ~ 46	
Pipe Benders P. 61-46		Screw Clamps/Vises P. 61-46 ~ 48		Tool Boxes/Part Cabinets P. 61-48 ~ 50	

61

Hand Tools

Drum Opening Spanners/Drum Cocks  P. 61-50	Drum Pumps  P. 61-50~ 51	Drum Hooks/ Lifting Clamps  P. 61-51
Hose Bands/ Pipe Clamps  P. 61-51 ~ 57	Carborundom Paste  P. 61-57	Files  P. 61-57 ~ 59
Grinding Wheels/Disc Paper  P. 61-59 ~ 64	Winches/ Chain Hoists  P. 61-64 ~ 65	Gear Pullers/ Bearing Pullers  P. 61-66 ~ 67
Hydraulic Jacks  P. 61-67 ~ 69	Nut Splitters/ Flange Jacks  P. 61-69	Pipe Cleaners  P. 61-69
Rivets/Riveters  P. 61-70 ~ 71	Stainless Steel Tools  P. 61-71 ~ 74	Non-Sparking Tools  P. 61-74 ~ 83
Bahco Tools  P. 61-83 ~ 84	Ridgid Tools  P. 61-84 ~ 87	Torches/ Leak Detectors  P. 61-87 ~ 88
Ladders  P. 61-88 ~ 89	Trucks/Carriers  P. 61-90 ~ 91	Roller Conveyors/ Mesh Box Pallets  P. 61- 91
Universal Joints  P. 61-91 ~ 92	Lubricators/ Grease Pumps  P. 61-92 ~ 98	Grease Nipples/ Grease Guns  P. 61-98 ~ 99
Oilers/Oil Containers  P. 61-100 ~ 101		

1. Socket Wrenches

Llaves de Vaso ソケットレンチ 套筒扳手套装

These strong socket wrench sets are forged from chrome-vanadium steel, a special alloy chrome plated steel. These sets are very useful for engineers, mechanics and electricians.

Socket Wrench Set Summary

CODE	Drive mm	No. of Socket	Size	No. of Tools	TONE
61 01 01	6.35 (1/4")	12	5-12 mm & 3/16"- 3/8"	18's	146
	12.7 (1/2")	26	8-32 mm		
	19.0 (3/4")	9	26-41 mm		
61 01 07	6.35 (1/4")	8	5-13 mm	4's	1850M
61 01 08		12	5-12 mm & 3/16"- 3/8"	8's	1800
61 01 09 10	9.5 (3/8")	8	3/16"- 7/16"	4's	1850
		12	4-14 mm	7's	1800M
61 01 14 15 16 17 18	12.7 (1/2")	13	6-22 mm	4's	1560MS
		13	5.5-24 mm	4's	1570M
		13	6-22 mm	4's	1560M
		13	6-22 mm	8's	1500M
		17	6-22 mm	8's	1550M
61 01 19		13	1/4"-7/8"	8's	1500
61 01 20 21 22 23 41 24 25 26 27 28 29 30 31 32 33 42 43	19.0 (3/4")	26	8-32 mm	8's	170M
		10	8-24 mm	3's	800MISO
		13	8-27 mm	4's	-
		13	8-27 mm	5's	750M
		13	8-27 mm	5's	750MS
		13	8-32 mm	4's	770M
		15	8-32 mm	5's	260MISO
		18	8-32 mm	8's	160M
		15	9-32 mm	5's	260M
		15	9-32 mm	8's	-
		8	10-24 mm	2's	-
		8	10-26 mm	2's	-
		10	10-26 mm	3's	800M
		13	10-26 mm	4's	-
		13	10-30 mm	4's	713M
		13	10-32 mm	4's	760M
		13	10-32 mm	4's	760MS
61 01 34 35 36 37	19.0 (3/4")	10	3/8"-15/16"	3's	800
		13	3/8"-1"	4's	-
		13	3/8"-1"	5's	750
		15	7/16"-1-1/4"	5's	260
61 01 39		26	8-32 mm & 3/8"-1"	8's	-
61 01 40		24	10-27 mm & 7/16"-1"	8's	550
61 01 51 52 53 54 56	19.0 (3/4")	20	19-60 mm	6's	230M
		10	24-41 mm	2's	210M
		8	24-50 mm	4's	200MISO
		8	26-50 mm	4's	200M
		8	26-50 mm	4's	200MS
61 01 55		13	1-1/16"-2"	4's	200
61 01 61 62 63	25.4 (1")	8	32-65 mm	5's	240M
	25.4 (1")	12	32-85 mm	5's	250MISO
		12	35-85 mm	5's	250M

Socket Wrench Sets

Llaves de Vaso ソケットレンチセット 套筒扳手套装

Square Drive :

6.35 mm (1/4"),
12.7 mm (1/2"),
19.0 mm (3/4")



Contents

6.35 mm (1/4") Square Drive

12 Sockets (6 Point)	5, 5.5 (7/32"), 6, 7, 8 (5/16"), 9, 10, 11 (7/16"), 12, 3/16", 1/4", 3/8"
1 Ratchet Handle (reversible)	115 mm (4-1/2")
1 Nut Spinner Handle (hinged)	150 mm (6")
1 Sliding T Handle	105 mm (4")
1 Driver Handle	140 mm (5-1/2")
1 Extension Bar	50 mm (2")
1 Extension Bar	150 mm (6")
1 Universal Joint	35 mm (1-3/8")
1 Cross Bar	100 mm (4")

12.7 mm (1/2") Square Drive

26 Sockets (12 Point)	8 (5/16"), 9, 10, 11 (7/16"), 12, 13, 14, 14.5 (9/16"), 15 (19/32"), 16 (5/8"), 17 (21/32"), 17.5 (11/16"), 18, 19 (3/4"), 20 (25/32"), 21, 22, 23, 24 (15/16"), 25 (1"), 26, 27 (1-1/16"), 28, 29, 30 (1-3/16"), 32 (1-1/4")
1 Ratchet Handle (reversible)	270 mm (10-1/2")
1 Nut Spinner Handle (hinged)	380 mm (15")
1 Sliding T Handle	250 mm (10")
1 Extension Bar	75 mm (3")
1 Extension Bar	150 mm (6")
1 Extension Bar	250 mm (10")
1 Universal Joint	75 mm (3")
1 Cross Bar	250 mm (10")

19.0 mm (3/4") Square Drive

9 Sockets (12 Point)	26, 27, 29, 30, 32, 35, 36, 38, 41 mm
1 Ratchet Handle (reversible)	500 mm (20")
1 Extension Bar	200 mm (8")

Socket Wrench Sets

Llaves de Vaso ソケットレンチセット 套筒扳手套装

Square Drive 6.35 mm (1/4")

How to order: CODE

Socket wrench set, 6.35 mm sq. drive, SOCKET SIZE, NUMBER of SOCKETS, NUMBER of TOOLS

Unit Per Set

CODE	Socket Size		Quantity of Sockets	Quantity of Tools
	mm	Inch		
61 01 07	5-13	-	8	4
08	5-12	3/16-3/8	12	8
09	-	3/16-7/16	8	4
10	4-14	-	12	7

Contents

61 01 07

8 Sockets (6 Point)	5, 5.5, 6, 7, 8, 10, 12, 13 mm
1 Nut Spinner Handle (hinged)	150 mm (6")
1 Ratchet Handle (reversible)	115 mm (4-1/2")
1 Driver Handle	140 mm (5-1/2")
1 Cross Bar	100 mm (4")

61 01 08

12 Sockets (6 Point)	5, 5.5(7/32"), 6, 7, 8(5/16"), 9, 10, 11(7/16"), 12, 3/16", 1/4", 3/8"
1 Ratchet Handle (reversible)	115 mm (4-1/2")
1 Nut Spinner Handle (hinged)	150 mm (6")
1 Sliding T Handle	105 mm (4")
1 Driver Handle	140 mm (5-1/2")
1 Extension Bar	50 mm (2")
1 Extension Bar	150 mm (6")
1 Universal Joint	35 mm (1-3/8")
1 Cross Bar	100 mm (4")

61 01 09

8 Sockets (6 Point)	3/16", 7/32", 1/4", 9/32" 5/16", 11/32", 3/8", 7/16"
1 Ratchet Handle	115 mm (4-1/2")
1 Nut Spinner Handle (hinged)	150 mm (6")
1 Driver Handle	150 mm (6")
1 Cross Bar	100 mm (4")

61 01 10

12 Sockets (6 Point)	4, 5, 5.5, 6, 7, 8 9, 10, 11, 12, 13, 14 mm
1 Ratchet Handle	115 mm (4-1/2")
1 Nut Spinner Handle (hinged)	150 mm (6")
1 Sliding T Handle	105 mm (4")
1 Driver Handle	150 mm (6")
1 Extension Bar	50 mm (2")
1 Extension Bar	150 mm (6")
1 Universal Joint	40 mm (1-9/16")

Socket Wrench Sets

Llaves de Vaso ソケットレンチセット 套筒扳手套装

**Square Drive 9.5 mm (3/8")****How to order: CODE**

Socket wrench set, 9.5 mm sq. drive, SOCKET SIZE, NUMBER of SOCKETS , NUMBER of TOOLS

Unit Per Set

CODE	Socket Size		Quantity of Sockets	Quantity of Tools
	mm	Inch		
61 01 14	6-22	-	13	4
15	5.5-24	-	13	4
16	6-22	-	13	4
17	6-22	-	13	8
18	6-22	-	17	8
19	-	1/4-7/8	13	8

Contents

61 01 14

13 Sockets (6 Point)	6, 7, 8, 9, 10, 11, 12, 13, 14, 17, 19, 21, 22 mm
1 Ratchet Handle (hold Type)	185 mm (7-1/4")
1 Extension Bar	75 mm (3")
1 Extension Bar	150 mm (6")
1 Ball Joint	44 mm (1-3/4")

61 01 15

13 Sockets (6 Point)	5.5, 6, 7, 8 mm (12 Point)
13 Sockets (6 Point)	10, 12, 13, 14, 17, 19, 21, 22, 24 mm
1 Ratchet Handle (hold Type)	185 mm (7-1/4")
1 Extension Bar	75 mm (3")
1 Extension Bar	150 mm (6")
1 Ball Joint	44 mm (1-3/4")

61 01 16

13 Sockets (6 Point)	6, 7, 8, 9 mm (12 Point)
13 Sockets (6 Point)	10, 11, 12, 13, 14, 17, 19, 21, 22 mm

1 Ratchet Handle (reversible)	190 mm (7-1/2")
1 Extension Bar	75 mm (3")
1 Extension Bar	150 mm (6")
1 Universal Joint	54 mm (2")

61 01 17

13 Sockets (6 Point)	6, 7, 8, 9 mm (12 Point)
13 Sockets (6 Point)	10, 11, 12, 13, 14, 17, 19, 21, 22 mm
1 Nut Spinner Handle (hinged)	190 mm (7-1/2")
1 Ratchet Handle (reversible)	190 mm (7-1/2")
1 Sliding T Handle	200 mm (8")
1 Speeder (Brace)	400 mm (16")
1 Extension Bar	75 mm (3")
1 Extension Bar	150 mm (6")
1 Universal Joint	300 mm (12")
1 Cross Bar	50 mm (2")

61 01 18

17 Sockets (6 Point)	6, 7, 8 (5/16"), 9 mm (12 Point)
17 Sockets (6 Point)	10, 11 (7/16"), 12, 13, 14, 14.5 (9/16"), 15 (19/32"), 16 (5/8"), 17 (21/32"), 17.5 (11/16"), 19 (3/4"), 21, 22 mm
1 Ratchet Handle (reversible)	190 mm (7-1/2")
1 Nut Spinner Handle (hinged)	190 mm (7-1/2")
1 Sliding T Handle	200 mm (8")
1 Extension Bar	75 mm (3")
1 Extension Bar	150 mm (6")
1 Extension Bar	300 mm (12")
1 Cross Bar	150 mm (6")
1 Universal Joint	54 mm (2")

61 01 19

13 Sockets (6 Point)	1/4", 5/16", 3/8" (12 Point)
13 Sockets (6 Point)	7/16", 1/2", 17/32", 9/16", 19/32", 5/8", 11/16", 3/4", 13/16", 7/8"
1 Nut Spinner Handle (hinged)	190 mm (7-1/2")
1 Ratchet Handle (reversible)	190 mm (7-1/2")
1 Sliding T Handle	200 mm (8")
1 Speeder (Brace)	400 mm (16")
1 Extension Bar	75 mm (3")
1 Extension Bar	150 mm (6")
1 Extension Bar	300 mm (12")
1 Universal Joint	50 mm (2")

Socket Wrench Sets

Llaves de Vaso ソケットレンチセット 套筒扳手套装

**Square Drive 12.7 mm (1/2")****Socket Set Contents with Metric Sizes****How to order: CODE**

Socket wrench set, 12.7 mm sq. drive, SOCKET SIZE, NUMBER of SOCKETS, NUMBER of TOOLS

CODE	Socket Size		Quantity of Sockets	Quantity of Tools
	mm	Inch		
61 01 20	8-32	-	26	8
21	8-24	-	10	3
22	8-27	-	13	4
23	8-27	-	13	5
41	8-27	-	13	5
61 01 24	8-32	-	13	4
25	8-32	-	15	5
26	8-32	-	18	8
27	9-32	-	15	5
28	9-32	-	15	8
61 01 29	10-24	-	8	2
30	10-26	-	8	2
31	10-26	-	10	3
32	10-26	-	13	4
33	10-30	-	13	4
61 01 42	10-32	-	13	4
43	10-32	-	13	4

Contents

61 01 20

26 Sockets (12 Point)	8, 9, 10, 11, 12, 13, 14, 14.5, 15, 16, 17, 17.5, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 32 mm
1 Ratchet Handle (reversible)	270 mm (10-1/2")
1 Nut Spinner Handle (hinged)	362 mm (14-1/4")
1 Sliding T Handle	250 mm (10")
1 Extension Bar	75 mm (3")
1 Extension Bar	150 mm (6")
1 Extension Bar	250 mm (10")
1 Universal Joint	70.5 mm (3/4")
1 Cross Bar	250 mm (10")

61 01 21

10 Sockets (12 Point)	8, 10, 11, 12, 13, 14, 17, 19, 22, 24 mm
1 Ratchet Handle (reversible)	270 mm (10-1/2")
1 Sliding T Handle	250 mm (10")
1 Extension Bar	150 mm (6")

61 01 22

13 Sockets (12 Point)	8, 10, 11, 12, 13, 14, 17, 19, 21, 22, 24, 26, 27 mm
1 Nut Spinner Handle (hinged)	300 mm (12")
1 Extension Bar	150 mm (6")
1 Cross Bar	250 mm (10")
1 Universal Joint	75 mm (3")

61 01 23

13 Sockets (12 Point)	10, 11, 12, 13, 14, 17, 19, 21, 22, 24, 26, 27, 30 mm
1 Ratchet Handle (reversible)	270 mm (10-1/2")
1 Nut Spinner Handle (hinged)	300 mm (12")
1 Extension Bar	150 mm (6")
1 Cross Bar	250 mm (10")

61 01 41

13 Sockets (6 Point)	8, 10, 11, 12, 13, 14, 17, 19, 21, 22, 24, 26, 27 mm
1 Ratchet Handle (hold Type)	250 mm (10")
1 Nut Spinner Handle (hinged)	300 mm (12")
1 Extension Bar	150 mm (6")
1 Ball Joint	60 mm (2-3/8")
1 Cross Bar	250 mm (10")

61 01 24

13 Sockets (12 Point)	8, 10, 11, 12, 13, 14, 17, 19, 22, 24, 27, 30, 32 mm
1 Ratchet Handle (reversible)	270 mm (10-1/2")
1 Nut Spinner Handle (hinged)	300 mm (12")
1 Extension Bar	150 mm (6")
1 Cross Bar	250 mm (10")

61 01 25

15 Sockets (12 Point)	8, 10, 11, 12, 13, 14, 17, 19, 21, 22, 24, 26, 27, 30, 32 mm
1 Ratchet Handle (reversible)	270 mm (10-1/2")
1 Nut Spinner Handle (hinged)	380 mm (15")
1 Sliding T Handle	250 mm (10")
1 Extension Bar	150 mm (6")
1 Cross Bar	250 mm (10")

61 01 26

18 Sockets (12 Point)	8, 9, 10, 11, 12, 13, 14, 17, 19, 21, 22, 23, 24, 26, 27, 29, 30, 32 mm
1 Ratchet Handle (reversible)	270 mm (10-1/2")
1 Nut Spinner Handle (hinged)	380 mm (15")
1 Sliding T Handle	250 mm (10")
1 Extension Bar	75 mm (3")
1 Extension Bar	150 mm (6")
1 Universal Joint	250 mm (10")
1 Cross Bar	75 mm (3")
	250 mm (10")

61 01 27

15 Sockets (12 Point)	9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 21, 23, 26, 29, 32 mm
1 Nut Spinner Handle (hinged)	380 mm (15")
1 Ratchet Handle (reversible)	270 mm (10-1/2")
1 Sliding T Handle	250 mm (10")
1 Extension Bar	150 mm (6")
1 Cross Bar	250 mm (10")

61 01 28

15 Sockets (12 Point)	9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 21, 23, 26, 29, 32 mm
1 Ratchet Handle (reversible)	270 mm (10-1/2")
1 Nut Spinner Handle (hinged)	380 mm (15")
1 Sliding T Handle	250 mm (10")
1 Offset Handle	275 mm (11")
1 Speed T Handle	300 mm (12")
1 Speeder	395 mm (16")
1 Extension Bar	150 mm (6")
1 Universal Joint	75 mm (3")

61 01 29

8 Sockets (12 Point)	10, 12, 13, 14, 17, 19, 22, 24 mm
1 Ratchet Handle (reversible)	270 mm (10-1/2")
1 Extension Bar	150 mm (6")

61 01 30

8 Sockets (12 Point)	10, 12, 14, 17, 19, 21, 23, 26 mm
1 Sliding T Handle	250 mm (10")
1 Extension Bar	150 mm (6")

61 01 31

10 Sockets (12 Point)	10, 12, 13, 14, 15, 17, 19, 21, 23, 26 mm
1 Ratchet Handle (reversible)	270 mm (10-1/2")
1 Sliding T Handle	250 mm (10")
1 Extension Bar	150 mm (6")

61 01 32

13 Sockets (12 Point)	10, 11, 12, 13, 14, 14.5, 16, 17, 17.5, 19, 21, 23, 26 mm
1 Nut Spinner Handle (hinged)	300 mm (12")
1 Universal Joint	75 mm (3")
1 Extension Bar	150 mm (6")
1 Cross Bar	250 mm (10")

61 01 33

13 Sockets (12 Point)	10, 11, 12, 13, 14, 17, 19, 21, 22, 24, 26, 27, 30 mm
1 Ratchet Handle (reversible)	270 mm (10-1/2")
1 Nut Spinner Handle (hinged)	300 mm (12")
1 Extension Bar	150 mm (6")
1 Cross Bar	250 mm (10")

61 01 42

13 Sockets (12 Point)	10, 12, 13, 14, 17, 19, 21, 22, 24, 26, 27, 30, 32 mm
1 Ratchet Handle (hold Type)	250 mm (10")
1 Nut Spinner Handle (hinged)	300 mm (12")
1 Extension Bar	150 mm (6")
1 Ball Joint	60 mm (2-3/8")

61 01 43

13 Sockets (6 Point)	10, 12, 13, 14, 17, 19, 21, 22, 24, 26, 27, 30, 32 mm
1 Ratchet Handle (hold Type)	250 mm (10")
1 Nut Spinner Handle (hinged)	300 mm (12")
1 Extension Bar	150 mm (6")
1 Ball Joint	60 mm (2-3/8")

Socket Set Contents with Inch Sizes**How to order: CODE**

Socket wrench set, 12.7 mm sq. drive, SOCKET SIZE, NUMBER of SOCKETS, NUMBER of TOOLS

Unit Per Set

CODE	Socket Size		Quantity of Sockets	Quantity of Tools
	mm	Inch		
61 01 34	-	3/8 - 15/16	10	3
35	-	3/8 - 1	13	4
36	-	3/8 - 1	13	5
37	-	7/16 - 1-1/4	15	5

Contents**61 01 34**

10 Sockets (12 Point)	3/8", 7/16", 1/2", 9/16", 5/8", 11/16", 3/4", 13/16", 7/8", 15/16"
1 Ratchet Handle (reversible)	270 mm (10-1/2")
1 Sliding T Handle	250 mm (10")

61 01 35

13 Sockets (12 Point)	3/8", 7/16", 1/2", 9/16", 19/32", 5/8", 11/16", 3/4", 25/32", 13/16", 7/8", 15/16", 1"
1 Nut Spinner Handle (hinged)	300 mm (12")
1 Extension Bar	150 mm (6")
1 Universal Joint	75 mm (3")
1 Cross Bar	250 mm (10")

61 01 36

13 Sockets (12 Point)	3/8", 7/16", 1/2", 9/16", 19/32", 5/8", 11/16", 3/4", 25/32", 13/16", 7/8", 15/16", 1"
1 Ratchet Handle (reversible)	270 mm (10-1/2")
1 Nut Spinner Handle (hinged)	300 mm (12")
1 Extension Bar	150 mm (6")
1 Universal Joint	75 mm (3")
1 Cross Bar	250 mm (10")

61 01 37

15 Sockets (12 Point)	7/16", 1/2", 9/16", 19/32", 5/8", 11/16", 3/4", 25/32", 13/16", 7/8", 15/16", 1, 1-1/16", 1-1/8", 1-1/4"
1 Nut Spinner Handle (hinged)	380 mm (15")
1 Ratchet Handle (reversible)	270 mm (10-1/2")
1 Sliding T Handle	250 mm (10")
1 Extension Bar	150 mm (6")
1 Cross Bar	250 mm (10")

Socket Set Contents in Metric & Inch Sizes**How to order: CODE**

Socket wrench set, 12.7 mm sq. drive, SOCKET SIZE, NUMBER of SOCKETS, NUMBER of TOOLS

Unit Per Set

CODE	Socket Size		Quantity of Sockets	Quantity of Tools
	mm	Inch		
61 01 39	8 - 32	3/8 - 1	26	8
40	10 - 26	7/16 - 1	24	8

Contents**61 01 39**

26 Sockets (12 Point)	8(5/16"), 9, 10, 11(7/16"), 12, 13, 14, 14.5(9/16"), 15(19/32"), 16(5/8"), 17(21/32"), 17.5(11/16"), 19(3/4"), 20(25/32"), 21, 22, 23, 24(15/16"), 26, 27(1-1/16"), 29, 30(1-3/16"), 32(1-1/4"), 3/8"(9.5), 1/2"(12.7), 1"(25.4)
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1 Ratchet Handle (reversible)	270 mm (10-1/2")
1 Nut Spinner Handle (hinged)	380 mm (15")
1 Sliding T Handle	250 mm (10")
1 Extension Bar	75 mm (3")
1 Extension Bar	150 mm (6")
1 Extension Bar	250 mm (10")
1 Universal Joint	75 mm (3")
1 Cross Bar	250 mm (10")

61 01 40

24 Sockets (12 Point)	10, 11, 12, 13, 14, 17, 19, 21, 22, 23, 24, 26 7/16", 1/2", 9/16", 19/32", 5/8", 11/16", 3/4", 25/32", 13/16", 7/8", 15/16", 1"
1 Ratchet Handle (reversible)	270 mm (10-1/2")
1 Nut Spinner Handle (hinged)	380 mm (15")
1 Sliding T Handle	250 mm (10")
1 Extension Bar	75 mm (3")
1 Extension Bar	150 mm (6")
1 Extension Bar	250 mm (10")
1 Universal Joint	75 mm (3")
1 Cross Bar	250 mm (10")

Socket Wrench Sets

Llaves de Vaso ソケットレンチセット 套筒扳手套装

Square Drive 19.0 mm (3/4")**How to order: CODE**

Socket wrench set, 19.0 mm sq. drive, SOCKET SIZE, NUMBER of SOCKETS, NUMBER of TOOLS

Unit Per Set

CODE	Socket Size		Quantity of Sockets	Quantity of Tools
	mm	Inch		
61 01 51	19-60	-	20	6
52	24-41	-	10	2
53	24-50	-	8	4
54	26-50	-	8	4
56	26-50	-	8	4
55	-	1-1/16-2	13	4

Contents

61 01 51

20 Sockets (12 Point)	19, 21, 22, 23, 24, 26, 27, 29, 30, 32, 35, 36, 38, 41, 46, 50, 54, 55, 58, 60 mm
1 Ratchet Handle (reversible)	500 mm (20")
1 Nut Spinner Handle (hinged)	500 mm (20")
1 Sliding T Handle	500 mm (20")
1 Extension Bar	200 mm (8")
1 Extension Bar	400 mm (16")
1 Universal Joint	97 mm (3-7/8")

61 01 52

10 Sockets (12 Point)	24, 26, 27, 29, 30, 32, 35, 36, 38, 41 mm
1 Sliding T Handle	500 mm (20")
1 Extension Bar	200 mm (8")

61 01 53

8 Sockets (12 Point)	24, 27, 30, 32, 36, 41, 46, 50 mm
1 Ratchet Handle (reversible)	500 mm (20")
1 Sliding T Handle	500 mm (20")
1 Extension Bar	200 mm (8")
1 Extension Bar	400 mm (16")

61 01 54

8 Sockets (12 Point)	26, 29, 32, 35, 38, 41, 46, 50 mm
1 Ratchet Handle (reversible)	500 mm (20")
1 Sliding T Handle	500 mm (20")
1 Extension Bar	200 mm (8")
1 Extension Bar	400 mm (16")

61 01 56

8 Sockets (6 Point)	26, 29, 32, 35, 38, 41, 46, 50 mm
1 Ratchet Handle	500 mm (20")
1 Sliding T Handle	500 mm (20")
1 Extension Bar	200 mm (8")
1 Extension Bar	400 mm (16")

61 01 55

13 Sockets (12 Point)	1-1/16", 1-1/8", 1-3/16", 1-1/4", 1-5/16", 1-3/8", 1-7/16", 1-1/2", 1-5/8", 1-3/4", 1-13/16", 1-7/8", 2"
1 Ratchet Handle (reversible)	500 mm (20")
1 Sliding T Handle	500 mm (20")
1 Extension Bar	200 mm (8")
1 Extension Bar	400 mm (16")

Socket Wrench Sets

Llaves de Vaso ソケットレンチセット 套筒扳手套装

Square Drive 25.4 mm (1")

How to order: CODE

Socket wrench set, 25.4 mm sq. drive, SOCKET SIZE, NUMBER of SOCKETS, NUMBER of TOOLS

25.4
mm
1"

Unit Per Set

CODE	Socket Size		Quantity of Sockets	Quantity of Tools
	mm	Inch		
61 01 61	32-65	-	8	5
62	32-85	-	12	5
63	32-85	-	12	5

Contents

61 01 61

8 Sockets (12 Point)	32, 36, 41, 46, 50, 55, 60, 65 mm
1 Ratchet Head	165 mm (6-1/2")
1 Sliding Head	80 mm (3-1/8")
1 Extension Bar	150 mm (6")
1 Extension Bar	400 mm (16")
1 Cross Bar	660 mm (26")

61 01 62

12 Sockets (12 Point)	32, 36, 41, 46, 50, 55, 60, 65, 70, 75, 80, 85 mm
1 Ratchet Head	165 mm (6-1/2")
1 Sliding Head	80 mm (3-1/8")
1 Extension Bar	150 mm (6")
1 Extension Bar	400 mm (16")
1 Cross Bar	660 mm (26")

61 01 63

12 Sockets (12 Point)	35, 38, 41, 46, 50, 54, 58, 63, 67, 71, 77, 85 mm
1 Ratchet Head	165 mm (6-1/2")
1 Sliding Head	80 mm (3-1/8")
1 Extension Bar	150 mm (6")
1 Extension Bar	400 mm (16")
1 Cross Bar	660 mm (26")

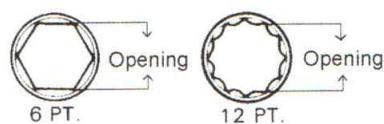
Socket Wrenches

Llaves de Vaso ソケットレンチ 套筒扳手套装

These socket wrenches are made of a special chromed alloy steel. The socket walls are made thin to make it easier to fit to bolts or nuts that are set in narrow, difficult to reach spots. The nominal sizes of the sockets are determined by the socket opening, not the bolt size.

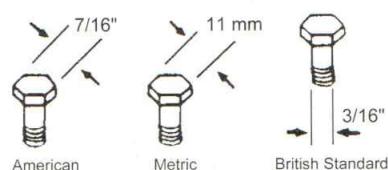


When ordering, please indicate the size of the square drive opening at the back of the socket : 6.35 mm (1/4"), 9.5 mm (3/8"), 12.7 mm (1/2"), 19.0 mm (3/4"), 25.4 mm (1"). Also specify the number of points in the socket and the size of the opening. The following illustrations show how to measure the opening of the socket sizes properly.



Careful When Ordering!!

American and Metric wrench sizes are taken across the flats of the bolt head, British Standard size is taken from the outside diameter of threads.



How to order: CODE

Socket wrench, SQUARE DRIVE mm or inch,
OPENING SIZE mm, TYPE OF OPENING POINT

6.35 mm (1/4") Drive 6 Point

CODE	Opening		CODE	Opening		Overall Length mm	Unit Per Pcs.	
	mm	inch		mm	inch		mm	inch
61 01 81	5	-	22	61 01 90	13	-	22.5	
82	5.5	7/32	22	91	14	-	22.5	
83	6	-	22	92	-	3/16	22	
84	7	9/32	22	93	-	1/4	22	
85	8	5/16	22	94	-	9/32	22	
61 01 86	9	11/32	22	61 01 95	-	11/32	22	
87	10	-	22.5	96	-	3/8	22.5	
88	11	7/16	22.5					
89	12	15/32	22.5					

**9.5 mm (3/8")
Drive 6 Point****9.5 mm (3/8")
Drive 12 Point**

CODE	Opening		CODE	Opening		Overall Length mm	Unit Per Pcs.	
	mm	inch		mm	inch		mm	inch
61 02 01	6	-	27	61 02 21	10	-	29	
02	7	9/32	27	22	11	7/16	29	
03	8	5/16	27	23	12	15/32	29	
04	9	11/32	29	24	13	-	29	
05	10	-	29	25	14	-	31.5	
61 02 06	11	7/16	29	61 02 26	14.5	-	31.5	
07	12	15/32	29	27	15	19/32	31.5	
08	13	-	29	28	16	5/8	31.5	
09	14	-	31.5	29	17	21/32	31.5	
10	17	21/32	31.5	30	17.5	11/16	31.5	
61 02 11	19	3/4	35	61 02 31	19	3/4	35	
12	21	13/16	35	32	21	13/16	35	
13	22	-	35	33	22	-	35	
14	-	1/4	27	34	23	-	35	
15	-	9/32	27	35	-	1/2	31	
61 02 16	-	11/32	29	61 02 36	-	17/32	31.5	
17	-	3/8	29	37	-	13/16	35	
				38	-	7/8	35	

**12.7 mm (1/2")
Drive 6 Point****12.7 mm (1/2")
Drive 12 Point**

CODE	Opening		CODE	Opening		Overall Length mm	Unit Per Pcs.	
	mm	inch		mm	inch		mm	inch
61 02 41	8	5/16	35	61 02 66	8	5/16	36	
42	9	11/32	35	67	9	11/32	36	
43	10	-	35	68	10	-	36	
44	11	7/16	35	69	11	7/16	36	
45	12	15/32	35	70	12	15/32	36	
61 02 46	13	-	35	61 02 71	13	-	36	
47	14	-	35	72	14	-	36	
48	15	19/32	35	73	14.5	-	36	
49	16	5/8	36	74	15	19/32	36	
50	17	21/32	37	75	16	5/8	36	
61 02 51	18	-	37	61 02 76	17	21/32	38	
52	19	3/4	38	77	17.5	11/16	38	
53	20	25/32	38	78	18	-	38	
54	21	13/16	39	79	19	3/4	38	
55	22	-	40	80	20	25/32	38	
61 02 56	23	-	41	61 02 81	21	13/16	38	
57	24	-	41	82	22	-	40	
58	26	-	44	83	23	-	40	
59	27	1-1/16	44	84	24	15/16	40	
60	28	-	44	85	26	-	42.5	

(to be continued)

						Unit Per Pcs.		
61 02 61	29	1-1/8	44	61 02 86	27	1-1/16	42.5	
62	30	-	47	87	28	-	43	
63	32	1-1/4	47	88	29	1-1/8	44	
				89	30	-	46	
				90	32	1-1/4	46	
				61 02 91	33	-	46	
				92	-	11/32	35	
				93	-	3/8	35	
				94	-	1/2	35	
				95	-	13/16	39	
				61 02 96	-	7/8	40	
				97	-	1	44	
				98	-	1-1/8	44	

Careful When Ordering!!

American and Metric wrench sizes are taken across the flats of the bolt head, British Standard size is taken from the outside diameter of the threads.

**19 mm (3/4")
Drive 6 Point****19 mm (3/4")
Drive 12 Point**

CODE	Opening		CODE	Opening		Overall Length mm	Unit Per Pcs.	
	mm	inch		mm	inch		mm	inch
61 03 01	19	3/4	50	61 03 21	19	3/4	50	
02	21	13/16	50	20	20	-	47.5	
03	22	-	50	22	21	13/16	50	
04	23	-	50	23	22	-	50	
05	24	-	50	24	23	-	50	
61 03 06	26	-	53	61 03 25	24	-	50	
07	27	1-1/16	53	26	26	-	53	
08	29	1-1/8	56	27	27	1-1/16	53	
09	30	-	56	28	29	1-1/8	56	
10	32	1-1/4	56	29	30	1-3/16	56	
61 03 11	35	1-3/8	58	61 03 30	32	1-1/4	56	
12	36	-	58	31	35	1-3/8	58	
13	38	1-1/2	60	32	36	-	58	
14	41	-	63	33	38	1-1/2	60	
15	46	1-3/16	65	34	41	-	63	
61 03 16	50	-	70	61 03 35	46	1-3/16	65	
				36	50	-	58	
				37	54	2-1/8	58	
				38	55	-	60	
				39	58	-	63	
61 03 40	60	-					65	
41	-	1-5/16					56	
42	-	1-7/16					58	
43	-	1-5/8					63	
44	-	1-3/4					65	
61 03 45	-	1-7/8					67	
46	-	2					70	

25.4 mm (1") Drive 12 Point

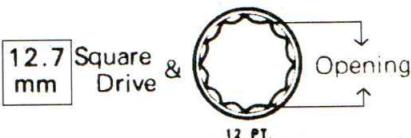
CODE	Opening		CODE	Opening		Overall Length mm	Unit Per Pcs.	
	mm	inch		mm	inch		mm	inch
61 03 51	32	1-1/4	67	61 03 61	60	-	90	
52	35	1-3/8	67	62	63	-	95	
53	36	-	67	63	65	-	95	
54	38	1-1/2	70	64	67	-	100	
55	41	-	73	65	70	-	105	
61 03 56	46	1-13/16	78	61 03 66	71	-	105	
57	50	-	82	67	75	-	110	
58	54	2-1/8	85	68	77	-	110	
59	55	-	85	69	80	-	115	
60	58	-	88	70	85	-	120	

Deep Socket Wrenches

Llaves de Vaso Largo

ディープソケットレンチ 深套筒扳手

Deep sockets made of a special alloy steel. The socket walls are made thin for easy access to nuts and bolts set in narrow spots. The nominal size of the socket is determined by measuring the opening of the socket, not the bolt size. Only supplied in a 12.7 mm sized square drive attachment. 12 point sockets and sockets in metric sizes are available. A hole is located at the top of the socket for use with a cross bar.



12.7 mm (1/2") Drive 12 Point

Unit Per Pcs.

CODE	Opening		CODE	Opening		Overall Length mm	
	mm	inch		mm	inch		
61 03 76	10	-	83	61 03 84	22	-	83
77	11	7/16	83	85	23	-	83
78	12	15/32	83	86	24	-	83
79	13	-	83	87	26	-	83
80	14	-	83	88	27	1-1/16	83
61 03 81	17	21/32	83	61 03 89	29	1-1/8	83
82	19	3/4	83	90	30	-	83
83	21	13/16	83	91	32	1-1/4	83

Ratchet Handles

for Socket Wrenches

Carracaçpara Llaves de Vaso ラチェットハンドル 轴轮手柄

6.35 mm (1/4")-25.4mm (1")

Drop forged from selected steel with 24 teeth in the ratcheting-gear instead of the usual 16 to 20. Turning shift lever reverses action instantly.



CODE	Square Drive	Male or Female	Overall Length mm	Weight grm
61 04 01	6.35 mm	Male	115	100
02		Female	115	80
61 04 03	9.5 mm	Male	190	280
04		Female	190	250
61 04 05	12.7 mm	Male	270	490
06		Female	270	420
61 04 07	19.0 mm	Male	500	1,925
08		Female	500	1,780
61 04 09	25.4 mm	Male	755	4,500
10		Male Head	165	1,300

Nut Spinner Handles

for Socket Wrenches

Mango Llave de Vaso

ナットスピナーハンドル 套筒扳手用绞装手柄

Made from selected alloy steel. Flexible head, knurled grip and a cross hole in the end for use with sliding bars.



Unit Per Pcs.

CODE	Square Drive	Overall Length mm	Weight grm
61 04 15	6.35 (1/4")	150	100
16	9.5 (3/8")	250	365
17	12.7 (1/2")	300	690
18	12.7 (1/2")	380	820
19	19.09 (3/4")	500	1,550

Sliding T Handles

for Socket Wrenches

Mango Llave de Vaso Corredizo

スライディング T ハンドル 滑动 T 形杆

Made from selected alloy steel. Specify only the size of the square drive fitting of the sockets to be used.



Unit Per Pcs.

CODE	Square Drive	Description	Overall Length mm	Weight grm
61 04 21	6.35 (1/4")		105	60
22	9.5 (3/8")		200	190
23	12.7 (1/2")	Adaptor & Handle Bars	250	320
24	19.0 (3/4")		550	1,765
25	25.4 (1")		660	3,820

61

Hand Tools

Cross Bar Handles

for Socket Wrenches

Mango Llave de Vaso

クロスバー ハンドル 横杆把手

Cross bars or sliding handle for use with the nut spinner and the deep sockets.



Unit Per Pcs.

CODE	For	Overall Length mm	Weight grm
61 04 29	6.35 mm (1/4") Square Drive	100	25
30	9.5 mm (3/8") "	150	85
31	12.7 mm (1/2") "	250	225
32	19.0 mm (3/4") "	330	500
33	25.4 mm (1") "	660	3,200

Offset Handles

for Socket Wrenches

Mago Acodado, Llaves de Vaso

オフセットハンドル 套筒扳手辅助手柄



Made from selected alloy steel with a nonrevolving knurled grip.

Unit Per Pcs.

CODE	Square Drive	Overall Length mm	Weight grm
61 04 36	12.7 mm (1/2")	275	465
37	19.0 mm (3/4")	313	1,110

Speed T Handles for Socket Wrenches

Mago T, Llave de Vaso スピード T ハンドル T型套筒扳手

12.7 mm (1/2") square drive, length 300 mm. Made from selected alloy steel with a revolving knurled grip in the middle.



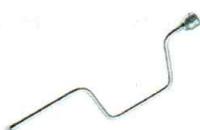
61 04 41	Speed T Handle 12.7 mm sq drive x L 300 mm	Pc.
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Speeder Handles for Socket Wrenches

Berbiqui Llave de Vaso

スピーダーハンドル 滑动 T型手柄

Selected alloy steel with knurled revolving grips.



CODE	Square Drive	Overall Length mm	Weight grm	Unit Per Pcs.
61 04 42	9.5 mm (3/8")	395	510	
43	12.7 mm (1/2")	395	650	

Extension Driver Handles for Socket Wrenches

Atornillador para Llave de Vaso

ドライバー型ハンドル 扩展驱动程序句柄的套筒扳手

Driver has a plastic grip with a 6.35 mm (1/4") square drive fitting. Total length : 140 mm.



61 04 46	Driver handle, extension 6.35 mm sq drive x L 140 mm	Pc.
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Extension Bars for Socket Wrenches

Barra de Extensión para Llave de Vaso

エキステンションバー 长杆的套筒扳手延长杆

Made from selected alloy steel. Has a square drive fitting for attaching a socket at one end and a receptacle fitting for attaching the ratchet handle at the other.



Unit Per Pcs.

CODE	Square Drive	Overall Length mm	Weight grm
61 04 48	6.35 mm (1/4")	50	30
49		150	70
61 04 50	9.5 mm (3/8")	75	70
51		150	120
52		300	225
61 04 53	12.7 mm (1/2")	75	135
54		150	225
55		250	350
61 04 56	19.0 mm (3/4")	200	800
57		400	1,570
61 04 58	25.4 mm (1")	150	870
59		400	1,820
61 04 60	25.4 mm (1")	250	1,250

Universal Joints for Socket Wrenches

Articulación para Llave de Vaso

ユニバーサルジョイント 万向节



Made from selected alloy steel with approximately a 140° operating range.

Unit Per Pcs.

CODE	Square Drive	Overall Length mm	Weight grm
61 04 65	6.35 mm (1/4")	35	30
66	9.5 mm (3/8")	54	65
67	12.7 mm (1/2")	75	145
68	19.0 mm (3/4")	97	465
69	25.4 mm (1")	128	890

Socket Adapters for Socket Wrenches

Adaptadores para Llaves de Vaso

ソケットアダプター 套筒接头



Adapters used to fit ratchet handles to sockets which have larger or smaller square drive fittings.

Unit Per Pcs.

CODE	Male SQ Drive	x	Female SQ Drive	Overall Length mm	Weight grm
61 04 71	9.5 (3/8")	x	6.35 (1/4")	23	15
72	6.35 (1/4")	x	9.5 (3/8")	25	25
73	12.7 (1/2")	x	9.5 (3/8")	32	40
74	9.5 (3/8")	x	12.7 (1/2")	33	50
75	19.0 (3/4")	x	12.7 (1/2")	42	115
61 04 76	12.7 (1/2")	x	19.0 (3/4")	46	170
77	25.4 (1")	x	19.0 (3/4")	58	340
78	19.0 (3/4")	x	25.4 (1")	63	420
79	38.1 (1-1/2")	x	25.4 (1")	77	780

Driver Sockets for Socket Wrenches

Puntas para Llaves de Vasos

ドライバーソケット 驱动套筒



These attachments allow you to drive screws with socket wrenches. Only 12.7 mm (1/2") square drive sockets available.

How to order: CODE

Driver socket for socket wrench, 12.7 mm square drive x BLADE WIDTH mm

Unit Per Pcs.

CODE	Square Drive	Blade Width		Weight grm
		mm	Inch	
61 04 81	12.7 mm (1/2")	19	3/4	70
82	12.7 mm (1/2")	24	1	95
83	12.7 mm (1/2")	30	13/16	110

Stud Remover Wrenches

Roller Type

Extractor de Espárragos

スタッドボルトリムーバー 滚筒式拆螺栓板手

This roller type stud bolt remover can be used for bolts of 8 – 19 mm. If used in connection with a 12.7 mm (1/2") square drive ratchet wrench, the work can be carried out more quickly and easily.



61 04 86	Wrench stud remover 1/2 sq. drive for bolt size 8-19 mm	Pc.
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Power Wrenches

Llaves Crraca パワーレンチ 动力扳手

Best for loosening tight bolts and nuts without effort. Even stubborn (frozen-jammed-corroded) bolts and nuts loosen in an easy and quick way. Tightens in the same easy way.



Features

- Power input is increased up to 4 times.
- Hand operated.
- Compact design for work in close quarters.

Advantages

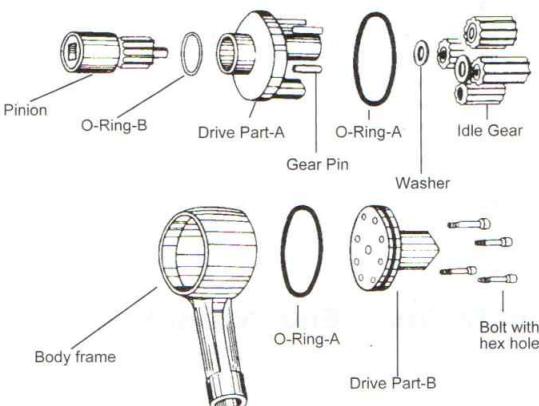
- No air or electric power is required.
- Portable, can be used anywhere.
- Easy to operate.
- Can be used with 25.4 mm drive sockets from any manufacturer.

How to order: CODE

Power wrench, POWER INPUT SQ. DRIVE x POWER OUTPUT SQ. DRIVE

Description		61 04 88	61 04 89	Unit Per Set
Square Drive	Input Power	19.0 mm (3/4")	12.7 mm (1/2")	
	Output Power	25.4 mm (1")	19.0 mm (3/4")	
Ratchet Overall Length		121 mm	86 mm	
Power	Input	850 N.m	400 N.m	
	Output	2,550 N.m	1,200 N.m	
Handle Size		26 x 590 mm	19 x 436 mm	
Metal Case Size		625 x 190 x 120 mm	505 x 120 x 100 mm	
Weight		7.2 kg	2.5 kg	

Power Wrench Spare Parts



2. Wrenches/Spanners

Double Open End Wrench Sets

Double Head 15° Angle

Juegos de Llaves Planas/Ángulo de 15°

両口スパナー 6 丁組 扁角双头开口板手



Chrome vanadium steel with head polished and clipped into a metal clip. Set consists of 6 wrenches with the opening size stamped at both ends.

How to order: CODE

Wrench set, double open end, SIZE (MINIMUM to MAXIMUM) mm, 6's/set

CODE	Contents & Opening	Unit Per Set
61 05 01	mm.....6x7, 8x9, 10x12, 11x13, 12x14, 14x17, 6's	
61 05 02	mm.....8x9, 10x12, 12x14, 14x17, 17x19, 21x23, 6's	
61 05 03	mm.....8x9, 10x12, 12x14, 14x17, 19x21, 23x26, 6's	
61 05 04	mm ISO6x7, 8x10, 11x13, 12x14, 17x19, 22x24, 6's	
61 05 05	inch5/16x3/8, 13/32x7/16, 1/2x9/16, 19/32x5/8, 11/16x3/4, 25/32x7/8, 6's	
61 05 06	inch3/8x7/16, 1/2x9/16, 19/32x5/8, 11/16x3/4, 25/32x7/8, 15/16x1, 6's	

Double Open End Wrench Sets

Long Type 15° Angle

Juegos de Llaves Planas/Ángulo de 15° Tipo Largo

両口スパナー 6 丁組ロングタイプ 长扳手组件



A long wrench specially designed for hard-to-reach nuts. There is a different sized opening at each wrench head.

How to order: CODE

Wrench set, double open end, long handle, SIZE (MINIMUM to MAXIMUM), 6's/set

CODE	Contents & Opening	Unit Per Set
61 05 10	mm ... 8x9, 10x12, 12x14, 14x17, 17x19, 21x23, 6's	
61 05 11	mm ... 8x9, 10x12, 12x14, 14x17, 19x21, 23x26, 6's	
61 05 12	mm ... 6x7, 8x9, 10x12, 11x13, 12x14, 14x17, 6's	
61 05 13	mm ... 6x7, 8x10, 11x13, 12x14, 17x19, 22x24, 6's	

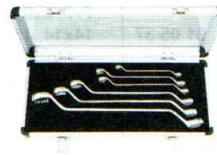
12 Point Double Offset Wrench Sets

45° Double Offset

Juegos de Llaves Planas/Ángulo de 45° Doble Acodada

45 度オフセット両口メガネセット

45 度扁頭 12 角双头扳手



For use in awkward places and connecting rods, main bearings, cylinder head and spring clips, etc.

How to order: CODE

Wrench set, 12 point double offset, SIZE (MINIMUM to MAXIMUM), 6's/set

Unit Per Set

CODE	Contents & Opening	Q'ty
61 05 16	mm Opening ... 10 x 12, 12 x 14, 14 x 17, 17 x 19, 19 x 21, 23 x 26 in Metal Case	6's
61 05 17	mm Opening ... 8 x 10, 11 x 13, 12 x 14, 14 x 17, 19 x 22, 24 x 27 in Metal Case	6's
61 05 18	mm Opening ... 10 x 12, 12 x 14, 14 x 17, 17 x 19, 19 x 21, 23 x 26 in Metal Case, Long Handle	6's
61 05 19	mm Opening ... 8 x 10, 11 x 13, 12 x 14, 14 x 17, 19 x 22, 24 x 27 in Metal Case, Long Handle	6's
61 05 20	mm Opening ... 10 x 12, 14 x 17, 19 x 21, in Vinyl Bag, Long Handle	3's
61 05 21	mm Opening ... 8 x 9, 10 x 12, 11 x 13, 14 x 17, 19 x 21, 22 x 24, 23 x 26 24 x 27 in Metal Case, Long Handle	8's
61 05 26	inch Opening ... 3/8 x 7/16, 1/2 x 9/16, 5/8 x 11/16, 3/4 x 25/32, 13/16 x 7/8, 15/16 x 1 in Metal Case	6's
61 05 27	inch Opening ... 3/8 x 7/16, 1/2 x 9/16, 5/8 x 11/16 in Vinyl Bag, Long Handle	3's

Open & 12 Point Box Wrench Sets**15° Angle Open End-12 Point Opening Box End**

Juegos de Llaves Combinadas

片口片ロスパナーセット 开口和12角筒扳手

**How to order: CODE**

Wrench set, open & 12 point, SIZE (MINIMUM to MAXIMUM), NUMBER of WRENCHES/set

Unit Per Set

CODE	Contents & Opening mm	Q'ty
61 05 31	8x8, 10x10, 12x12, 13x13, 14x14, 17x17, 19x19, 21x21, 22x22, 24x24	10's
61 05 32	10x10, 11x11, 12x12, 13x13, 14x14, 17x17	6's
61 05 33	6x6, 7x7, 8x8, 9x9, 10x10, 11x11, 12x12, 13x13, 14x14, 17x17, 19x19	11's
61 05 34	8x8, 10x10, 12x12, 13x13, 14x14, 17x17, 19x19, 22x22, 24x24, 27x27, 30x30, 32x32	12's
61 05 35	8x8, 9x9, 10x10, 11x11, 12x12, 13x13, 14x14, 17x17, 19x19, 22x22, 24x24, 27x27, 30x30, 32x32	14's
61 05 36	6x6, 7x7, 8x8, 9x9, 10x10, 11x11, 12x12, 13x13, 14x14, 17x17, 19x19, 22x22, 24x24, 27x27, 30x30, 32x32	16's
61 05 37	7x7, 8x8, 9x9, 10x10, 11x11, 12x12, 13x13, 14x14, 15x15, 16x16, 17x17, 18x18, 19x19, 20x20, 21x21, 22x22, 23x23, 24x24, 25x25, 26x26, 27x27, 28x28, 29x29, 30x30, 32x32	18's
61 05 38	6x6, 7x7, 8x8, 9x9, 10x10, 11x11, 12x12, 13x13, 14x14, 15x15, 16x16, 17x17, 18x18, 19x19, 20x20, 21x21, 22x22, 23x23, 24x24, 25x25, 26x26, 27x27, 28x28, 29x29, 30x30, 32x32	26's

Double Open End Wrenches**15° Angle**

Llaves Planas/Ángulo de 15° 両口スパナー 双头开放式扳手



Jaws are long, thin, and pointed. With the 15° angle of the openings, a hex nut can be rotated completely by turning the wrench in a range of only 30°. Forged from selected alloy steel, heat treated and finished in industrial black with the heads buffed bright.

CODE	Opening mm	Overall Length	For Bolt Size	
			Metric	Whitworth
61 05 51	5.5x7	100 mm	M3 x M4	-
	52	100	M3.5 x M4	-
	53	105	M3.5 x M5	-
	54	105	M4 x M5	-
	55	110	M5 x -	-
61 05 56	8x10	120 mm	M5 x M6	-
	57	120	M5 x M7	-
	58	120	- x M6	-
	59	130	M6 x M7	-
	60	130	M6 x -	W3/16 x W1/4
61 05 61	10x13	140 mm	M6 x M8	-
	62	140	M6 x -	W3/16 x W5/16
	63	140	M7 x -	- x W1/4
	64	140	M7 x -	-
	49	140	-	W1/4 x -
61 05 65	12x14	140 mm	-	W1/4 x W5/16
	66	165	- x M10	-
	50	165	-	W5/16 x -
	67	165	- x M10	W5/16 x W3/8
	68	180	M10 x M12	W3/8 x W7/16
61 05 69	17x21	200 mm	M10 x -	W3/8 x W1/2
	70	210	M12 x -	W7/16 x W1/2
	71	210	M12 x M14	-
	72	220	M12 x M16	-
	73	220	-	W1/2 x W9/16
61 05 74	21x26	230 mm	-	W1/2 x W5/8
	75	220	M14 x M16	-
	76	240	-	W9/16 x W5/8
	77	240	M16 x M18	-
	78	270	M16 x M20	-
61 05 79	26x29	270 mm	-	W5/8 x W11/16
	80	270	- x M22	W5/8 x W3/4
	81	270	M18 x M20	-
	82	280	- x M22	W11/16 x W3/4
	83	280	M20 x M22	-
61 05 84	32x35	310 mm	M22 x -	W3/4 x W7/8
	85	310	M22 x M24	-
	86	330	M22 x M27	-
	87	350	- x M27	W7/8 x W1
	88	350	M24 x M27	-
61 05 89	41x46	410 mm	M27 x M30	W1 x W1-1/8
	90	410	M27 x M33	W1 x W1-1/4
	91	430	M30 x M33	W1-1/8 x W1-1/4
	92	430	M33 x M36	W1-1/4 x W1-3/8
	93	430	M33 x M36	W1-1/4 x -
61 05 94	50x58	475 mm	M33 x M39	W1-1/4 x W1-1/2
	95	475	M33 x M39	W1-1/4 x -
	96	475	M36 x M39	W1-3/8 x W1-1/2
	97	475	M36 x M39	-

Single Open End Wrenches**15° Angle**

Llaves Planas Simple/Ángulo de 15° 片口スパナー 单头开放式扳手

Milled surface and smoothed edge, opening size is stamped on the head. Hardened and finished in industrial black, head has a polished finish. For check-jam-lock nuts, etc.



Unit Per Pcs.

CODE	Opening mm	Overall Length	For Bolt Size		Unit Per Pcs.
			Metric	Whitworth	
61 06 01	5.5	82 mm	M 3	-	
02	6	82	M 3.5	-	
03	7	92	M 4	-	
04	8	92	M 5	-	
05	9	105	-	-	
61 06 06	10	105 mm	M 6	W 3/16	
07	11	122	M 7	-	
08	12	122	-	W 1/4	
09	13	135	M 8	-	
10	14	140	-	W 5/16	
61 06 11	17	165 mm	M 10	W 3/8	
12	19	180	M 12	W 7/16	
13	21	200	-	W 1/2	
14	22	210	M 14	-	
15	23	210	-	W 9/16	
61 06 16	24	220 mm	M 16	-	
17	26	245	-	W 5/8	
18	27	245	M 18	-	
19	29	270	-	W 11/16	
20	30	270	M 20	-	
61 06 21	32	285 mm	M 22	W 3/4	
22	35	315	-	W 7/8	
23	36	315	M 24	-	
24	38	320	-	W 15/16	
25	41	360	M 27	W 1	
61 06 26	46	400 mm	M 30	W 1-1/8	
27	50	430	M 33	W 1-1/4	
28	54	470	-	W 1-3/8	
29	55	470	M 36	-	
30	58	510	-	W 1-1/2	
61 06 31	60	510 mm	M 39	-	
32	63	550	M 42	W 1-5/8	
33	65	550	-	-	
34	67	575	M 47	W 1-3/4	
35	70	575	-	-	
61 06 36	71	575 mm	M 48	W 1-7/8	
37	75	645	-	-	
38	77	645	M 52	W 2	
39	80	645	M 54	-	
40	85	715	M 56	W 2-1/4	
61 06 41	90	715 mm	-	-	
42	95	770	M 64	W 2-1/2	
43	100	770	-	-	
44	105	825	M 72	W 2-3/4	
45	110	825	M 76	W 3	
61 06 46	115	870 mm	-	-	
47	120	870	M 85	-	

12 Point Single End Wrenches 40° Bent

Llaves Estrella Simple/40° Curvada (Una Boca)
片目スパナ 十二角单头梅花扳手 (40° 弯角)

Made of selected alloy steel with the opening size stamped on the head. Hardened and chrome plate finished. Each head is bent 40° for easier leveraging.



CODE	Opening mm	Overall Length	For Bolt Size		Unit Per Pcs.
			Metric	Whitworth	
61 06 51	10	165 mm	M 6	-	
52	11	165	M 7	-	
53	12	165	-	W 1/4	
54	13	186	M 8	-	
55	14	186	-	W 5/16	
61 06 56	17	203 mm	M 10	W 3/8	
95	18	-	-	-	
57	19	215	M 12	W 7/16	
58	21	232	-	W 1/2	
59	22	232	M 14	-	
61 06 60	23	243 mm	-	W 9/16	
61	24	248	M 16	-	
62	26	265	-	W 5/8	
63	27	265	M 18	-	
64	29	282	-	W 11/16	
61 06 65	30	282 mm	M 20	-	
66	32	289	M 22	W 3/4	
67	35	311	-	W 7/8	
68	36	311	M 24	-	
69	38	345	-	W 15/16	
61 06 70	41	345 mm	M 27	W 1	
71	46	378	M 30	W 1-1/8	
72	50	412	M 33	W 1-1/4	
73	54	450	-	W 1-3/8	
74	55	450	M 36	-	
61 06 75	58	484 mm	-	W 1-1/2	
76	60	484	M 39	-	
77	63	522	M 42	W 1-5/8	
78	65	522	-	-	
79	67	552	M 45	W 1-3/4	
61 06 80	70	552 mm	-	-	
81	71	552	M 48	W 1-7/8	
82	75	616	-	-	
83	77	616	M 52	W 2	
84	80	663	M 54	-	
61 06 85	85	663 mm	M 56	W 2-1/4	
86	90	704	-	-	
87	95	704	M 64	W 2-1/2	
88	100	704	-	-	
89	105	740	M 72	W 2-3/4	
61 06 90	110	740 mm	M 76	W 3	
91	115	776	-	-	
92	120	776	M 85	-	
93	125	812	-	-	
94	130	812	M 90	-	

12 Point Double End Wrenches Both Heads 40° Bent

Llaves Estrella/40° Curvada

S型両口メガネスパンナ 十二角双头扳手

For use in close quarters. Thin head walls permit use where the clearance is limited. Made of selected alloy steel, heat treated and chrome plated. Opening sizes are stamped on each neck.



CODE	Opening mm	Overall Length	Unit Per Pc.	
			Metric	Whitworth
61 07 01	10 x 11	179 mm	M6 x -	-
02	10 x 12	179	M6 x -	- x W1/4
03	10 x 13	179	M6 x M8	-
04	11 x 13	179	- x M8	-
05	12 x 14	186	-	- x W5/16
61 07 06	13 x 17	210 mm	M8 x M10	- x W3/8
07	14 x 17	210	- x M10	- x W3/8
08	17 x 19	230	M10 x M12	W3/8 x W7/16
09	17 x 21	230	M10 x -	W3/8 x W1/2
10	19 x 21	262	M12 x -	W7/16 x W1/2
61 07 11	19 x 22	262 mm	M12 x M14	W7/16 x -
12	19 x 24	286	M12 x M16	W7/16 x -
13	21 x 23	286	-	W1/2 x W9/16
14	21 x 26	286	-	W1/2 x W5/8
15	22 x 24	286	M14 x M16	-
61 07 16	23 x 26	303 mm	-	W9/16 x W5/8
17	24 x 27	303	M16 x M18	-
18	24 x 30	324	M16 x M20	-
19	26 x 32	324	- x M22	W5/8 x W3/4
20	27 x 30	324	M18 x M20	-

12 Point Double Offset Wrenches

45° Double Offset

Llaves Estrella/40° Doble Curvada

45 度オフセット両口メガネスパナー 十二角双头扁颈板手

Adapted to work in close quarters. Drop forged from selected alloy steel. Heat treated and chrome plated with bright heads. Different opening at each head. Opening size stamped on each neck.



Unit Per Pc.

CODE	Opening mm	Overall Length	Unit Per Pc.	
			Metric	Whitworth
61 07 26	6 x 7	128	M3.5 x M4	-
27	8 x 9	174	M5 x -	-
28	8 x 10	174	M5 x M6	- x W3/16
29	10 x 11	189	M6 x M7	W3/16 x -
30	10 x 12	189	M6 x -	W3/16 x W1/4
61 07 31	10 x 13	198	M6 x -	W3/16 x
32	11 x 13	198	M7 x -	-
33	12 x 14	214	-	W1/4 x W5/16
24	12 x 13	214	-	W1/4 x -
34	13 x 17	243	- x M10	-
61 07 25	14 x 15	243	-	W5/16 x -
35	14 x 17	243	- x M10	W5/16 x W3/8
36	17 x 19	276	M10 x M12	W3/8 x W7/16
37	17 x 21	293	M10 x -	W3/8 x W1/2
38	19 x 21	314	M12 x -	W7/16 x W1/2
61 07 39	19 x 22	314	M12 x M14	- -
40	19 x 24	317	M12 x M16	- -
41	21 x 23	333	- -	W1/2 x W9/16
42	21 x 26	364	- -	W1/2 x W5/8
43	22 x 24	333	M14 x M16	-
61 07 44	23 x 26	366	- -	W9/16 x W5/8
45	24 x 27	366	M16 x M18	-
46	24 x 30	392	M16 x M20	-
47	26 x 29	392	- x -	- x W11/16
48	26 x 32	392	- x M22	W5/8 x W3/4
61 07 49	27 x 30	392	M18 x M20	-
50	29 x 32	428	- x M22	W11/16 x W3/4
51	30 x 32	428	M20 x M22	- x W3/4
52	32 x 35	428	M22 x -	W3/4 x W7/8
53	32 x 36	428	M22 x M24	W3/4 x -
61 07 54	35 x 41	454	- x M27	W7/8 x W1
55	36 x 41	454	M24 x M27	W7/8 x W1

Open & 12 Point Box Wrenches

15° Angle Open End-12 Point Opening Box End

Llaves Combinadas 片目口スパナー 开口和十二角套筒扳手

For use in close quarters. The open end is pointed with slim jaws. The other end is a thin walled 12 point box head. Both heads have the same size opening. Drop forged from tough, selected alloy steel, heat-treated and chrome plated.



Metric

CODE	Opening mm	Overall Length mm	CODE	Opening mm	Overall Length mm
61 07 61	6	99	61 07 95	25	333
62	7	105	77	26	330
63	8	105	78	27	360
64	9	110	96	28	390
65	10	118	97	29	390
61 07 66	11	134	61 07 79	30	387
67	12	140	80	32	420
68	13	150	81	35	465
69	14	170	82	36	490
92	15	198	83	41	520
61 07 70	16	190	61 07 84	43	550
71	17	215	85	45	550
93	18	245	86	46	580
72	19	235	87	50	580
94	20	268	88	54	635
61 07 73	21	265	61 07 89	55	635
74	22	280	90	58	710
75	23	310	91	60	710
76	24	310			

Inch

CODE	Opening mm	Overall Length mm	CODE	Opening mm	Overall Length mm
61 08 01	1/4	99	61 08 13	1	330
02	5/16	105	14	1- 1/16	360
03	3/8	118	15	1- 1/8	387
04	7/16	134	16	1- 1/4	420
05	1/2	150	17	1-11/16	550
61 08 06	9/16	170	61 08 18	1- 3/4	550
07	5/8	190	19	1- 7/8	580
08	11/16	215	20	2	580
09	3/4	235	21	2- 1/8	635
10	13/16	265	22	2- 1/4	635
61 08 11	7/8	280	61 08 23	2- 3/8	710
12	15/16	310			

Open & Ratchet Type 12 Point Box Wrenches

Llaves Combinadas Tipo Carraca

ラチェット式片口／片口スパナー

开口及棘输式 12 角梅花扳钳

One standard open end, but the other end has ratchet type 12 point wrenches which can fasten the bolt or nut using a ratchet mechanism at only 5° handles swinging space. Both heads have the same size opening.



CODE	Opening mm	Overall Length mm	CODE	Opening mm	Overall Length mm	Unit Per Pcs.
61 08 31	8	140	61 08 36	13	180	
32	9	150		37	14	190
33	10	160		38	15	200
34	11	165		39	17	220
35	12	170		40	19	246

Open & Ratchet Type 12 Point Box Wrench Sets

Juegos de Llaves Combinadas Tipo Carraca y Fija Abierta

ラチェット式片目／片口スパナーセット

开口及棘轮式 12 角梅花扳钳组

CODE	Size mm	Pcs/Set	Unit Per Set
61 08 45	10 - 14	4's (10, 12, 13, 14)	
46	8 - 17	6's (8, 10, 12, 13, 14, 17)	

6 Point T-Type Wrenches

Handles Fixed (Not Removable)

Llaves Hexagonales Tipo-T/Mangos Fijos

T 型六角ボックスレンチ 六角 T 型套筒板手

Broached and chrome plated with a smoothed surface. Made of selected alloy steel. The size of the opening for this 6 point wrench is determined by measuring the length between two parallel flat sides.



CODE	Opening mm	Overall Length	For Bolt Size		Unit Per Pcs.
			MM	WW	
61 08 51	6	110 mm	M 3	-	
52	7	110	M 3.5	-	
53	8	110	M 4	-	
54	9	110	M 5	-	
55	10	150	M 6	W 3/16	
61 08 56	11	150 mm	-	-	
57	12	165	-	W 1/4	
58	13	165	M 8	-	
59	14	165	-	W 5/16	
60	17	180	M 10	W 3/8	
61 08 61	19	200 mm	M 12	W 7/16	
62	21	210	-	W 1/2	
63	22	210	M 14	-	
64	23	220	-	W 9/16	
65	24	220	M 16	-	
61 08 66	26	240 mm	-	W 5/8	
67	27	240	M 18	-	
68	29	250	-	W 11/16	
69	30	250	M 20	-	
70	32	250	-	W 3/4	
61 08 71	35	280 mm	M 22	W 7/8	
72	36	280	M 24	-	
73	41	300	M 27	W 1	
74	46	320	M 30	W 1-1/8	
75	50	360	M 33	W 1-1/4	
61 08 76	54	380 mm	M 36	W 1-3/8	
77	55	380	-	-	

4 Point T-Type Wrenches

Handle Fixed (Not Removable)

Llaves Cuadrangulares Tipo-T/Mangos Fijos (Llave de Vaso en Cruz)

固定型角ボックスレンチ 四角 T 型套筒板手

Fixed handle and square opening.
Broached, hardened and chrome plated.



Unit Per Pcs.

CODE	Opening mm/in.	Overall Length
61 08 86	6 (1/4)	60 mm
87	8 (5/16)	67
88	9 (3/8)	85
89	10 (-)	85
90	11 (7/16)	100
61 08 91	12 (1/2)	110 mm
92	14 (9/16)	120
93	16 (5/8)	130
94	19 (3/4)	140

6 Point T-Type Wrenches

Handles Detachable

Llaves Tubulares con Volvedores

強力型六角ボックスレンチハンドル付 六角 T 型套筒板手

Broached, surface smoothed and chrome plated, 6 point extra heavy wrenches with detachable handles. The size of the openings are measured between two parallel sides of the socket.



Unit Per Pcs.

CODE	Opening mm	Overall Length	For Bolt Size		Unit Per Pcs.
			MM	WW	
61 09 01	10	145 mm	M 6	W 3/16	
02	11	145	-	-	
03	12	150	-	W 1/4	
04	13	155	M 8	-	
05	14	160	-	W 5/16	
61 09 06	17	180 mm	M 10	W 3/8	
07	19	190	M 12	W 7/16	
08	21	200	-	W 1/2	
09	22	205	M 14	-	
10	23	210	-	W 9/16	
61 09 11	24	220 mm	M 16	-	
12	26	230	-	W 5/8	
13	27	235	M 18	-	
14	30	245	M 20	-	
15	32	250	-	W 3/4	
61 09 16	35	280 mm	M 22	W 7/8	
17	36	285	M 24	-	
18	41	300	M 27	W 1	
19	46	320	M 30	W 1-1/8	
20	50	340	M 33	W 1-1/4	
61 09 21	55	365 mm	-	-	
22	60	375	-	-	
23	65	390	-	-	
24	70	405	-	-	
25	71	410	M 48	W 1-7/8	
61 09 26	75	415 mm	-	-	

Flex 6 Point T-Type Wrenches

Llave T vaso Articulado

T型フレックスレンチ

T型万向接头六角套筒扳手

Flexible head, fixed handle.



Unit Per Pcs.

CODE	Opening mm	Overall Length
61 09 31	10	320 mm
32	11	320
33	12	320
34	13	320
35	14	320
61 09 36	17	350 mm
37	19	350

6 Point L-Type Wrenches

Offset Wrenches

Llave de Pipa Simple Acodada

L型六角ボックスレンチ 六角L型套筒扳手

Broached, surface smoothed, hardened and chrome plated.



Unit Per Pcs.

CODE	Opening mm	Overall Length	For Bolt Size	
			MM	WW
61 09 41	6	110 mm	M 3	-
42	7	110	M 3.5	-
43	8	110	M 4	-
44	9	110	M 5	-
45	10	182	M 6	W 3/16
61 09 46	11	182 mm	-	-
47	12	193	-	W 1/4
48	13	194	M 8	-
49	14	209	-	W 5/16
50	17	226	M 10	W 3/8
61 09 51	19	228 mm	M 12	W 7/16
52	21	258	-	W 1/2
53	22	260	M 14	-
54	23	270	-	W 9/16
55	24	271	M 16	-
61 09 56	26	278 mm	-	W 5/8
57	27	278	M 18	-
58	30	296	M 20	-
59	32	296	-	W 3/4
60	35	343	M 22	W 7/8
61 09 61	36	344 mm	M 24	-
62	41	354	M 27	W 1
63	46	369	M 30	W 1-1/8
64	50	392	M 33	W 1-1/4
65	55	415	-	-

6 Point Y-Type Wrenches

3 Different Opening Selected Alloy Steel

Llave en Y con 3 Diferentes Vasos

Y型ボックススパナー 六角T型套筒扳手

Made from selected alloy steel and heat-treated. This one tool has 3 openings for 3 different nut sizes. The vacant two bars may be used as a handle when nutting. Adapted for close corner nutting work.



CODE	Opening Size mm	Length of Handle mm	Unit Per Pcs.
61 09 71	8 x 9 x 10	80 x 80 x 80	
72	10 x 12 x 14	80 x 85 x 85	
73	10 x 14 x 17	85 x 85 x 85	
74	12 x 14 x 17	95 x 95 x 95	
75	13 x 17 x 19	100 x 100 x 100	
61 09 76	14 x 17 x 19	100 x 100 x 100	
77	14 x 17 x 21	105 x 105 x 105	
78	17 x 19 x 21	110 x 110 x 110	
79	19 x 21 x 23	120 x 120 x 120	
80	21 x 23 x 26	130 x 130 x 130	

12 Point & Spud End Wrenches

60° Offset

Llave Estrella Acodada 1 Boca

組立用メガネスパナー 2点铲形扳手 60度偏移

Adapted for heavy industrial and automotive work where unusual leverage is necessary. The 12 point box head insures a firm hold on the nut and it is offset to give maximum clearance. The long sturdy tapered handle provides ample strength and leverage, and can be easily inserted into bolt holes to bring them into line. Drop forged from selected alloy steel, heat-treated.



CODE	Opening mm	Overall Length	For Bolt Size		Unit Per Pcs.
			MM	WW	
61 10 01	13	220 mm	M8	-	
02	14	230	-	W5/16	
03	17	300	M10	W3/8	
04	19	320	M12	W7/16	
05	21	335	-	W1/2	
61 10 06	22	335 mm	M14	-	
07	23	335	-	W9/16	
08	24	355	M16	-	
09	26	370	-	W5/8	
10	27	370	M18	-	
61 10 22	29	-	-	-	
11	30	390 mm	M20	-	
12	32	405 mm	-	W3/4	
23	34	-	-	-	
13	35	440 mm	M22	W7/8	
61 10 14	36	440 mm	M24	-	
24	38	-	-	-	
15	41	475 mm	M27	W1	
43	42	-	-	-	
44	43	-	-	-	
61 10 45	44	-	-	-	
16	46	510 mm	M30	W1-1/8	
46	48	-	-	-	
17	50	545 mm	M33	W1-1/4	
18	54	560 mm	M36	W1-3/8	
61 10 19	55	560 mm	-	-	
20	58	575 mm	M39	W1-1/2	
21	60	575 mm	-	-	
47	65	-	-	-	

Wrenches, Double or Single Head Ratchet 12 Point

Llaves, Carraca Sencilla o Doble

シノ付ラチエットスパナー 十二角单头棘轮套筒扳手

Made from selected alloy steel. All the critical parts are heat-treated.



Single Head

CODE	Opening mm	Overall Length	Unit Per Pcs.	
			For Bolt Size	
			Metric	Whitworth
61 10 26	10	195	M 6	W 3/16
	27	195	-	W 1/4
	28	210	-	-
	29	210	-	W 5/16
	30	250	M10	-
61 10 31	19	270	M12	W 7/16
	32	290	-	W 1/2
	33	290	M14	-
	34	310	M16	-
	35	330	-	W 5/8
61 10 36	27	330	M18	-
	37	350	M20	-
	38	370	-	W 3/4
	39	410	M22	W 7/8
	40	410	M24	-
61 10 41	41	450	M27	W 1
	42	460	M30	W 1-1/8

Double Head

CODE	Opening mm	Overall Length	Unit Per Pcs.	
			For Bolt Size	
			Metric	Whitworth
61 10 51	10 x 12	195	M6 x -	W3/16 x W1/4
	52	210	M6 x -	W3/16 x -
	53	210	M6 x -	W3/16 x W5/16
	54	210	-	W1/4 x W5/16
	55	250	- x M10	-
61 10 56	14 x 17	250	- x M10	W5/16 x -
	57	290	M10 x M12	- x W7/16
	58	290	M10 x -	- x W1/2
	59	290	M12 x M14	W7/16 x -
	60	330	M12 x M14	W7/16 x -
61 10 61	21 x 26	330	-	- x W5/8
	62	330	- x M18	-
	63	330	M14 x M16	-
	64	330	M14 x M18	-
	65	330	M16 x M18	-
61 10 66	24 x 30	370	M16 x M20	-
	67	370	-	W5/8 x W3/4
	68	370	M18 x M20	-
	69	370	M20 x -	- x W3/4

Striking Wrenches 12 Point Ring (Slogging Wrenches 12 Point Ring)

Llaves Estrella de Golpe

打擊メガネスバナー 敲击式单头十二角梅花扳手

Adapted for heavy industrial work at close quarters where large nuts must be set-up tight or frozen nuts must be loosened. Drop forged from selected alloy steel and properly heat-treated to withstand shocks.



CODE	Opening mm	Overall Length	For Bolt Size		Unit Per Pcs.
			MM	WW	
61 11 01	30	196 mm	M20	-	0.53
	02	196	M22	W3/4	0.53
	03	210	-	W7/8	0.67
	04	210	M24	-	0.67
	05	223	M27	W1	0.92
61 11 06	46	250 mm	M30	W1-1/8	1.13
	07	250	M33	W1-1/4	1.13
	08	273	-	W1-3/8	1.75
	09	273	M36	-	1.75
	10	282	-	W1-1/2	2.10
61 11 11	60	282 mm	M39	-	2.10
	12	302	M42	W1-5/8	2.50
	13	302	-	-	2.50
	14	327	M45	W1-3/4	3.20
	15	327	-	-	3.20
61 11 16	71	327 mm	M48	W1-7/8	3.20
	17	353	-	-	4.40
	18	353	M52	W2	4.40
	19	353	M54	-	4.40
	20	397	M56	W2-1/4	7.0
61 11 21	90	397 mm	-	-	7.0
	22	418	M64	W2-1/2	8.50
	23	418	-	-	8.50
	24	441	M72	W2-3/4	11.20
	25	441	M76	W3	11.20
61 11 26	115	441 mm	-	-	11.20
	27	480	M85	-	13.30
	28	490	-	-	15.80
	29	492	M90	-	15.80
	30	512	M95	-	16.60
61 11 31	145	553	M100	-	18.0

Striking Wrenches 12 Point Ring with Spring Washer

Llaves de Golpe 12 Puntas Anillo con arandela elástica

スプリングワッシャー付き打撃式ガネスバナー

带弹簧垫圈的敲击式巨型隔板

A drop forged steel safety striking wrench adapted two spring washers inside the 12 point ring, which enable the wrench to remain in place without having to hold it for free hand hammer striking.



CODE	Opening mm	Overall Length (mm)	For Bolt Size		Unit Per Pcs.
			MM	WW	
61 11 76	24	160	M16	-	
	27	180	M18	-	
	30	190	M20	-	
	32	190	M22	W3/4	
	36	205	M24	-	
61 11 81	41	225	M27	W1	
	46	240	M30	W1-1/8	
	50	255	M33	W1-1/4	
	55	272	M36	-	
	60	272	M39	-	
61 11 86	65	300	-	-	
	70	330	-	-	
	75	330	-	-	

Name of Mfr.: Ampco Safety Tools

Striking Wrenches Single Open End

(Slogging Wrenches Single Open End)

Llaves Fija de Golpe

打擊片口スパナー 敲击式单头开口板手

This open end slogging wrench is designed for the same purpose as the 12-point slogging wrench. Drop forged from selected alloy steel and heat-treated.



Unit Per Pc.

CODE	Opening mm	Overall Length	For Bolt Size		Weight kg
			MM	WW	
61 11 41	30	222	M 20	-	0.83
42	32	222	M 22	W3/4	0.83
43	35	222	-	W7/8	0.83
44	36	222	M 24	-	0.83
45	41	238	M 27	W1	1.15
61 11 46	46	266	M 30	W1-1/8	1.45
47	50	266	M 33	W1-1/4	1.45
48	54	303	M 36	W1-3/8	2.20
49	55	303	M 36	-	2.20
50	58	303	M 39	W1-1/2	3.50
61 11 51	60	324	M 39	-	3.50
52	63	324	M 42	W1-5/8	4.10
53	65	324	M 42	-	4.10
54	67	350	M 45	W1-3/4	5.40
55	70	350	M 45	-	5.40
61 11 56	71	350	M 48	W1-7/8	5.40
57	75	381	M 48	-	7.00
58	77	381	M 52	W2	7.00
59	80	381	M 54	-	7.00
60	85	499	M 56	W2-1/4	10.00
61 11 61	90	429	M 60	-	10.00
62	95	429	M 64	W2-1/2	10.00
63	100	451	M 68	-	13.70
64	105	469	M 72	W2-3/4	14.50
65	110	487	M 76	W3	16.00
61 11 66	115	507	M 80	-	17.90
67	120	521	M 85	-	20.20
68	125	532	-	-	23.60
69	130	537	M 90	-	23.90
70	135	560	M 95	-	24.50
61 11 71	145	606	M 100	-	29.00

Adjustable Hook Spanner Wrenches

Llave Gancho Ajustable アジャストフックスパナー 钩形活络板手

This spanner has the advantage of strength and adjustability. One wrench can be used for bolts of a variety of sizes by simply adjusting the jaw. The handle is strengthened so that the wrench can be used safely with a hammer.



Unit Per Pc.

CODE	Circle Diam. mm	Overall Length
61 12 01	35 to 105	270 mm
02	95 to 165	370 mm

Hook Spanner Wrenches

Llaves Gancho

引掛けスパナー

钩形板手

A tool to tighten and loosen round nuts with notches. Sizes fit to the outer diameter of round nuts. Made from selected alloy steel, hooks are hardened and tempered.



Unit Per Pc.

CODE	Circle Diam mm	Overall Length
61 12 06	12 to 14	108 mm
	16 to 20	108
	25 to 28	136
	30 to 32	136
	34 to 38	160
61 12 11	40 to 42	173 mm
	45 to 50	196
	52 to 55	208
	58 to 62	232
	68 to 75	247
61 12 16	80 to 90	271 mm
	92 to 100	286
	110 to 115	333
	120 to 130	333
	135 to 145	385
61 12 21	150 to 165	385 mm
	175 to 195	466
	200 to 220	466
	230 to 250	567
	260 to 280	567

Valve Wheel Wrenches

Claw Type

Llaves de Válvula/Tipo Uña

バルブホイールレンチ爪型

阀盘板手

For opening and closing cargo valves. Claw type wrenches made of manganese bronze. Specify the overall length when ordering.



Unit Per Pc.

CODE	Overall Length mm.	For Valve size mm.
61 12 31	460	Up to 130
32	560	100 ~ 300
33	660	200 ~ 450
34	915	360 and over

Allen Hexagon Wrenches

Llaves Allen (Hexagonal)

六角棒スパナー

L型内六角板手

Made from selected steel. A tool wrench for tightening and loosening hexagon head cap screws.



		Unit Per Pcs.	
CODE	Across Flats	CODE	Across Flats
mm			
61 12 41	1.4	61 12 52	9.0
42	1.5	85	9.5
43	2.0	53	10
44	2.4	54	12
45	2.5	55	14
61 12 46	3.0	61 12 56	16
77	3.5	57	17
47	4.0	58	19
78	4.5	59	21
48	5.0	60	22
61 12 79	5.5	61 12 61	23
49	6.0	62	24
80	6.5	63	26
50	7.0	64	27
83	7.5	65	32
61 12 51	8.0	61 12 66	36
84	8.5		
Inch			
61 12 67	1/8	61 12 72	5/16
68	5/32	73	3/8
69	3/16	74	7/16
70	7/32	75	1/2
71	1/4	76	9/16

Hexagon Allen Wrench Sets

Juegos de Llaves Allen (Hexagonal)

六角棒スパナセット 六角板手

How to order: CODE

Wrench set, allen hexagon,

SIZE (MINIMUM to MAXIMUM), 8's/set



Unit Per Set

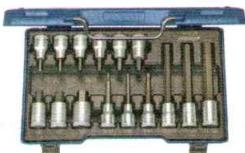
CODE	Contents	Pcs/Set
61 12 81	mm ... Across Flats ... 2.5, 3, 4, 5, 6, 8, 10, 12	8's
82	in ... Across Flats ... 1/8, 3/16, 7/32, 1/4, 5/16, 3/8, 7/16, 1/2	8's

Hexagon Bit Sets

Juegos de Puntas Hexagonales

六角ビットセット 全套的六角板手

A handy tool kit to tighten and loosen hexagon head cap screws.



How to order: CODE

Hexagon bit set, 6 bits, SIZE, NUMBER of TOOLS

Unit Per Set

CODE	Hexagon Bit		Number of Tools	Case
	Size	Quantity		
61 12 86	2 - 6	6's	3's	Plastic
87	3 - 10	6's	6's	"
88	6 - 17	6's	6's	"
89	14 - 27	6's	3's	Steel

Contents

61 12 86

6 Hexagon bits 2, 2.5, 3, 4, 5, 6 mm

1 x Extension bar (6") 1 x Nut handle
1 x Ratchet handle

61 12 87

6 Hexagon bits 3, 4, 5, 6, 8, 10 mm

1 x Extension bar (6") 1 x Ratchet handle
1 x T type handle

61 12 88

6 Hexagon bits 6, 8, 10, 12, 14, 17 mm

2 x Extension bar (5" / 10") 1 x Ratchet handle
1 x T type handle

61 12 89

6 Hexagon bits 14, 17, 19, 22, 24, 27 mm

2 x Extension bar (100mm/200mm) 1 x Ratchet handle
1 x T type handle

Hexagon Sockets

Llaves hexagonales 六角ソケット 六角套筒

Standard hexagonal sockets for tighten or loosen the hexagon head cap screws. Socket part is treated with nickel-chrome plated surface.



Unit Per Pcs.

CODE	Square Drive mm	Size mm	Overall Length (mm)
61 12 91	12.7	4	60
92		5	60
93		6	60
94		8	60
95		10	60
61 12 96		12	60
97		14	60
98		17	70

Pipe Wrenches

(Stillson Wrenches)

Llaves Stillson パイプレンチ 重型直形管扳鉗

Straight, Heavy Duty

Powerful all alloy housing and handle. Housing guaranteed not to break or warp. Chrome molybdenum steel jaws will not slip or lock on pipes. The adjusting nut spins smoothly on frames of all sizes.



Unit Per Pcs.

CODE	Length mm	For Pipe Size in	CODE	Length mm	For Pipe Size in
61 13 01	150	1/4 - 5/8	61 13 06	450	1/2 - 2
02	200	1/4 - 3/4	07	600	1/2 - 2-1/2
03	250	1/4 - 1	08	900	1/2 - 4
04	300	3/8 - 1-1/4	09	1,200	1 - 5
05	350	1/2 - 1-1/2			

45°

45° angle jaws with offset teeth in opposite direction. Teeth are additionally induction hardened. Made of chrome vanadium steel, oil-hardened and tempered.



CODE	Nom. Capacity	Working Capacity mm	Length mm	Weight grm	Unit Per Pcs.
61 13 11	1"	0 - 42	320	810	
12	1-1/2"	0 - 60	430	1,490	
13	2"	0 - 70	570	2,820	

Ref. : Knipex Model No. 83 20 010 / 015 / 020

S-Type 45°

S type and 45° angled jaws with offset teeth in opposite direction. Teeth are additionally induction hardened. Made of chrome vanadium steel, oil-hardened and tempered.



CODE	Nom. Capacity	Working Capacity mm	Length mm	Weight grm	Unit Per Pcs.
61 13 15	1/2"	0 - 35	245	500	
16	1"	0 - 42	320	870	
17	1-1/2"	0 - 60	420	1,570	
18	2"	10 - 70	540	2,540	
19	3"	10 - 120	680	4,295	

Ref. : Knipex Model No. 83 30 005 / 010 / 015 / 020 / 030

Motor Wrenches

Llaves de Motor モーターレンチ 马达扳手

Well adapted for industrial use. Natural, polished finish, rustproof with tight grip jaws.



CODE	61 13 21	61 13 22	Unit Per Pcs.
Length	230 mm	280 mm	

Speed Wrenches, Adjustable

Llaves Auto-ajustable スピードレンチ 可调整式快速扳手

A tool, that serves as an adjustable wrench and a pipe wrench. The jaws are milled extra deep for speedy operations.



CODE	Length mm	Maximum Open mm	Unit Per Pcs.
61 13 26	150 mm	13 mm	
27	200 mm	24 mm	
28	250 mm	30 mm	
29	300 mm	35 mm	

Adjustable Wrenches
Heavy Duty (Shifting Spanners)

Llaves Ajustables/Servicio Pesado

モンキースパナ

活动扳手重载荷用（活动扳手）

Drop forged from special alloy steel with thin tapered jaws. A square shoulder on the sliding jaw shank prevents it from loosening during use. The head has a polished finish and the handle is chromed.



CODE	Length	Maximum Jaw Opening	CODE	Length	Maximum Jaw Opening	Unit Per Pcs.
61 13 31	100 mm	13 mm	61 13 35	300 mm	34 mm	
32	150	20	36	375	44	
33	200	24	37	450	53	
34	250	29	38	600	62	

Single Jaw Chain Pipe Wrenches

Llaves de Cadena para Tubo

片顎式チェーンツング 单爪链条式管板钳

Drop forged from vanadium alloy steel with a chain made of nickel chrome molybdenum steel. Will fit to objects of any shape: round, square, hexagon, etc. Can be used in close quarters where it would be difficult to use a pipe or wrench. This wrench has ratchet action which enables it to tighten and free up without being removed from the pipe.



CODE	Nominal Pipe Size	Capacity Pipe mm	Overall Length mm	Unit Per Pcs.
Chain Pipe Wrench				
61 13 71	8A - 40A	12 - 50	230	
72	8A - 80A	14 - 89	305	
73	10A - 100A	17 - 120	425	
74	20A - 150A	25 - 170	510	
75	25A - 200A	34 - 230	700	
61 13 76	25A - 250A	35 - 270	745	
77	25A - 300A	35 - 320	745	
78	50A - 500A	60 - 510	745	

Extra Chain For Pipe Wrench

61 13 81	8A - 40A	12 - 50	243
82	8A - 80A	14 - 89	438
83	10A - 100A	17 - 120	514
84	20A - 150A	25 - 170	685
85	25A - 200A	34 - 230	860
61 13 86	25A - 250A	35 - 270	984
87	25A - 300A	35 - 320	1,111
88	50A - 500A	60 - 510	1,867

Internal Pipe Wrenches

"Pipe Buster"

Llave para Limpiar el interior de Tubos "Pipe Buser"
差し込み式バイブルンチ 插入式扳手

Reduces pipe assembly and disassembly time by 80%. A self-locking, reversible, internal pipe wrench can be used with ratchets, extensions and impact/air wrenches. Suitable for installing or removing pipes located in tight spots, extremely hot and rusted tight. It won't create busted knuckles, broken pipes or ruined walls, and won't scar chromed pipe, can't damage threads and can remove the most stubborn nipples.



Unit Per Pcs.

CODE	For Pipe Size	CODE	For Pipe Size
For Schedule 40		For Schedule 80	
61 13 91	1/2"	61 13 95	3/4"
92	3/4"	96	1" & 1-1/4"
93	1" & 1-1/4"	97	1-1/2" & 2"
94	1-1/2" & 2"		

3. Torque Tools/Torque Wrenches

Torque Tools/Torque Wrenches

Herramientas Dinamométricas/Llaves Dinamométricas

トルクツール 转矩工具 / 转矩扳手

A device which shows the force of torque with which a screw or nut is being tightened. It allows one to set screws exactly at a predetermined torque without any effort.

A wide range of models from different manufacturers are available. The most common models are listed below.

Direct Reading Beam Type

For quality control inspection and production. Pivotted handle concentrates load position. For use with a socket wrench.



How to order: CODE

Torque wrench, direct reading beam type, CAPACITY (MINIMUM to MAXIMUM) kgf-cm

Unit Per Pcs.

CODE	Model	Capacity min.-max. kgf-cm	Scale kgf-cm	Sq. Drive	Overall L mm	Wgt. kg
61 14 01	F23N	3 - 23	0.5	9.5	295	0.40
02	F46N	5 - 46	1	9.5	355	0.60
03	F92N	10 - 92	2	12.7	400	0.95
04	F130N	20 - 130	2	12.7	445	1.20
05	F190N	30 - 190	5	12.7	490	1.50
61 14 06	F280N	50 - 280	5	19.0	565	2.20
07	F420N	70 - 420	10	19.0	820	3.50
08	F560N	100 - 560	10	19.0	945	4.00
09	F700N	100 - 700	10	19.0	1,175	6.00
10	F850N	100 - 850	20	25.4	1,410	7.80
61 14 11	F1000N	100 - 1,000	20	25.4	1,640	8.80

Dial Type

Ideal for quality control and inspection, and rugged enough for production work. With stay-set indicator model available. For use with a socket wrench.



How to order: CODE

Torque wrench, dial type, CAPACITY (MINIMUM to MAXIMUM) kgf-cm

Unit Per Pcs.

CODE	Model	Capacity min.-max. kgfcm	Scale kgf-cm	Sq. Drive	Overall L mm	Wgt. kg
61 14 16	DB6N	0 - 6	0.1	6.3	230	0.40
17	DB12N	1 - 12	0.2	6.3	230	0.40
18	DB25N	3 - 25	0.5	9.5	245	0.40
19	DB50N	5 - 50	0.5	9.5	320	0.60
20	DB100N	10 - 100	1	12.7	400	0.70
61 14 21	DB200N	20 - 200	2	12.7	500	1.00
22	DB280N	30 - 280	5	19.0	690	1.65
23	DB420N	40 - 420	5	19.0	890	2.50

Preset Type

Suitable for high efficiency mass production. By presetting the wrench you can tighten bolts to a desired torque every time. To operate, you first pull the handle until it clicks to the set position. Then you tighten the bolt until the resistance of the wrench stops. When you release the wrench, it is automatically set for the next operation. No need to refer to a dial or meter during use allowing you to increase work speed substantially. For use with a socket wrench.



How to order: CODE

Torque wrench, preset type, CAPACITY (MINIMUM to MAXIMUM) kgf-cm

Unit Per Pcs.

CODE	Model	Capacity min.-max. kgf-cm	Scale kgf-cm	Sq. Drive	Overall L mm	Wgt. kg
61 14 26	QL6N	2 - 6	0.1	6.3	175	0.12
27	QL12N	4 - 12	0.2	6.3	185	0.18
28	QL25N	5 - 25	0.25	9.5	220	0.23
29	QL50N	10 - 50	0.5	9.5	250	0.43
30	QL100N	20 - 100	1	12.7	330	0.67
61 14 31	QL200N	40 - 200	2	12.7	475	1.40
32	QL280N	40 - 280	2	19.0	675	1.80
33	QL420N	60 - 420	2	19.0	975	3.20

Direct Reading Beam Type with Ratchet

High efficient torque wrench with ratchet for quality control and production. Best for use in narrow spaces.



How to order: CODE

Torque wrench, direct reading beam with ratchet, CAPACITY (MINIMUM to MAXIMUM) kgf-cm

Unit Per Pcs.

CODE	Model	Capacity min.-max. kgf-cm	Scale kgf-cm	Sq. Drive	Overall L mm	Wgt. kg
61 14 36	QF60N	6 - 60	1	9.5	455	0.80
37	QF120N	10 - 100	2	12.7	520	1.20
38	QF220N	30 - 220	5	12.7	580	1.80
39	QF320N	40 - 320	5	19.0	655	2.60
40	QF420N	70 - 420	5	19.0	830	3.40
61 14 41	QF560N	100 - 560	10	19.0	950	4.30
42	QF700N	100 - 700	10	19.0	1,165	6.50
43	QF850N	100 - 850	20	25.4	1,400	8.50

Preset Type Torque Driver

For high efficient mass production. Incorporated with a device utilizing a toggle joint. When the set torque is reached, the movement of the toggle joint can be felt by hand. No need to read the scale.



How to order: CODE

Torque driver, preset type, CAPACITY (MINIMUM to MAXIMUM) kgf-cm

Unit Per Pcs.					
CODE	Model	Capacity min.-max. kgf-cm	Scale kgf-cm	Overall L mm	Wgt. grm
61 14 46	LTD15CN	2 - 15	0.1	100	50
47	LTD30CN	4 - 30	0.2	100	50
48	LTD60CN	10 - 60	0.5	105	80
49	LTD120CN	20 - 120	1.0	120	125
50	LTD260CN	60 - 260	1.2	140	215
61 14 51	LTD500CN	100 - 500	2.5	150	320
52	LTD1000CN	200 - 1,000	5.0	180	580
53	LTD2000CN	300 - 2,000	5.0	255	1,150

Preset Type Torque Watch Driver

Torque drivers for the highly efficient tightening of small screws such as in watches and cameras. When the set torque is reached, the movement of the toggle joint is felt on the finger. There is no need to read the dial.



How to order: CODE

Torque watch driver, preset type, CAPACITY (MINIMUM to MAXIMUM) kgf-cm

Unit Per Pcs.					
CODE	Model	Capacity min.-max. kgf-cm	Scale kgf-cm	Overall L mm	Wgt. grm
61 14 56	BMLD15CN	2 - 15	0.1	114	50
57	BMLD30CN	4 - 30	0.2	114	50

Bolt Tension Machine

Used for measuring the axial force of bolts by oil pressure. Use this machine to determine whether the bolt is good or not as well as whether the tightening torque of the bolt is adequate or not by tightening the bolt with the torque wrench. Accuracy: $\pm 3\%$.



How to order: CODE

Bolt tension measurer, CAPACITY (MINIMUM to MAXIMUM) ton

Unit Per Pcs.					
CODE	Model	Capacity min.-max. Ton	Scale Ton	Dimension W x T x H	Wgt. kg
61 14 61	B-BTM13K	1.2 - 13	0.2	106 x 78 x 217	7.7
62	B-BTM40K	4 - 40	0.5	134 x 82 x 241	9.8
63	B-BTM130K	12 - 130	2	188 x 106 x 287	17.5
64	B-BTM400K	40 - 400	5	280 x 126 x 369	31.0
65	BTM400K	40 - 400	5	260 x 64 x 280	12.6

4. Pliers

Combination Pliers, Slip Joint

Alicates Ajustable コンビネーションプライヤー 鲤鱼钳

Designed to have the maximum capacity for gripping round objects. The jaws are set close to the hinge for better leverage and the handle is curved for better gripping.



Unit Per Pr.

CODE	61 16 01	61 16 02	61 16 03
Length	150 mm	200 mm	250 mm

Thin Bent Nose Pliers

Alicate de Punta Curva ベントノーズプライヤー 弯嘴钳

The head of these pliers is bent at a 30° angle and the plier jaws are thinner for easier use in confined areas.



Unit Per Pr.

CODE	61 16 11	61 16 12
Length	175 mm	200 mm

Long Nose Straight Pliers

Alicate de Boca Plana Larga ロングノーズプライヤー 尖嘴钳

Designed with a thin and pointed nose for precision work in close quarters.



Unit Per Pr.

CODE	61 16 16	61 16 17
Length	160 mm	200 mm

Plier Wrenches

Plastic Coated Handle

Tenazas Llave, Mango de Plástico Reverstido

プライヤーレンチ 胶柄扳手钳



Plier and wrench in a single tool. Excellent for gripping, holding, pressing and bending workpieces. Fast adjustment directly on the workpiece by pushing a button, and no unintentional shift of the gripping jaws and no slipping of the joint. The action of the jaws allows screwed connections to be tightened and released quickly using the ratchet principle.

CODE	Working Capacities		Length mm	Weight grm
	Inch	mm		
61 16 21	1-3/8"	to 35	180	260
22	1-3/4"	to 46	250	540
23	2-3/8"	to 60	300	725

Ref.: Knipex Model No. 86 03 180 / 250 / 300

Water Pump Pliers w/Positions

Five Adjustment (Channel Locks)

Tenacilla de Canal ウォーターポンププライヤー 水泵钳子

Designed with narrow angled jaws for work in confined spaces.



Unit Per Pr.

CODE	61 16 26	61 16 27
Length	250 mm	300 mm

Heavy Water Pump Pliers

Five Adjustment

Tenacilla Canal 'P.V.C.'

ヘビーウォーターポンププライヤー 重型水泵鉗

Provides strong gripping power in all set positions. Jaw opens to a maximum size of 45 mm.



Unit Per Pr.

CODE	Length	CODE	Length
61 16 29	165 mm	61 16 31	300 mm
33	200 mm	32	400 mm
30	250 mm		

Gripping Pliers for Plastic Pipe

Plastic Coated Handle

Alicates para Manejar Tobos de Plástico, Mango de Plástico Revestido

プラスチックパイプ用グリッピングプライヤー

塑膠管用膠柄夾鉗

Ideal for tightening and releasing plastic pipe joints, round union nuts, etc. from 25 up to 80 mm diam. 25-position adjustable slip joint and made of chrome vanadium electric steel, oil-hardened and tempered. Model No.81 13 250 is furnished with plastic jaws for careful installation up to 75 mm diam.



With Plastic Jaws

Unit Per Pr.

CODE	Working Capacity Diam. mm	Length mm	Weight grm	Remark
61 16 35	25 - 80	250	355	-
36	10 - 75	250	355	w/jaws

Ref. : Knipex Model No. 81 03 250 / 81 13 250

Vise Grip Combination Pliers

(Mole Grip Wrenches)

Mordaza Grip Bacos curvas

バイスプライヤー 虎钳式手钳

A universal tool which serves as an adjustable end wrench, locking wrench, pipe wrench, vise, clamp, plier and toggle press. Has a double lever action that locks jaws to the work. Locks with a grip that holds until the lever is snapped open. Works in close quarters at any angle.



Unit Per Pr.

CODE	Length	CODE	Length
61 16 41	125 mm	61 16 43	200 mm
42	175 mm	44	250 mm

Small Water Pump Pliers with Groove Joint, Plastic Coated Handle

Tenacillas para Bombas de Agua con Groove Joint, Mango de Plástico Revestido

小型ウォーターポンププライヤー
凹槽結合式小型膠柄幫浦鉗

Non-slip joint and easy, convenient engagement in 4 different positions. Made of forged from chrome vanadium electric steel, oil-hardened and tempered.

Unit Per Pr.

CODE	Capacities		Length mm	Weight grm
	For Pipes Diam. mm	For Nuts Across Flats mm		
61 16 46	17	14	125	100

Ref. : Knipex Model No. 90 01 125

Side Cutting Pliers

Alicate Universal ペンチ 側剪鉗 (无绝缘手柄)

A belt or pocket tool developed for difficult working situations. (For example : overhead electric work in masts, etc.) Forged high grade tool steel with powerful leverage and keen cutting blades. Insulated handles tested to withstand 1,000 volts.



Non-Insulated Handle



Insulated Handle

Unit Per Pr.

Non-Insulated Handle		Insulated Handle	
CODE	Length	CODE	Length
61 16 50	125 mm	61 16 56	125 mm
51	150	57	150
52	175	58	175
53	200	59	200
54	250	60	250

Flat Nose Pliers

Insulated Plastic Body

Alicates planos, agarre con aislamiento plástico

プラスチック製絶縁プライヤー

塑料绝缘扁嘴钳



Made of plastic material, fibreglass-reinforced, handles with soft plastic zone. Fully insulating to reduce risk of short circuit up to AC 1,000V and DC 1,500V. Insulation standard: IEC 60900 DIN EN 60900. Length : 180 mm.

61 16 61	Pliers, flat nose, insulated, plastic body, length 180 mm	Pr.
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Ref. : Knipex Model #98 62 01

Side Cutting Pliers with Spring

Plastic Covered Handle

Alicate Universal con Reorte/Magos en P.V.C.

スプリング付ペンチ 弹簧式侧剪鉗

A side cutting plier with a built-in spring to open the jaws easily when pressure on the handle is relaxed. Useful tool for electricians.



Unit Per Pr.

CODE	61 16 66	61 16 67	61 16 68
Length	150 mm	175 mm	200 mm

Side Cutting & Reamer Pliers

Plastic Covered Handle

Alicate Universal "Americano"/Magos en P.V.C.
面取りベンチ 側剪鉗 (塑料绝缘手柄)



This tool combines the qualities of a side cutting plier with a reaming blade for lead, conduit or vinyl tubes.

Unit Per Pr.

CODE	61 16 71	61 16 72	61 16 73
Length	150 mm	175 mm	200 mm

Mini Combination Pliers

Plastic Covered Handle

Alicate Tamaño Pequeño/Mangos en P.V.C.
ミニベンチ 迷你大力鉗



Jaw opening springs, full polished head. Induction hardened cutting edges, slip resistant PVC handle. Material: Hardened and tempered CrV steel.

61 16 75	Pliers, combination, mini, plastic covered handle, 115 mm	Pr.
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Round Nose Pliers

Plastic Covered Handle

Alicate de Boca Redonda/Magos en P.V.C.
丸ベンチ 圆嘴鉗 (绝缘手柄)



Designed for quick wiring jobs and detailed wiring where a small round tipped wire is essential. Made from a special alloy steel.

Unit Per Pr.

CODE	61 16 81	61 16 82
Length	125 mm	150 mm

Mini Long Round Nose Pliers

Plastic Covered Handle

Alicate de Boca Redonda Medio Largo/Mangos en P.V.C.
ミニ丸ベンチ 迷你长圆鼻鉗



Jaw opening springs, full polished head. Induction hardened cutting edges, slip resistant PVC handle, flat-square jaws for gripping and forming. Material: Hardened and tempered CrV steel.

61 16 84	Pliers, round nose, mini long, plastic covered handle, 115 mm	Pr.
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Long Needle Nose Pliers

Plastic Covered Handle

Alicate de Boca Redonda Largo/Mangos en P.V.C.
先長細口ベンチ 细口尖嘴鉗 (塑料绝缘手柄)



With a long, half-round, tempered nose for very fine work in assembling electric apparatus, etc.

Unit Per Pr.

CODE	61 16 86	61 16 87
Length	125 mm	150 mm

Insulated Round Nose Pliers

Resistance up to 1,000 Volts

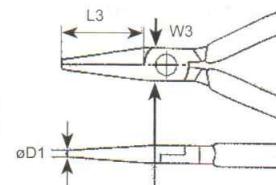
Conformed to IEC 60900/DIN EN 60900

Tenazas de Punta Redonda Aisladas Resistentes hasta Mil Voltios

絶縁型丸ベンチ (耐電 1,000V)

高絕緣圓口鉗 耐電壓 1000V

For forming wire loops by precision ground, short, round jaws. Made of special tool steel, oil-hardened and tempered.



Unit Per Pr.

CODE	Dimensions			Length mm	Weight grm
	L3	W3	D1		
61 16 89	30.0	18.0	3.0	160	175

Ref.: Knipex Model No. 22 06 160

Snipe Nose Pliers

Insulated Plastic Body

Alicates en punta, agarre con aislamiento plástico
プラスチック製絶縁ブライヤー 塑料绝缘尖嘴鉗



Made of plastic material, fibreglass-reinforced, handles with soft plastic zone. Fully insulating to reduce risk of short circuit up to AC 1,000V and DC 1,500V. Insulation standard: IEC 60900 DIN EN 60900. Length: 220 mm.

61 16 90	Pliers, snipe nose, insulated, plastic body, length 220 mm	Pr.
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Ref.: Knipex Model #98 62 02

Bent Nose Pliers

Plastic Covered Handle

Alicates de Punta Curvada 先曲りベンチ 弯嘴鉗



Curved needle spring tempered nose pliers for use in narrow places. Can be used without having to turn or twist your hand in close quarters.

61 16 91	Pliers, bent nose plastic covered handle 150 mm	Pr.
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Long Nose Side Cutting Pliers

Plastic Covered Handle

Alicates de corte lateral de nariz larga, manija cubierta de plástico
ラジオベンチ 长鼻侧切鉗, 塑料覆盖手柄



Long thin tip for work in narrow confined areas. An ideal tool for quick repair and electronic works.

CODE	Length	CODE	Length
61 16 94 95	125 mm 150 mm	61 16 96	200 mm

Unit Per Pr.

Insulated Long Nose Pliers

Resistance up to 1,000 Volts

Alicates de punta larga con aislamiento, hasta 1.000 voltios de resistencia
絶縁先長ペンチ（耐電圧 1,000V）
绝缘耐压尖嘴钳（可耐电压 1000V）

The essential pliers for electrical installation work in narrow confined areas. Made of VDE insulated handle which can withstand 1,000 volts.



61 16 97	Pliers, long nose, insulated, L: 150 mm	Pr.
61 16 98	Pliers, long nose, insulated, L: 200 mm	Pr.

Duckbill Pliers

Plastic Covered Handle

Alicate Boca Pato/Magos en P.V.C.

ダックビルペンチ 鸭嘴钳（塑料绝缘手柄）



Made from chrome-molybdenum steel. Long handle provides powerful leverage.

61 17 01	Pliers, duckbill plastic covered handle 200 mm	Pr.
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Flat Nose Pliers

Plastic Covered Handle

Alicate Boca Plana/Magos en P.V.C.

リードベンチ 扁嘴钳（塑料绝缘手柄）



Designed with flat narrow jaws for holding or bending wires, etc. inside narrow and restricted places.

Unit Per Pr.

CODE	Length	CODE	Length
61 17 05	125 mm	61 17 07	175 mm
06	150 mm		

Mini Long Flat Nose Pliers

Plastic Covered Handle

Alicate de Boca Plana Medio Largo/Mangos en P.V.C.

ミニリードベンチ 长平嘴钳



Jaw opening springs, full polished head. Induction hardened cutting edges, slip-resistant PVC handle, flat-square jaws for gripping and forming. Material: Hardened and tempered CrV steel.

61 17 09	Pliers, flat nose, mini long, plastic covered handle, 115 mm	Pr.
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Diagonal Cutting Pliers

Plastic Covered Handle

Cortante Oblicuo/Magos en P.V.C.

斜ニッパー 对剪钳（塑料绝缘手柄）



Sharp, hardened edges with narrow jaws enable you to cut wires inside tight places.

Unit Per Pr.

CODE	Length	CODE	Length
61 17 10	100 mm	61 17 12	150 mm
11	125 mm		

Heavy Duty Diagonal Cutting Pliers

Plastic Covered Handle

Cortante Oblicuo Reforzado/Magos en P.V.C.

強力ニッパー

强力对剪钳（塑料绝缘手柄）



A tool to cut heavy wire with little effort. Made from high quality alloy steel.

Unit Per Pr.

CODE	61 17 16	61 17 17	61 17 18
Length	125 mm	150 mm	175 mm

Mini Diagonal Cutting Pliers

Plastic Covered Handle

Cortante oblicuo tamaño Pequeño/Mangos en P.V.C.

ミニ斜めニッパー 斜嘴钳



Jaw opening springs, full polished head. Induction hardened cutting edges, slip-resistant PVC handle. Designed to cut wire with ease. Material: Hardened and tempered CrV steel.

61 17 21	Pliers, diagonal cutting, mini, plastic covered handle, 115 mm	Pr.
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Pr.

Insulated Diagonal Strippers

Resistance up to 1,000 Volts

Conformed to IEC 60900 / DIN EN 60900

Pelacables Aislados de Corte Diagonal Resistentes hasta Mil Voltios

絶縁型ストリッパー（耐電圧 1,000V）

高绝缘斜口剥线钳耐电壓 1000V

The essential plier for electrical installation work, and furnished with precision stripping holes for single (solid) conductors of 1.5 and 2.5 mm². Induction hardened precision blades for soft wire up to 4.0 mm diam., cutting edge hardness approx. 60 HRC. Made of high grade special tool steel, oil-hardened and tempered.



Unit Per Pr.

CODE	Cutting Capacities		Length mm	Weight grm
	mm ²	AWG		
61 17 23	1.5 + 2.5	15 + 13	160	210

Ref. : Knipex Model No. 14 26 160

Insulated Diagonal Cutters

Resistance up to 1,000 Volts

Conformed to IEC 60900 / DIN EN 60900

Pinzas de Corte Diagonal aisladas Resistentes hasta Mil Voltios

絶縁先ニッパー（耐電 1,000V）

高绝缘斜口钳 耐电壓 1000V

Furnished with precision cutting edges for soft and hard wire, and creates clean cutting at cutting edge tips, also in case of thin copper wires. Cutting edges are additionally induction hardened, cutting edge hardness approx. 62 HRC. Narrow head style for use in confined areas. Made of vanadium electric steel, oil-hardened and tempered.



CODE	Cutting Capacities			Unit Per Pr.	
	Copper / Plastics	Nail / Wire pin	Wire rope strand/ Steel wire	Length mm	Weight grm
61 17 25	3.0	2.3	1.5	125	120
26	4.0	2.5	1.8	140	160
27	4.0	2.8	2.0	160	210
28	4.0	3.0	2.5	180	255

Ref.: Knipex Model No. 70 06 125 / 140 / 160 / 180

Cable Shoe Pliers

Alicates para Terminales 压着ペンチ 电缆端子压钳

A tool for pressing cable shoes on electric cables of sizes 1.25, 2.0, 5.5 and 8 mm/sq. An essential tool for radio repairers and electricians. Length 250 mm.



61 17 30	Pliers, cable shoe 1.25 mm - 8 mm sq.	Pr.
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Cable Shoe Clamping Tool Kits

Estuches de Herramientas para Terminales
ケーブルシューキット 电缆端子压钳

Specially designed for marine use. A steel kit with a clamping pliers and 1,000 cable shoes of 10 different sizes.



61 17 32	Cable shoe and its clamping tool kit	Set
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Crimping Pliers with Changer Magazine

Alicates de engarzar con cambiador de herramienta
交換式ダイス付き压着ペンチ 带可更换压模的压线钳

Just one tool for the most common crimping applications. Made of chrome vanadium electric steel in special quality, oil-hardened. Crimping dies changed quickly and easily without any additional tool. Length: 250 mm.



- Five interchangeable dies in round magazine :
- * for non-insulated open plug type connectors (plug width 4.8 + 6.3 mm) from 0.5 - 6 mm².
 - * for insulated terminals, plug connectors and butt connectors from 0.5 - 6 mm².
 - * for insulated and non-insulated end sleeves (ferrules) from 0.25 - 6 mm².
 - * for insulated and non-insulated end sleeves (ferrules) with 10 / 16 / 25 mm².
 - * for non-insulated crimp terminals. Tube and compression cable lugs in accordance with DIN 46234 and DIN 46235 and non-insulated crimp, butt and press connectors in accordance with DIN 46341 and DIN 46267.

61 17 33	Pliers, crimping, with changer magazine, length 250 mm	Set
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Ref. : Knipex Model No. 97 33 02

Hydraulic Cable Shoe Pliers

Tenaza Hidráulica para Terminales

油圧ケーブルシューペンチ 液压电缆端子压钳

For non-insulated terminals. The following four sizes are available. Please specify the size required when ordering.



Specifications

Applicable Cable Shoe Size	Wire mm ² (AWG)	Weight grm
14	10.52 - 16.78 (6)	
22	16.78 - 26.66 (4)	2,000
38	26.66 - 42.42 (2)	
60	42.42 - 60.57 (1/0)	

61 17 34	Pliers, cable shoe hydraulic for 10.52 - 60.57 mm ² wire size	Pr.
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Electric Cable Strippers

Alicates Pelacables ワイヤーストリッパー 剥线钳

Strips the outer vinyl cover from electric wires without damaging the copper wire underneath. These strippers come with an insulated handle. A very useful tool for engineers and electricians.



How to order: CODE

Electric cable stripper, KIND of CABLE, CABLE SIZE (MINIMUM - MAXIMUM)

Unit Per Pr.

CODE	Kind of Cable	Cable Size
61 17 36	Single	0.5, 1.2, 1.6, 2.0 mm
37	"	1.0, 1.6, 2.0, 2.6, 3.2 mm
38	Strand	0.9, 1.25, 2.0, 3.5, 5.5 mm ²
39	Parallel	0.75 mm ² x 2C, 1.25 mm ² x 2C

Weicon Cable & Wire Strippers

Herramienta peladora de cables y alambres

ケーブル & ワイヤーストリッパー 电缆和剥线钳

Accurate, fast and safe stripping of all common round cables and wires with variety of performance ranges.

Unit Per Pr.

CODE	Model	Application	Performance Range
61 17 29	Cable Stripper 4-28H	Accurate, fast and safe stripping of all common round cables of 4-28 mm Ø. No damage of the inner conductors due to infinitely variable adjustment of the cutting depth.	4 - 28 mm Ø with Hook knife
61 17 31	Cable Stripper S4-28 Multi	Accurate, fast and safe stripping of all common round cables of 4-28 mm Ø. Stripping of all standard flexible and solid cables with a cross-diameter between 0.5 and 6 mm ² .	4 - 28 mm Ø 0.5 - 6 mm ²

CODE	Model	Application	Performance Range
61 17 35	Cable Scissors No. 35	For cutting and stripping of Cu/Al conductors as well as for crimping of terminals from 0.5 to 4 mm ² . The blades are equipped with micro-toothing. This achieves a flush cut and the slipping of the cable is prevented.	Cu/Al conductors 35 mm ²
61 17 40	Coax Stripper No. 2	Working range 4.8 - 7.5 mm Ø, adjusting the cutting depth not required. Also suitable for flexible cables Length scale (0 - 17 mm) integrated in the housing Two-level stripping of all common coaxial cables.	Coaxial 4.8 - 7.5 mm Ø NYM 3 x 0.75 mm ² Flexible 10+16 mm ²
61 17 55	Duo-Crimp No. 300	Three tools in one: Wire Stripper for inner insulations from 0.5-6.0 mm ² , crimping of terminals with two crimping ranges: 0.5 mm ² - 2.5 mm ² (18-15 AWG) and 4 mm ² - 6.0 mm ² (14-10 AWG). According to DIN 46228-2 Integrated, well-accessible side cutter up to 6 mm ²	0.5 - 6.0 mm ²
61 17 61	Multi-Stripper No. 400	Multifunctional with 4 functions. Working range 0.5 - 6 mm ² / 8 - 13 mm Ø Flush stripping even in locations difficult to reach. Secure and space-saving storage thanks to interlock Round cutting - longitudinal cutting - stripping - cutting	8 - 13 mm Ø 0.5 mm ² - 6.0 mm ²
61 17 62	Wire Stripper No.5	Automatic wire stripper for all common stranded and solid conductors (0.2 - 6.0 mm ²), very easy to operate, integrated, well-accessible side cutter up to 2 mm Ø, precise working thanks to adjustable length stop (5 - 12 mm), space-saving due to locking of the stripper, low weight ensures fatigue-free working, replaceable blades.	0.2 - 6.0 mm ² (24 - 10 AWG)

Name of Mfr : Weicon GmbH & Co. KG

Wire Strippers

Plastic Coated Handle



Pelacables, Mango de Plástico Revestido
ワイヤーストリッパー 膠柄剥線鉗

For single, multiple and fine stranded conductors with plastic or rubber insulation max. 5.0 mm diam. or respondent 10.0 mm² cable cross section. Easy adjustment to the required diameter of solid or stranded wire with knurled screw and lock nut. Made of special tool steel, oil-hardened and tempered.

Unit Per Pr.

CODE	Length mm	Stripping Capacities			Weight grm
		Diam. mm	mm ²	AWG	
61 17 41	160	5.0	10.0	7	135

Ref.: Knipex Model No. 11 01 160

Insulated Wire Strippers

Resistance up to 1,000 Volts
Conformed to IEC 60900 / DIN EN 60900

Palacables Aislados Resistentes hasta Mil Vatios

絶縁型ワイヤーストリッパー (耐電 1,000V)

高絶縁剥線鉗 耐電壓 1000V



For single, multiple and fine strand conductors with plastic or rubber insulation max. 5.0 mm diam. or respondent 10.0 mm² cable cross section. Easy adjustment to the required diameter of the solid or stranded wire with knurled screw and lock nut. Made of special tool steel, oil-hardened and tempered.

Unit Per Pr.

CODE	Stripping Capacities			Length mm	Weight grm
	Diam. mm	mm ²	AWG		
61 17 42	5.0	10.0	7.0	160	165

Ref.: Knipex Model No. 11 06 160

Electricians' Pliers

Plastic Coated Handle

Pinzas de Electricista, Mango de Plástico Revestido

電工プライヤー 膠柄電工鉗



The ideal pliers for cable work, for gripping and bending wire, and for cutting soft, medium and hard wire. Precision cutting edges additionally induction hardened, cutting edge hardness approx. 60 HRC. Furnished with precision stripping holes, and for crimping end sleeves (ferrules). Made of high grade special tool steel, oil-hardened and tempered.

Unit Per Pr.

CODE	Stripping Capacities		Length mm	Weight grm
61 17 43	0.5 - 0.75 / 1.5 / 2.5 mm ²		160	110
44	AWG 10 / 12 / 14		160	110

Ref.: Knipex Model No. 13 01 160 / 13 01 614

Automatic Insulation Strippers

Cortador de aislamiento automático

自動剥離径調整式絶縁ストリッパー

自调式绝缘剥线钳

Fully automatic adjustment to all single-, multi- and fine-stranded conductors with standard insulation throughout the entire capacity range from 0.03 to 10.0 mm². With recessed

wire cutter for Cu and Al conductors, stranded up to 10 mm² and single wire up to 6 mm². Handle with soft-plastic zone for a steady grip, body: plastic, fibreglass-reinforced, and blade: special tool steel, oil-hardened. Length: 195 mm.



61 17 45	Stripper, insulation, automatic, 0.03 – 10 mm ² , length 195 mm	Pr.
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Ref.: Knipex Model No. 12 42 195

Insulation Strippers with Opening Spring, Plastic Coated Handle

Pelacables de Aislación con Muelle de Apertura, Mango de Plástico Revestido
補助バネ付絕線ストリッパー

膠柄剝線鉗 附彈簧

Insulation stripper for stripping thin wires, furnished with opening spring. Made of special tool steel, oil-hardened and tempered.



Unit Per Pr.

CODE	Stripping Capacities Diam. mm	Length mm	Weight grm
61 17 46	0.5	160	110
47	0.6	160	110
48	0.8	160	110

Ref.: Knipex Model No. 15 51 160 / 15 61 160 / 15 81 160

Electronics Wire Strippers with Opening Spring, Plastic Coated Handle

Pelacables para Electrónica con Muelle de Apertura, Mango de Plástico Revestido

エレクトロニックワイアーストリッパー
电动剥线钳

For single, multiple and fine stranded cables with 0.1 up to 0.8 mm diam. with plastic or rubber insulation. Easy adjustment to the required diameter of solid or stranded wire with knurled screw and lock nut. Made of special tool steel, oil-hardened and tempered.



Unit Per Pr.

CODE	Stripping Capacities Diam. mm	Length mm	Weight grm
61 17 49	0.1 - 0.8	140	100

Ref.: Knipex Model No. 11 92 140

Bulldog End Cutting Pliers

Alicates de Corte Frontal 噴切 扭头钳

Drop forged and heat-treated in industrial finish. Stout jaws and wide cutting edges are adapted for various carpentry tasks.



Unit Per Pr.

CODE	Length	CODE	Length
61 17 50	120 mm	61 17 53	175 mm
51	150 mm	54	240 mm
52	180 mm		

Flat Nose Japanese Type Pliers

Alicates con Punta Plana Tipo Japonés

ヤットコ平口 日式扁嘴钳



Unit Per Pr.

CODE	Length	CODE	Length
61 17 56	150 mm	61 17 59	240 mm
57	180 mm	60	300 mm
58	210 mm		

Razor Wire Clip Pliers

Alicates de corte para alambre

レーザーワイヤークリップ・プライヤー

剃须刀夹线钳



Clip Pliers



61 17 65 | Razor wire clip pliers

Pr.

5. Scissors and Knives

Hand Snips

Straight or Curved Edge

Tijeras de Chapa, Recta o Cirvada

ブリキ鋏 直式手剪

Forged of special steel for cutting tin plate. The blades have a smooth, strong edge that will retain their sharpness. The straight edge blades are for straight cutting and the curved blades are for cutting curved lines or intricate patterns.



Straight Edge



Curved Edge

Unit Per Pr.

Straight		Curved	
CODE	Length mm	CODE	Length mm
61 17 70	180	61 17 81	180
71	210	82	210
72	240	83	240
73	270	84	270
74	300	85	300
61 17 75	330	61 17 86	330
76	360	87	360
77	390	88	390
78	420	89	420
79	450	90	450

Tweezers

Pinzas ピンセット 镊子组

Made from stainless steel, and used for picking up small objects that are not easily handled with the hands. Overall length 125 mm.



CODE	Tip Style	Grip Style	Unit Per Pr.
61 17 91	Sharp	Smooth	
92	Rounded	Serrated	
93	Curved	Smooth	

Snap Ring Pliers

Alicates de presión スナップリングプライヤー 卡环钳

These snap ring pliers are used for inserting or removing external/internal snap rings. They automatically open or close just by gripping the handles. There are two types of pliers, one for external, the other for internal use.

For External Use



For Internal Use



External Ring Pliers

How to order: CODE

Plier, snap ring, external, STRAIGHT or BENT nose, RING SIZE

CODE	For External Ring Size	Overall Length	Unit Per Pr.
Straight Nose			
61 18 01	3 - 15 mm	125 mm	
02	10 - 25	140	
03	19 - 40	175	
04	32 - 80	236	
05	50 - 100	270	
06	100 - 130	400	
07	130 - 200	500	
Bent Nose			
61 18 11	3 - 15 mm	135 mm	
12	10 - 25	135	
13	19 - 40	165	
14	32 - 80	220	
15	50 - 100	270	
16	100 - 130	400	
17	130 - 200	500	

Internal Ring Pliers

How to order: CODE

Plier, snap ring, internal, STRAIGHT or BENT nose, RING SIZE

Unit Per Pr.

CODE	For Internal Ring Size	Overall Length
Straight Nose		
61 18 21	6 - 15 mm	140 mm
22	15 - 25	140
23	19 - 65	180
24	32 - 80	246
25	50 - 100	270
26	100 - 130	400
27	130 - 200	500
Bent Nose		
61 18 31	6 - 15 mm	135 mm
32	12 - 25	135
33	19 - 65	170
34	32 - 80	230
35	50 - 100	270
36	100 - 130	400
37	130 - 200	500

Cloth Scissors

Tijeras para Juntas

ラシャ切鋏 布剪子



Made of cutlery steel, hardened and tempered. Individually tested by hand.

Unit Per Pr.

CODE	Overall Length mm	CODE	Overall Length mm
61 18 41	210	61 18 44	255
42	225	45	270
43	240	46	300

Electricians Knives

Navajas de Electricista

電工ナイフ 电工刀



A well tempered cutlery steel blade with a strong joint and a solid well-proportioned handle.

61 18 51	Knife, electrician	Pc.
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Heavy Duty Knives with Leather Case

Machetes con Estuche de Cuero Reforzado

シーナイフ 強力刀 (带皮套)



A 120 mm, high carbon, cutlery steel blade. Comes with a leather case.

61 18 55	Knife, heavy duty w/leather case	Pc.
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6. Cutters/Shears

Bolt Cutters

with Plastic Coated Handle

Cortadora de pernos con mango revestido de plástico

ボルトクリッパー

绝缘柄断线钳

Precision cutting edges for soft and hard wire as well as piano wire, and cuts bolts, nails, rivets, etc. up to 5.2 mm dia (Model 71 31 200) and up to 6.0 mm dia (Model 71 31 250). Made of chrome vanadium heavy-duty steel, forged, oil-hardened. 60 % less effort required compared to conventional high-leverage diagonal cutters.



Unit Per Pr.

CODE	Length mm	CODE	Length mm
61 18 58	200	61 18 59	250

Ref.: Knipex Model No. 71 31 200 for 200 mm / No. 71 31 250 for 250 mm

Bolt Cutters, Straight Edge (Bolt Clippers)

Cortavillas ボルトクリッパー 直线螺栓剪

For cutting mild steel, rods, bolts, wire, etc. Jaws are drop forged of special tool steel. Generally recommended for all around work with soft materials. Jaws are replaceable.



Complete Cutter

Spare Jaw for Straight Bolt Cutter

Unit Per Pr.

Unit Per Pcs.

CODE	Length mm	Maximum Cut Dia.	CODE	Length mm	Maximum Cut Dia.
61 18 60	300	5 mm	61 18 71	300	5 mm
61	350	6	72	350	6
62	450	7	73	450	7
63	600	10	74	600	10
64	750	13	75	750	13
61 18 65	900	16	61 18 76	900	16
66	1,050	18	77	1,050	18

Bolt Cutters, Straight Edge

Cortarillas/Mango Aislado ボルトクリッパー 直线螺栓剪

Insulated handle type is tested to withstand 1,000 volts.



Insulated Handle

61 18 80	Cutter, bolt straight edge, 620 mm, cutting capacity 8 mm diam. handle insulated	Pr.
81	Spare jaw for insulated bolt cutter, 620 mm	Pcs.

Non-Insulated Handle

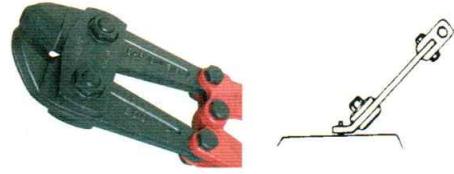
61 18 83	Cutter, bolt straight edge, 620 mm, cutting capacity 8 mm diam. handle non-insulated	Pr.
84	Spare jaw for non-insulated bolt cutter, 620 mm	Pcs.

Bolt Cutters, Angle Edge

Cortavillas, Filo Angular

アンダルカッター 弯形螺栓剪

Designed for cutting mild steel rods, bolts, wire, etc. at a raised angle. Even if the bolt is set against a flat surface, it is possible to use these cutters because they will fit flush against the surface for a straight cut.



Complete

Spare Jaw for Angle Edge Bolt Cutter

Unit Per Pr. Unit Per Pcs.

CODE	Length mm	Maximum Cut Dia.	CODE	Length mm	Maximum Cut Dia.
61 18 90	300	5 mm	61 18 93	300	5 mm
91	450	7	94	450	7
92	600	10	95	600	10

Wire Rope Cutters

Cortadores para Cuerda de Alambre

ワイヤーロープカッター 钢丝剪

Designed specially for cutting wire ropes. The cutting edges pass each other for complete shear action resulting in a clean, sharp cut. A notched jaw holds the wires in place while cutting and minimizes the crushing and deformation of the wires.



Complete

Spare Jaw for Wire Rope Cutter

Unit Per Pr. Unit Per Pcs.

CODE	Length mm	Maximum Cut Dia.	CODE	Length mm	Maximum Cut Dia.
61 19 01	600	10 mm	61 19 06	600	10 mm
02	750	14	07	750	14
03	900	16	08	900	16
04	1,050	20	09	1,050	20

Cable Cutters

Cortante Cables Acero ケーブルカッター 电缆剪

Designed for electric cables, of copper, aluminium, etc. Notched jaw holds and cuts cables in a clean and sharp way.



Complete

Unit Per Pr.

CODE	Model No.	Length mm	Maximum Cut Dia.
61 19 20	1	450	20 mm
21	2	750	30 mm
22	3	1,050	50 mm

Spare Jaw for Cable Cutters

Unit Per Pcs.

CODE	Model No.	Length mm	Maximum Cut Dia.
61 19 25	1	450	20 mm
26	2	750	30 mm
27	3	1,050	50 mm

Cable Cutters

Tenaza Cortacables Eléctrico/Mango Aislado
絶縁ケーブルカッター 绝缘电缆剪

Same as the above cutters but the insulated handle type is tested to withstand 1,000 volts.



Insulated Handle		
CODE	Cutter, cable 535 mm, cutting capacity 20 mm dia. handle insulated	Pr.
61 19 31		
Non-Insulated Handle		
32	Spare jaw for insulated cable cutter, 535 mm	Pc.
61 19 33	Cutter, cable 535 mm, cutting capacity 20 mm dia. handle non-insulated	Pr.
34	Spare jaw for non-insulated cable cutter, 535 mm	Pc.

Ratchet Type Cable Cutters

Insulated Handle

Cortadores de cables tipo trinquete, mango aislado

ラチェット式絶縁ケーブルカッター

棘轮式绝缘电缆剪

For cutting copper and aluminium single conductors as well as multiple stranded cables. Insulated with multi-component grips to withstand up to 1,000 Volts. Two-stage, three-stage ratchet-drive with high leverage enables easy cutting in one-hand and two-hand operation. *Not suitable for cutting steel and wire ropes.



Two-Stage Ratchet Drive



Three-Stage Ratchet Drive

CODE	Length mm	Ratchet Drive	Cutting Capacities			Weight grm	Unit Per Pr.
			Max.Dia mm	mm ²	MCM		
61 19 37	250	2-Stage	32	240	500	652	
61 19 38	280	2-Stage	52	380	750	835	
61 19 39	320	3-Stage	60	600	1,200	830	

MCM: Thousands of circular mils, same as kcmil.
Ref.: Knipex Model No. 95 36 250 / 95 36 280 / 95 36 320

Portable Midget Cutters

Tenazas Pegueñas Cortacables Eléctrico

ミジェットカッター

便携式弹簧剪

A portable tool for cutting spring wire of a diameter of up to 4 mm. The jaws are riveted to the handle so they are not replaceable. The handles are knurled and covered in plastic. These cutters are easy to handle as they weigh only 300 grms and are of a length of only 200 mm.



61 19 36	Cutter, midget, portable 200 mm	Pr.
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Rod Cutters

Cortavillas 鉄筋カッター 钢筋剪

A heavy duty, improved bench type rod and bolt cutter. The handle end is covered by rubber to avoid slipping during use. Capable of cutting rods and bolts of a diameter of up to 16 mm.



Complete

Spare Jaw for Rod Cutter

Complete			Spare Jaw for Rod Cutter		
CODE	Length mm	Maximum Cut Dia.	CODE	Length mm	Maximum Cut Dia.
61 19 50	766	10 mm	61 19 55	766	10 mm
51	1,090	13	56	1,090	13
52	1,290	16	57	1,290	16

Metal Bench Shears

Cizalla Manual Chapa レバーシャー 台式螺栓剪

A heavy duty, improved, bench type iron sheet and rod cutter. This unit can be permanently mounted to a bench or bolted to a plank. The cutting lever can be operated with one hand, leaving the other hand free to feed and hold in place the material which is being cut.



Unit Per Set

CODE	Blade Length mm	Cutting Capacity mm		Size mm	Weight kg
		Iron Sheet	Iron Round		
61 19 64	120	3.0	6	370 x 300	9.5
65	160	4.0	6	400 x 325	11.5
60	180	3.2	13	370 x 300	35
61	200	5.0	8	495 x 350	22
62	250	6.5	8	485 x 335	35
63	300	3.2	13	485 x 335	13

Hydraulic Wire Rope Cutters

Cortante hidráulico para Cables de Acero

油压ワイヤーロープカッター 液压式钢丝剪

Designed for manually cutting wires with hydraulic power. Gives a clean cut with a few strokes of the handle without requiring any outside power. Can be carried to the job and placed anywhere, no firm base is required. Essential for cutting and splicing wire rope. Be sure to unscrew the die plug before use and to retighten it after use.



Unit Per Set

CODE	Maximum Cut Diam mm	Dimensions mm	Weight kg
61 19 70	20	310 x 90 x 152	10
71	30	380 x 105 x 180	15
72	40	400 x 120 x 200	20
61 19 73	50	485 x 130 x 220	30
74	60	630 x 175 x 270	70
75	100	1,000 x 600 x 360	200

Gasket and Washer Cutters

Juego Máquina Cortar Juntas

バッキングカッター 垫片(圈)剪

Designed for cutting gaskets or washers from leather, paper, or rubber sheets up to a diameter of 600 mm/24". The knife and center are made of tool steel, are well tempered, and adjustable. A tool box is furnished with the cutter.



61 20 01	Cutter, gasket and washer, set	Set
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7. Packing Hooks

Packing Hook Sets

Juego Extractor Empaqueadura

バッキングフックセット 盼更钩子组

The shank consists of one inner spiral shaft wrapped with an outer spiral of steel wire laid in the opposite direction. The flexible shaft has a solid handle and the hook is carefully tempered and pointed.



61 20 04	Packing hook set, complete	Set
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61 Packing Hooks

Extractor Empaqueadura バッキングフック 盼更钩子

Individual packing hooks from the above set.



How to order: CODE

Packing hook, NAME, LENGTH

Unit Per Pcs.

CODE	Name	Length mm	For Packing Size mm
61 20 06	Flex	185	Flex 3.2 ~ 6.4
		215	" 6.4 ~ 9.6
		255	" 9.6 ~ 16.0
		380	" 16.0 ~ 25.4
		600	" 25.4 ~ 38.1
		800	" 38.1 ~ 50.8
61 20 12	Stick	240	
13	Hook & Ring	200	

Single Wheel Pipe Cutters

Cortabulos de una sola Cuchilla

トライモ形パイプカッター 单轮式切管器

Equipped with either a heavy duty cutter wheel or a thin blade wheel which are forged from tool steel and assembled in solid steel bushed hubs.

The cutter has powerful, malleable alloy frames which insure perfect tracking. Extra wheels available.



Pipe Cutter

Unit Per Set

CODE	For Pipe Size in Inches	Overall Length
61 20 20	1/8 - 1-1/4"	335 mm
	21	435
61 20 22	1/2 - 3"	540

Spare Wheel

Unit Per Pcs.

61 20 23	1/8 - 1-1/4", 1/8 - 2"	O.D. 32 mm
24	1/2 - 3"	" 35

Chain-Type Pipe Cutters

Cortabulos Tipo Cadena チューン式パイプカッター

链式切管器

Designed for cutting large sized pipes easily. By cranking the lever, ratchet action tightens the cutting blades against the pipe while continually increasing the cutting pressure on the pipe. Because of the ratcheting action only a small amount of force is required on the lever itself.



61 20 25	Cutter, pipe, chain-type 75 to 250 mm	Pcs.
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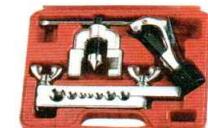
Cutting & Flaring Tool Sets

Abocinador Conjunto

チューブフレアリングカッターツールセット

切管工具组

Designed for cutting or flaring copper, brass or aluminium tubes. The set consists of one cutter, flaring bar and yoke.



Unit Per Set

CODE	Capacity of Cutting & Flaring	
61 20 30	mm . . .	5 to 12 with Cutter
31	in . . .	3/16 to 5/8 with Cutter
32	mm . . .	12 to 20 without Cutter

Copper & Brass Tube Cutters

Cortabulos para Cobre y Latón

チューブカッター

切铜管器

Designed for the cutting and flaring of small copper, brass or aluminium tubes. The cut will be absolutely clean (no distortion or burr) and ready for soldering. Extra blades are available.



CODE	For Tube Size O.D. mm	CODE For Extra Blade
61 20 35	3 - 30 mm	61 20 45
36	5 - 45	46
37	6 - 60	47

8. Tube Expanders

Tube Flaring Expanders

Abocinador - Expander

チューブエキスパンダー 扩管器

For condenser, heat exchanger and similar types of tubes. Made of special selected and hardened tool steel. When ordering, please select the largest size of expander which will fit for the inner tube diameter.



Unit Per Pc.

CODE	Enters I.D. tube & Expands to		Square Shank mm
	mm	Equiv. in	
61 20 51	6.4 to 7.5	1/4 to 5/16	8
52	9.5 to 11	3/8 to 7/16	8
53	13 to 15	1/2 to 19/32	8
54	16 to 18.5	5/8 to 3/4	8
55	19 to 22	3/4 to 7/8	9.5
61 20 56	22 to 25.5	7/8 to 1	9.5
57	25 to 29.5	1 to 1-3/8	9.5
58	29 to 33.5	1-1/8 to 1-5/16	12.7
59	32 to 36.5	1-1/4 to 1-7/16	12.7
60	35 to 40	1-3/8 to 1-9/16	12.7

9. Screwdrivers

Screwdrivers, Wood Handle

Destornilladores, anglo de Madera/Uso Intensivo

木柄貫通ドライバー 木柄一字螺丝刀（重型）

Heavy Duty

Tungsten alloy steel blades are pierced through a hard wood handle. The end is reinforced with a large nut that permits hammering. When ordering, please indicate the blade length for the slotted type, not the overall length. For Phillips type screwdrivers, please order according to the indicated number.



How to order: CODE

Screwdriver, wood handle, heavy duty, BLADE LENGTH (Slotted), or NO. (Phillips)

- Slotted Screwdriver

+ Phillips Screwdriver

CODE	Blade Length mm	Blade Width	CODE	No.	Blade Length mm
					Unit Per Pc.
61 22 01	50	4.5 mm	61 22 11	No. 0	75
02	75	5.5	12	No. 1	75
03	100	6.0	13	No. 2	100
04	125	7.0	14	No. 3	150
05	150	8.0	15	No. 4	200
61 22 06	200	9.0			
07	250	10.0			
08	300	10.0			

General Purpose

Tungsten alloy steel blades are set securely in hard wood handles. The required size must be ordered according to the blade length for the slotted type, not by the overall length. For Phillips type screwdrivers, please order according to the indicated number.



How to order: CODE

Screwdriver, wood handle, general purpose, BLADE LENGTH (Slotted), or NO. (Phillips)

- Slotted Screwdriver

+ Phillips Screwdriver

Unit Per Pc.

CODE	Blade Length mm	Blade Width	CODE	No.	Blade Length mm
61 22 31	50	4.5 mm	61 22 41	No. 0	75
32	75	5.5	42	No. 1	75
33	100	6.0	43	No. 2	100
34	125	7.0	44	No. 3	150
35	150	8.0	45	No. 4	200
61 22 36	200	9.0			
37	250	10.0			
38	300	10.0			

Screwdrivers, Plastic Handle

Heavy Duty

Destornilladores, Mango de Plástico/Uso Intensivo

プラス柄絶縁ドライバー 塑料柄一字螺丝刀（重型）

Tungsten alloy steel blades are interlocked firmly to plastic handles which are hammer-proof and unbreakable. Handles are insulated to withstand up to 1,000 AC voltage for insulated type. The required size must be ordered according to the blade length for the slotted type, not by the overall length. For Phillips type screwdrivers, please order according to the indicated number.



Insulated Handle

How to order: CODE

Screwdriver, plastic handle, insulated heavy duty, BLADE LENGTH (Slotted), or NO. (Phillips)

- Slotted Screwdriver

+ Phillips Screwdriver

Unit Per Pc.

CODE	Blade Length mm	Blade Width	CODE	No.	Blade Length mm
61 22 61	50	4.5 mm	61 22 71	No. 00	75
62	75	5.5	72	No. 0	75
63	100	6.0	73	No. 1	75
64	125	7.0	74	No. 2	100
65	150	8.0	75	No. 3	150
61 22 66	200	9.0	61 22 76	No. 4	200
67	250	10.0			
68	300	10.0			

Non-insulated Plastic Handle

How to order: CODE

Screwdriver, plastic handle, non-insulated, heavy duty, BLADE LENGTH (Slotted), or NO. (Phillips)

- Slotted Screwdriver

+ Phillips Screwdriver

Unit Per Pc.

CODE	Blade Length mm	Blade Width	CODE	No.	Blade Length mm
61 21 81	50	4.5 mm	61 21 91	No. 00	75
82	75	5.5	92	No. 0	75
83	100	6.0	93	No. 1	75
84	125	7.0	94	No. 2	100
85	150	8.0	95	No. 3	150
61 21 86	200	9.0	61 21 96	No. 4	200
87	250	10.0			
88	300	10.0			

Screwdrivers, Plastic Handle

Square Blade

Destornilladores, Mango de Plástico/Varilla Cuadrada

スクエアドライバー 一字型螺丝刀（塑料柄）

Tungsten alloy steel square blade, heat-treated and chromed. The required size must be ordered according to the blade length for the slotted type, not by the overall length. For Phillips type screwdrivers, please order according to the indicated number.



- Slotted



+ Phillips

How to order: CODE

Screwdriver, plastic handle, square blade, BLADE LENGTH (Slotted), or NO. (Phillips)

- Slotted Screwdriver

+ Phillips Screwdriver

Unit Per Pcs.

CODE	Blade Length mm	Blade Width mm	CODE	No.	Blade Length mm
61 22 90	75	5.5 mm	61 22 95	No. 1	75
91	100	6.0	96	No. 2	100
92	150	8.0	97	No. 3	150
87	200	8.0	98	No. 4	200
88	250	8.0			
61 22 89	300	10.0			

61

Hand Tools

Electrician's Screwdrivers

Destornilladores de Electricistas 電工用ドライバー 电工螺丝刀

Designed with a large wood on synthetic handle for electricians continuous lining works. When ordering, please indicate the blade length for the slotted type, not the overall length.



How to order: CODE

Screwdriver, electrician, wood handle, BLADE LENGTH (Slotted), or NO. (Phillips)

- Slotted Screwdriver

Unit Per Pcs.

CODE	Blade Length mm	Blade Width mm	CODE	No.	Blade Length mm
61 23 01	50	7.0 mm	61 23 04	125	9.0 mm
02	75	5.5	05	150	6.0
03	100	5.5	06	200	6.0

+ Phillips Screwdriver

Unit Per Pcs.

CODE	Blade Length mm	No.	CODE	Blade Length mm	No.
61 23 11	75		61 23 08	100	
12	100	No. 1	14	150	No. 2
13	150		15	200	

Insulated Screwdrivers

Resistance up to 1,000 Volts

Conformed to IEC 60900 / DIN EN 60900

Destornilladores aislados, Resistencia hasta 1.000 voltios

絶縁型スクリュードライバー (耐震圧 1,000V)

隔离螺丝刀 (抗震压力 1 000V)

The essential screwdriver for

electrical installation work,

fully insulating to reduce risk

of short circuit up to AC 1,000V and DC 1,500V. Insulation

standard: IEC 60900 DIN EN 60900.



- Slotted Screwdriver

+ Phillips Screwdriver

Unit Per Pcs.

CODE	Blade Length mm	Blade Width mm	CODE	No.	Blade Length mm
61 23 31	80	2.5 mm	61 22 36	No. 1	75
32	100	4.0	37	No. 2	100
33	125	5.5	38	No. 3	150
34	150	6.5	39	No. 4	200
35	175	8.0			

Stubby Screwdrivers

Wood or Plastic Handle

Destornilladores Cortos, Mango de Madera o de Plástico "Carrocero"

スタビードライバー

短柄螺丝刀

For work in close quarters. The plastic handle screwdrivers are more popular than the wood ones. Plastic handle screwdrivers will be supplied unless specified otherwise.



Wood Handle

Plastic Handle

How to order: CODE

Screwdriver, stubby, WOOD, or PLASTIC HANDLE, BLADE LENGTH (Slotted), or NO. (Phillips)

Wood Handle

Plastic Handle

Unit Per Pcs.

CODE	No.	Blade Length mm	CODE	No.	Blade Length mm
61 23 21	Slotted	38	61 23 24	Slotted	38
22	(+) No. 1	38	25	(+) No. 1	38
23	(+) No. 2	38	26	(+) No. 2	38

Screwdrivers, Plastic Ratchet Handle

Destornilladores, Mango de Carraca de Plástico

ラチェット付 ドライバー

塑料棘轮手柄一字螺丝刀

Can be used in several ways. The handle can tighten and revolve freely back like a ratchet handle or it can operate in the normal way when put in a neutral ratchet gear.



How to order: CODE

Screwdriver, ratchet, plastic handle, BLADE LENGTH (Slotted), or NO. (Phillips)

- Slotted Screwdriver

+ Phillips Screwdriver

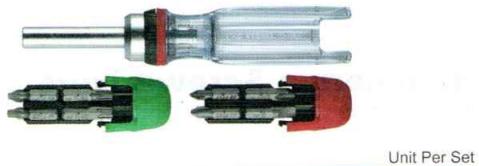
Unit Per Pcs.

CODE	Blade Length mm	Blade Width mm	CODE	No.	Blade Length mm
61 23 41	100	5.0 mm	61 23 43	No. 1	100
42	100	6.0	44	No. 2	100

Ratchet Screwdrivers with Interchangeable Bits

Destornillador de Trinquete con Brocas Intercambiables
替えビット式ラチェットドライバー 赫轮螺丝批

Supplied with four sizes of magnetic interchangeable bits.
They are stored inside the handle.



Unit Per Set

CODE	Blade Length mm	Overall Length mm	Bit's Size
61 23 46	112	227	-5 x 25 mm / -7 x 25 mm #1 x 25 mm / #2 x 25 mm

Hexagon Nut Drivers

Destornilladores Hexagonales para Tuerca "Stecker"
ボックスドライバー 六角螺母螺丝刀

The wood handle with a heat-treated on plastic handle and chromed blade.
The size must be ordered according to the opening across flats.



Unit Per Pcs.

CODE	Opening mm	Blade Length mm	Overall Length mm
Wood Handle			
61 23 51	4.0	75	170
52	5.0	115	210
53	5.5	115	210
54	6.0	115	220
55	7.0	125	230
61 23 56	8.0	125	230
57	9.0	125	250
58	10.0	125	250
59	11.0	125	250
60	12.0	150	292
61 23 61	13.0	150	292
62	14.0	150	292
63	17.0	150	313

CODE	Opening mm	Blade Length mm	Overall Length mm
Plastic Handle			
61 23 91	4.0	75	155
67	5.0	75	155
68	5.5	75	155
69	6.0	75	155
70	7.0	75	155
61 23 92	8.0	75	155
71	9.0	75	155
72	10.0	75	155
93	11.0	75	155
94	12.0	75	155
61 23 95	13.0	75	155
96	14.0	75	155
97	17.0	75	155

Hexagon Nut Driver Sets

Juegos de Destornilladores Hexagonales para Tuerca "Stecker"

ナットドライバーセット 六角螺母螺丝刀组

Deep socket type nut drivers provided as a set with a steel holding rack. The set consists of 7 nut drivers ranging from 5 mm to 12 mm in size.



61 23 66	Nut driver set, 5 mm - 12 mm, 7 pcs	Set
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Flexible Blade Nut Drivers

Destornilladores para Tuerca con Varilla Flexible
自在ボックスドライバー 弹性刀杆螺帽刀

The flexible blade is made of a specially designed spring which will bend and allow you to set nuts around corners and in places where straight blades cannot be used. When ordering, please specify the size, not by the bolt size, but by the size between the two parallel walls of the nut driver socket.



Unit Per Pcs.

CODE	Opening mm	For Bolt Size ISO mm	Overall Length mm
61 23 75	5.5	3	226
76	7	4	226
77	8	5	226

Screwdrivers with Gripping

Destornilladores Sacatornillos
ビスキャッチドライバー 带夹具螺丝刀

Heat-treated, hardened, alloy steel blades. Plastic handle and precision ground tips. Positive gripping mechanism. Can be worked on screws in hard-to-reach places with the assurance that the screw will stay on the blades.



- Slotted Screwdriver

+ Phillips Screwdriver

Unit Per Pcs.

CODE	Blade Length mm	Blade Width mm	CODE	No.	Blade Length mm
61 23 81	100	4.5 mm	61 23 87	No. 00	75
82	100	2.6	88	No. 20	100
83	150	4.5			
84	150	2.6			

Offset Screwdrivers

Destornilladores Acodados オフセット ドライバー 扁颈螺丝刀

For work in close quarters. Made from selected alloy steel. Mechanic and Phillips points drivers are available. Chrome plate finished.



Unit Per Pc.

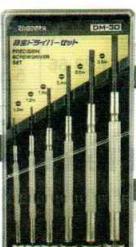
CODE	No.	Blade Diameter mm	Overall Length mm
61 24 01	-5 x -6	6.4	127
	-8 x -9	9.0	152
61 24 03	No.1 & 2	6.4	127
	No.3 & 4	9.0	152
61 24 05	No.1 & -5	5.0	125
	No.2 & -6	6.0	125
	No.3 & -8	8.0	150

Screwdriver Sets, Watch Makers'

Juegos de Destornilladores de Precisión Relojero

時計用精密 ドライバー 6 本組 钟表螺丝刀全套

For precision work with small screws. The end of the handle rotates, permitting your fingers to stay on the end during screwing work. Set supplied in a plastic case.



Unit Per Set

CODE	Blade	Contents	Set
61 24 11	Slotted	Blade width mm 0.9, 1.2, 1.8, 2.3, 3.0, 3.5	6 Pcs
61 24 13	Phillips	Blade width No. 0000, No. 000, No. 00, No. 0, No. 1, No. 1	6 Pcs
61 24 12	Slotted & Phillips	Blade width mm & No. 0.9, 1.2, 1.8, 2.3 mm No.00, No.0	6 Pcs

Spark Testing Screwdriver Sets

In Vinyl Sheath

Juegos de Destornilladores para Comprobar el Voltaje con Varilla Aislada

検電 ドライバー 6 本組

测电螺丝刀全套

For spark testing of low voltage:
100-220V-AC 100-350V-DC

6 various interchangeable bits

61 24 16	Screwdriver, spark testing, Low-voltage 6's	Set
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For spark testing of high voltage:

2,500-15,000V-AC

6 various interchangeable bits

61 24 17	Screwdriver, spark testing, High-voltage 6's	Set
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Automatic Screwdrivers with Ratchet

Destornilladores Automáticos con Carraca

オートマチック ドライバー 自动棘轮螺丝刀



These screwdrivers work by pushing the handle downward and causing a crank drive inside the ratchet shaft to spin the blade. When the handle is released, the blade extends to its original position. By repeatedly pushing the handle you can set loose screws quickly with a very simple operation. When not in use the interchangeable bits can be stored inside of the handle. The gear blade can be set to rotate in either direction by changing the ratchet gear allowing you to remove screws as well as insert them.

Unit Per Set

CODE	Extend Length	Handle Length	Bit Contents
61 24 21	240 mm	102 mm	Plastic handle, -6, +#1, #2, & one gimlet
22	300	84	Plastic handle, -6, +#1, #2, & one gimlet
23	380	100	Wood handle, -6, +#1 & #2
24	440	100	Wood handle, -6, +#1 & #2
25	620	120	Wood handle, -7, +#2 & #3

Hammering Screwdrivers

Impact Type

Destornilladores/Tipo Impacto

打撃 ドライバー 冲锤螺丝刀

Designed to work with screws that are set tight due to freezing or corrosion. By hammering the head of the screwdriver, a sudden, sharp pressure is applied to the screw causing it to be jarred loose. Supplied with interchangeable bits for rotation in the left or right direction.



61 24 31



61 24 32

Unit Per Set

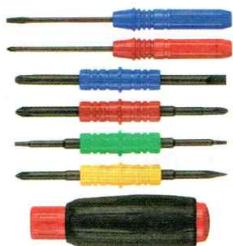
CODE	No. of Bit	Blade Diam	Overall Length	Bit Contents
61 24 31	4's	32 mm	190 mm	- 10 mm + No.2 3 & 4
61 24 32	6's	26 mm	240 mm	- 5, 6, 7 mm + No.1, 2 & 3

Detachable Screwdriver Sets

Juegos de Destornilladores Desmontables

差し替え ドライバーセット 套换式螺丝刀组

Detachable drill bits with plastic handle in a handy plastic case. The drill bits are attached and detached manually by screwing bit chuck at handle.



Unit Per Set

CODE	No. of Bits	Bit Size	Bit Length	Overall Length
61 24 41	4's	-3 / -5 No.1 & 2	90 mm	162 mm
42	5's	-3 / -5 No.1 & 2 Auger	100 mm	182 mm
43	5's	-3 / -4 / -6 No.1 & 2	125 mm	216 mm

Pozidriv Screwdrivers

Destornillador Pozidriv

ボジドライブスクリュードライバー 十字塑料柄精工螺丝批

This unique shape of the bit provides excellent driving control with less operator fatigue. The Pozidriv screw is incorporated with visible ribs in the groove, so Phillips drivers should not be used with Posidriv screws.



Unit Per Pcs.

CODE	Blade Diam mm	No.	Blade Length mm
61 24 51	5	PZ1	75
52	6	PZ2	100
53	8	PZ3	150

Long Blade Screwdrivers

Destornillador de Hoja Larga 角長軸ドライバー 加长型一字螺丝批

Extra long blade screwdrivers with plastic handle.



Unit Per Pcs.

CODE	Blade Width or No.	Blade Diam.	Blade Length
61 24 56	9.0 mm	8 mm	450 mm
61 24 57	No.2	6 mm	450 mm
61 24 58	No.3	8 mm	450 mm

10. Hammers

Ball Pein Hammers

Handled

Martillos de Boda/con Mango 片手ハンマー 球头手锤

The perfect ball pein hammers for all industries. Accurately balanced. Tough drop forged head with a selectively hardened face and pein. Fine quality, lacquer finished, hickory handles shaped for ease in use.



Unit Per Pcs.

CODE	No.	Weight Gram	CODE	No.	Weight Gram
61 25 01	1/4	110	61 25 06	1-1/2	675
02	1/2	225	07	2	900
03	3/4	330	08	2-1/2	1,100
04	1	450	09	3	1,350
05	1-1/4	550			

Blacksmiths' Sledge Hammers Double Face

Maza de Doble Cara/con o sin Mango
両口ハンマー 双面铁锤 (带柄)

Double head hammer with smooth faces furnished with a handle.



Unit Per Pcs.

CODE	No.	Weight kg	CODE	No.	Weight kg
61 25 21	No. 2	0.9	61 25 29	No. 14	6.3
22	3	1.3	30	15	6.7
23	4	1.8	31	16	7.2
24	5	2.2	32	18	8.1
25	6	2.7	33	20	9.0
61 25 26	8	3.6	61 25 34	22	9.9
27	10	4.5	35	25	11
28	12	5.4	36	30	13.5

Smooth & Cross Pein Hammers

with or without Handle

Martillos de Cruz/con o sin Mango
片口ハンマー 横头大锤 (带手柄)



Smooth and cross pein head. Specify whether you need a hammer with or without a handle. The hammer-head will be furnished without a handle unless otherwise specified.

With Handle		Without Handle			
CODE	No.	Weight kg	CODE	No.	Weight kg
61 25 61	2	0.9	61 25 81	2	0.9
62	3	1.3	82	3	1.3
63	4	1.8	83	4	1.8
64	5	2.2	84	5	2.2
65	6	2.7	85	6	2.7
61 25 66	8	3.6	61 25 86	8	3.6
67	10	4.5	87	10	4.5
68	12	5.4	88	12	5.4
69	14	6.3	89	14	6.3
70	15	6.7	90	15	6.7
61 25 71	16	7.2	61 25 91	16	7.2
72	18	8.1	92	18	8.1
73	20	9.0	93	20	9.0
74	22	9.9	94	22	9.9
75	25	11.0	95	25	11.0
61 25 76	30	14.0	61 25 96	30	14.0

Testing Hammers

Handled

Martillo Inspección/con Mango
テストハンマー 检验用手锤

For testing and investigating boilers, welding joints, hulls, etc. Designed for detecting structural defects by the sound created from the hammering. Made from specially selected alloy steel with a hickory handle.



Unit Per Pc.

CODE	61 26 01	61 26 02	61 26 03
No.	1/4	1/2	3/4
Weight	110 grm	225 grm	330 grm

Bell Face-Hand Hammers

*with Nail Puller, Handled
(Claw Hammers)*

Martillos Uñas/con Mango 釘拔付ハンマー 钟面羊角锤（带柄）

Drop forged of specially heat-treated steel. Round bell face enables easier driving of nails close to butting surfaces and in corners.



Unit Per Pc.

CODE	61 26 06	61 26 07	61 26 08
Weight	330 grm	450 grm	550 grm

Chipping Hammers

Handled

Piqueta con Mango ケレンハンマー 敲锈锤（连柄）

Designed for removing boiler, scale, rust or paint on vessels, etc. Forged from a special grade of steel. Handle made of hard wood.



Unit

CODE	Weight	Unit
61 26 11	225 grm	Pc.
12	450 grm	"

Combination Hammers

Handled

Martillos Combinados o de bocas de Intercambio/con Mango

コンビネーションハンマー

双面锤（带铁头和塑料头）



Hammer-head made of a combination of iron and hard plastic.

Unit Per Pc.

CODE	61 26 16	61 26 17	61 26 18
Nos.	1/2	1	2
Weight	0.225 kg	0.45 kg	0.9 kg

Carpenter Hammers

Tubular Steel & Cushion Grip

Martillos de Carpintero/Mango de Goma

ゴム柄ハンマー 木工锤（连柄）



Tubular steel handle with rubber cushion grip. The head has been designed with one round faced end and one end as a nail puller.

Unit Per Pc.

CODE	61 26 21	61 26 22
Weight	450 grm	550 grm

Copper Hammers

Handled

Maza de Cobre/con Mango 銅ハンマー

紫铜锤（连柄）

A polished face hammer fitted securely to a hard wooden handle.



Unit Per Pc.

CODE	No.	Weight kg	CODE	No.	Weight kg
61 26 41	1/2	0.25	61 26 45	3	1.5
42	1	0.5	46	4	2.0
43	1-1/2	0.75	47	5	2.5
44	2	1.0			

Copper Hammers

with Replaceable Tip and Handle

Martillos de Cobre/con Mango y Bocas de Intercambio

替頭式銅ハンマー

锤头可换式紫铜锤（连柄）

Copper hammer with replaceable spare tip and handle. The head and the handle can be furnished separately.



Complete

Unit Per Pc.

CODE	No.	Weight kg	CODE	No.	Weight kg
61 26 51	1/2	0.25	61 26 55	3	1.35
52	1	0.45	56	4	1.8
53	1-1/2	0.65	57	5	2.25
54	2	0.9			

Spare Tip

Spare Handle

Unit Per Pc.

CODE	Head No.	CODE	Head No.
61 26 61	1/2	61 26 71	1/2
62	1	72	1
63	1-1/2	73	1-1/2
64	2	74	2
65	3	75	3
61 26 66	4	61 26 76	4
67	5	77	5

Lead Hammers

Handled

Maza de Plomo/con Mango 鉛ハンマー

铅锤（连柄）

A polished face hammer fitted securely to a hard wooden handle.



Unit Per Pc.

CODE	No.	Weight kg	CODE	No.	Weight kg
61 26 81	1/2	0.25	61 26 85	3	1.5
82	1	0.5	86	4	2.0
83	1-1/2	0.75	87	5	2.5
84	2	1.0			

Brass Hammers

Handled

Maza de Latón/con Mango 真鍮ハンマー 黄铜锤（连柄）

A polished face hammer fitted securely to a hard wooden handle.



Unit Per Pc.

CODE	No.	Weight kg	CODE	No.	Weight kg
61 26 91	1/2	0.25	61 26 95	3	1.5
92	1	0.5	96	4	2.0
93	1-1/2	0.75	97	5	2.5
94	2	1.0			

Aluminium Hammers

Handled

Martillos de Aluminio/con Mango アルミハンマー 铝锤（连柄）

A polished face hammer fitted to a hard wooden handle which is light and easy to use for extended periods of time.



Unit Per Pc.

CODE	No.	Weight kg	CODE	No.	Weight kg
61 27 01	1/2	0.1	61 27 05	4	0.5
02	1	0.2	06	10	1.5
03	2	0.3	07	20	3.0
04	3	0.45			

Plastic Hammers

Handled and Replaceable Tips

Martillos de Plástico con Mango/y Bocas intercambiables 替頭式ソフトハンマー 锤头可换式塑料锤

Furnished with replaceable round tips of tough plastic.



Unit Per Pc.

CODE	No.	Head Diam. mm	Weight kg
61 27 21	1/2	25	0.22
22	1	31	0.4
23	1-1/2	38	0.63
24	2	46	0.98

Spare Tip

Unit Per Pc.

CODE	No.	CODE	No.
61 27 31	1/2	61 27 33	1-1/2
32	1	34	2

Rubber Hammers

Handled

Maza de Goma con Mango ゴムハンマー 橡胶锤（连柄）

Soft but tough, non-flaking neoprene head prevents damage to the surface being worked on.



Unit Per Pc.

CODE	No.	Head Diam. mm	Weight kg
61 27 51	1/2	46	0.31
52	3/4	48	0.46
53	1	60	0.58
54	1-1/2	67	0.82

Wood Mallet Hammers

Handled

Maza de Madera/con Mango 木槌 小木槌

Head and handle manufactured of selected hardwood. Head finished with a bright varnish.



Unit Per Pc.

CODE	Face Diam.	CODE	Face Diam.
61 27 61	50 mm	61 27 63	70 mm
62	60	64	75

Hammer Handles, Hard Wood

Mango de Martillo, Madera (Dura) de Fresno o Haya

ハンドル柄 木锤柄

Tough hard wood handle shaped and finished for a comfortable, sure grip.



Unit Per Pc.

CODE	Length mm	CODE	Length mm
61 27 75	300	61 27 78	600
76	330	79	900
77	450	80	1,200

Handles for Testing and Chipping Hammers:

Unit Per Pc.

CODE	For	Hammer Weight
61 27 82		110 grm
83	Testing Hammer	225
84		330
61 27 86	Chipping Hammer	225 grm
85		450

Steel Wedges for Hammer

Cuña de Acero para Martillo スチールウエッジ 锤用钢楔

Used to tightly wedge a wooden handle to a hammer-head.



Unit Per Pc.

CODE	61 27 91	61 27 92	61 27 93
Size	7 x 16 mm	14 x 16 mm	20 x 27 mm

11. Glass Cutters

Glass Cutters

Cortavidrios ガラス切り 玻璃刀

These glass cutters are for cutting straight plate glass with the use of straight scales. Industrial diamonds are used for the cutting point to ensure easy cutting.



Unit Per Pc.

CODE	For Glass Thickness	CODE	For Glass Thickness
61 28 01	2 - 3 mm	61 28 03	5 - 10 mm
02	3 - 5		

Circle Glass Cutters

Cortadores para Cristal Circular 棒付丸ガラス切り 切玻璃圆规

These glass cutters are designed for cutting round glass pieces in the range between 80 to 600 mm.

The cutting points are made of industrial diamonds and on the other end of the glass cutter is a special rubber piece fitted to ensure a correct, even cut.



61 28 05	Glass cutter, max cutting diam. 600 mm	Pc.
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12. Bars / Nail Pullers

Carpenters' Pincers

Plastic Coated Handle

Tenazas para Carpintero くぎ抜き 牛头钳



Extreme wear resistance and good balance. Made of special tool steel, oil-hardened and tempered.

Unit Per Pr.

CODE	Length mm	Weight grm	CODE	Length mm	Weight grm
61 28 32	160	225	61 28 35	225	435
33	180	325	36	250	600
34	210	415	37	300	900

Ref.: Knipex Model No. 50 01 160 / 180 / 210 / 225 / 250 / 300

Claw and Nail Puller Bars

Desencofradores 段付カジヤバール 起钉撬棒



Pull and pry bar with one 90° end and one smoothly curved end to suit use on a variety of surfaces.

Unit Per Pcs.

CODE	Length mm	CODE	Length mm
61 28 41	200	61 28 45	330
42	240	46	360
43	260	47	460
44	300		

Claw and Chisel End Bars

Desencofradores "Garra y Cincel" 平カジヤバール 起钉器及凿子端杆



Made of forged steel and heat-treated.

Curved claw is offset 90°, pointed and polished.

Unit Per Pcs.

CODE	Length mm	CODE	Length mm
61 28 51	300	61 28 56	500
52	330	57	540
53	360	58	600
54	390	59	750
55	450	60	900

Straight Pinch and Chisel End Bars

Desencofradores "Punzón y Cincel"

直バール 叉头弯凿撬棒



A multi purpose pinch bar.

Unit Per Pcs.

CODE	Length mm	61 28 66	61 28 67
	600	900	1,200

Gooseneck Type Bars

Desencofradores Tipo "Cuello de Ganso"

グースネックバール 鹅颈撬棒

One end is a pointed chisel and the other is a rounded nail puller.



Unit Per Pcs.

CODE	61 28 71	61 28 72	61 28 73
Length mm	600	900	1,200

Crowbars

Palancas de Acero クローバー 撬棍

Iron lever with a forked wedge.



Unit Per Pcs.

CODE	Length mm	Weight kg	CODE	Length mm	Weight kg
61 28 81	850	4	61 28 84	1,200	8
82	950	5	85	1,350	9
83	1,150	6	86	1,500	10

Giant Nail Pullers

Extracores de Clavos Gigantes 西洋釘拔 西洋起钉器

Forged steel shank with hand guard and automatic claw.
Overall length: 460 mm.



61 28 90	Nail, puller, giant type, 460 mm	Pc.
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13. Chisels

Chisels

Cinceles タガネ 凿

Cold Chisel

These chisels are made of tough selected alloy steel which has been carefully tempered to assure toughness and ample strength.



Unit Per Pcs.

CODE	Blade Width mm	Length mm	CODE	Blade Width mm	Length mm
61 29 01	6	125	61 29 05	19	190
02	9	140	06	22	200
03	13	160	07	25	215
04	16	175	08	32	225

Cape Chisel

Made from special selected alloy steel. Lacquered body and polished blade.



Unit Per Pcs.

CODE	Blade Width mm	Length mm	CODE	Blade Width mm	Length mm
61 29 11	3	150	61 29 14	7.5	175
12	4.5	150	15	9	200
13	6	175	16	13	200

Hand Tools

A multi purpose pinch bar.

Unit Per Pcs.

CODE	Length mm	61 28 66	61 28 67
	600	900	1,200

Concrete Chisel

Made from selected alloy steel. Well balanced and finished in blue lacquer with a polished point.



Unit Per Pc.

CODE	Blade Width mm	Length mm	CODE	Blade Width mm	Length mm
61 29 21	9	120	61 29 25	22	240
22	13	150	26	25	270
23	16	180	27	32	300
24	19	210			

Offset Caulking Chisel

Unit Per Pc.

CODE	Length mm	CODE	Length mm
61 29 31	150	61 29 36	400
32	200	37	450
33	250	38	500
34	300	39	550
35	350	40	600

Cross Cut Cold Chisels**with Wooden Handle**

Tajadera 生切柄付タガネ 横切冷凿 (木柄)

Made with carbon black finish and fitted to a hardened wood handle.



Unit Per Pc.

CODE	61 29 51	61 29 52	61 29 53
Blade Width & Length mm	25 x 125	32 x 140	38 x 150

Cross Cut Hot Chisels**with Iron Handle**

Cinceles Calientes con Mango de Hierro
柄タガネ 横切热凿 (铁柄)



Made from carbon steel with an iron handle.

Unit Per Pc.

CODE	61 29 57	61 29 58
Blade Width & Length	25 x 125 mm	32 x 140 mm

14. Punches/Stencils**Round Hole Punches**

Sacabocado Cilíndrico 打抜ポンチ 圆冲

Forged from selected tool steel with a fully polished finish.



Unit Per Pc.

CODE	Hole Diam. mm	CODE	Hole Diam. mm
61 30 01	3	61 30 26	28
02	4	07	29
03	5	08	30
04	6	09	31
05	7	10	32
61 30 06	8	61 30 31	33
07	9	12	34
08	10	13	35
09	11	14	36
10	12	15	37
61 30 11	13	61 30 36	38
12	14	17	39
13	15	18	40
14	16	19	41
15	17	20	42
61 30 16	18	61 30 41	43
17	19	22	44
18	20	23	45
19	21	24	46
20	22	25	47
61 30 21	23	61 30 46	48
22	24	23	49
23	25	24	50
24	26	25	
25	27		

Punching Tool Sets

Juego de Sacabocado パッキング打抜工具 冲头组

Used for punching holes in soft brass, copper, and other soft metals as well as leather, canvas, and gasketing materials. A set for 6 to 38 mm is available as standard.



Punching Dies



Punching Table

Unit Per Set

CODE	Hole Size	Contents
Combination Size		
61 30 56	6-38 mm	16 pcs Punching dies (6, 7, 8, 9, 10, 11, 12, 13, 16, 19, 22, 25, 28, 32, 35, 38) 1 pc Punching table

Center Punches

Granetes センターポンチ 中心冲头

Forged from special alloy steel. The tips are accurately centered and the knurled finger grip assures accurate handling.



Unit Per Pc.

CODE	61 30 60	61 30 61	61 30 62
Length	100 mm	125 mm	150 mm

Center Punch Sets**Combination**

Juegos de Granetes センターポンチセット 中心冲头组

Forged, tempered, alloy steel. Center punches of various sizes available in one compact case.



Unit Per Set

CODE	Contents
61 30 65	9 pcs set, Length 150 mm

Pin Rivet Punches

Botadores Cilindricos ピンポンチ 销铆钉冲

Forged from selected alloy steel. For driving out pins and bushings and lining up bolt and rivet holes. Length: 150 mm.



Unit Per Pcs.

CODE	Point mm	CODE	Point mm
61 30 70	2.5	61 30 74	5.5
71	3.0	75	6.5
72	4	76	8
73	5	77	10

Pin Punch Sets Combination

Juegos de Botadores Cilindricos ピンポンチセット 销钉冲



Unit Per Set

Forged, tempered alloy steel. Each set is furnished in a round wooden case. Pointings available are : 2.5 - 3 - 4 - 5 - 5.5 - 6.5 - 8 & 10 mm in diameter. Length: 150 mm.

61 30 80	Punch set, pin, combination 2.5-10 mm, L:150 mm, 8 pcs/set	Set
----------	---	-----

Combination Chisel Sets

Juego Cortafrios Combinado

タガネセット 组合凿子组

Forged, tempered alloy steel. Contains 7 different types of chisels in a round plastic case. Shank diameter 8 mm, length 150 mm.



Unit Per Set

61 30 86	Chisel set, combination 150 mm, 7's	Set
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Chisel & Punch Sets Combination

Juegos de Cinceles, punteros Y Granetes

タガネ及びピンポンチセット 凿子及冲头组



Unit Per Set

Forged, tempered alloy steel. Consisting of different chisel and pin punch types in a vinyl case.

Length: 150 mm.

Unit Per Set	
CODE	Contents
61 30 88	7 pcs set Length 150 mm
89	12 pcs set " "

Heavy Duty Wad Punches

Perforadora de arandelas de gran potencia

強力型打ち抜きポンチ

重型冲孔机

A heavy-duty tools designed to cut discs of gasket materials. They are most commonly used to create washers by first cutting a disc with a larger sized wad punch and the centre hole with a smaller sized punch.



CODE	Hole Diam. mm	CODE	Hole Diam. mm	CODE	Hole Diam. mm
61 30 49	6	61 30 82	24	61 31 14	42
50	7		25	15	43
51	8	84	26	27	44
52	9	85	27	28	45
53	10	87	28	29	46
61 30 54	11	61 30 90	29	61 31 30	48
55	12	91	30	97	50
57	13	92	31	98	55
58	14	93	32	99	60
59	15	94	33	61 32 00	65
61 30 63	16	61 30 95	34	61 32 10	70
64	17	96	35	11	75
67	18	97	36	12	80
68	19	98	37	13	85
69	20	99	38	14	90
61 30 78	21	61 31 00	39	61 32 15	100
79	22	12	40		
81	23	13	41		

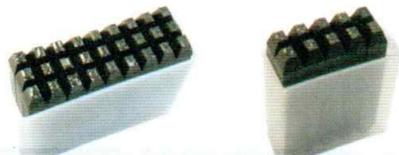
Letter or Figure Sets

In Steel Box

Abecedarios y Nmeración de Golpe

手打印刻、英字又は数字 钢印字母及数字组

This machine processed letter set consists of 27 letters and the character "&". The special machine processed figure set consists of 9 pieces 0 to 8 where as the figure "9" is also to be used as "6". The letters/figures are accommodated in a steel case.



Unit Per Set

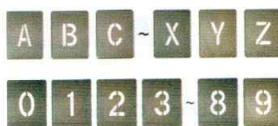
Letter Sets 27 Pieces		Figure Sets 9 Pieces	
CODE	Size mm	CODE	Size mm
61 31 01	1.5	61 31 16	1.5
02	2.0	17	2.0
03	2.5	18	2.5
04	3.0	19	3.0
05	4.0	20	4.0
61 31 06	5.0	61 31 21	5.0
07	6.0	22	6.0
08	8.0	23	8.0
09	10.0	24	10.0
10	13.0	25	13.0
61 31 11	16.0	61 31 26	16.0

Stencil Letter and Figure Sets

Abecedarios y Nmeración de Chapa
ステンシルレター又は数字

字母及数字印花版

Adjustable stencils for letters and figures. Due to a special design, the letters and figures may be joined together to form any word, address, etc. as required. The joined figures and letters are accurately spaced and on an even level to assure a perfect print. The size is taken according to the required height of letters and figures.



How to order: CODE

Stencil, LETTER & FIGURE (LETTER or FIGURE), adjustable brass, SIZE, NUMBERS/set.

Unit Per Set

CODE	Size mm	Description	Set
61 31 31	13		
32	20		
33	25	76 Pieces A to Z and 0 to 9	Letter & Figure
34	30		
35	38		
61 31 36	45		
37	50		
38	60	76 Pieces A to Z and 0 to 9	Letter & Figure
39	75		
40	100		
61 31 61	13		
62	20		
63	25	36 Pieces A to Z and 0 to 9	Letter & Figure
64	30		
80	38		
61 31 81	45		
82	50		
83	60	36 Pieces A to Z and 0 to 9	Letter & Figure
84	75		
96	100		
61 31 41	13		
42	20		
43	25	26 Pieces A to Z only	Letter
44	30		
45	38		
61 31 46	45		
47	50		
48	60	26 Pieces A to Z only	Letter
49	75		
50	100		
61 31 51	13		
52	20		
53	25	10 Pieces 0 to 9 only	Figure
54	30		
55	38		
61 31 56	45		
57	50		
58	60	10 Pieces 0 to 9 only	Figure
59	75		
60	100		

CODE	Weight kg	Overall Length mm	CODE	Weight kg	Overall Length mm
61 31 65	10	285	61 31 73	60	470
66	15	320	74	70	520
67	20	340	75	80	520
68	25	350	76	90	560
69	30	380	77	100	560
61 31 70	35	400	61 31 78	150	665
71	40	405	79	200	700
72	50	420			

Cast Steel Anvils

Yunque de acero Forjado 鋳鋼製アンビル 铸钢砧

Made of cast steel and perfectly heat-treated to assure a long life under heavy working conditions. Painted or furnished in its original colour. Available in weights from 20 to 200 kg.



Unit Per Pcs.

CODE	Weight kg	Overall Length mm	CODE	Weight kg	Overall Length mm
61 31 85	20	325	61 31 91	80	580
86	30	430	92	100	620
87	40	460	93	120	665
88	50	480	94	150	790
89	60	515	95	200	880
61 31 90	70	530			

Blacksmiths' Tongs

Tenazas de Herrero 火造箸 扁嘴打铁钳



Flat

Round

Unit Per Pr.

CODE	Type	Length mm	CODE	Type	Length mm
61 32 01		360	61 32 06		360
02	Flat	450	07	Round	450
03		550	08		550
04		600	09		600

15. Anvils / Blacksmith's Tongs

Anvils

Yunque アンビル 砧子

Cast Iron Anvils

Yunque de Hierro Forjado 鋳鉄製アンビル 铸铁製铁砧

Made of cast iron and heat-treated with plain surfaces. Finished painted or in its original colour. Available in weights from 10 to 200 kg.



16. Scrapers / Scribes

Bearing Scrapers

Rasqueteadores ベアリングスクレーバー 轴承刮刀

These scrapers are forged and perfectly tempered to assure an absolute true shape for scraping jobs on bearings, valves, etc. Highly polished finish.



1. With Wooden Handle



2. Flat Double End



3. Half Round & Flat End



4. Half Round & Point End

Unit Per Pc.					
CODE	Type	Length mm	CODE	Type	Length mm
61 32 20	1. With wooden handle	200	61 32 30	3. Half round & flat end	200
21		250	31	240	300
22		280	32	300	360
61 32 25	2. Flat double end	200	61 32 35	4. Half round & point end	200
26		240	36	240	300
27		300	37	300	360
28		360	38		

Stainless steel blade with plastic body, excellent for removing glue, rust or paint from wood or glass surfaces. Ideal for work in close quarters. Blades can be changed easily.



Unit Per Pc.

Scraper Complete		Spare Blade	
CODE	Blade Width mm	CODE	Blade Width mm
61 32 55	25	61 32 58	25
56	45	59	45
57	64		

Hand Scraper for Ice

For cleaning ice and frost from windows. Made of ABS plastic.

61 32 61	Hand Scraper, ice for window	Pc.
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Steel Scribes

Trazadores de Acero Punta Trazar

ケガキ針 钢划针

Points are made of the best quality steel, and properly tempered with twisted center portions for a solid grip.



Unit Per Pc.

CODE	61 32 65	61 32 66
Size	200 mm	250 mm

17. Magnets

Strong Hand Magnets

Imanes Potentes de Mano

強力マグネット 强力磁铁



Unit Per Pc.

CODE	No.	Size mm H x W x T	CODE	No.	Size mm H x W x T
61 32 80	4.5	85 x 65 x 8	61 32 82	10	127 x 93 x 12
81	7.5	105 x 75 x 11	83	15	136 x 110 x 15

18. Saws / Hacksaws

Hand Saws

Serruchos de Carpintero 西洋手挽鋸

手鋸



Unit Per Pc.

CODE	Blade Length mm	CODE	Blade Length mm
61 34 01	450	61 34 03	600
02	500	04	650

Back Saws

(Tenon Saws)

Serrucho de Costilla

バックソー

板锯

Double End Angle Scrapers

Resqueta Angular Doble 共柄スクラーバー

双端弯头刮刀

Made of rounded edge tool steel, hammer forged, and oil finished.



Unit Per Pc.

Deck Scrapers

with Long Handle

Rasqueta Mango Largo 長柄スクラーバー 甲板刮刀

Tempered steel blade of 65 mm width. Furnished with a wooden handle of 1,200 mm length.



61 32 46	Deck scraper with long handle 65 x 1,200 mm	Pc.
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Angle Scrapers with Wooden Handle

Rasqueta Acodada con Mango de Madera

短柄スクラーバー 弯头短柄刮刀（木柄）



Forged steel blade of 45 mm width, overall length: 320 mm.

61 32 48	Angle scraper with wooden handle 45 x 320 mm	Pc.
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Yacht Type Triangular Scrapers

Basqueta Triangular Tipo Yate

ヨットスクラーバー 快艇用三角刮刀

Triangular shaped 70 mm steel edge with a 300 mm wooden handle.



61 32 50	Triangular scraper, yacht type, 70 x 300 mm	Pc.
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Hand Scrapers

Raspilla

鉄の爪

手刮刀

For general use in connection with mitre box and cabinet work. Stiff blade with a heavy steel back. Solid hard wood handle.



61 34 07 Back saw 300 mm

Pc.

Unit Per Pcs.

CODE	Type	For Blade Length
61 34 26	Pipe	Adjustable to blades
29	Fixed	For 250 mm
28		For 300 mm

Double Blade Saws

Serrucho de Doble Hoja 両刃鋸 日本式双刃锯

For carpentry use. Double blade saw for rip and cross cutting.



Unit Per Pcs.

CODE	Blade Length mm	CODE	Blade Length mm
61 34 10	210	61 34 13	295
11	240	14	320
12	270		

Compass or Keyhole Saws

Serrucho de Punta 引廻し鋸 鸡尾锯

Steel blade, hardened and tempered. Blade fastened securely to the handle.



61 34 16 Saw, compass, blade length 210 mm

Pc.

Saw Setters

Fijador de Serrucho 鋸目立て 正锯器

For use on setting saw teeth.



61 34 22 Setter saw Japanese type

Pc.

Tiny Hacksaw Frames

Arco de Marquetería 弓鋸弓形锯架

Designed for cutting sheet metal, thin tubing or heavy wires in close quarters. Frames are made of bright finished nickel spring wire. Handle depth is 50 mm and the blades are 150 mm x 6 mm.



CODE	Description	Unit
61 34 23	Tiny hack saw frame with 12 blades	Set
24	Tiny hack saw frame with one blade	"
25	Tiny hack saw blades	Doz

Hacksaw Frames

Acros de Sierra 弓鋸フレーム 锯架

The frames are available in solid type or pipe type. Made of nickel plated steel and polished or buff finished.



Pipe



Fixed

Hacksaw Blades

Hoja de Sierra o Segueta 弓鋸刃 锯条(碳钢)



Carbon Steel Recommended for general use by engineers, mechanics, electricians, plumbers and maintenance men.

Tungsten Alloy Steel Resist breakage, longer wearing and give satisfaction where fast, dependable results are essential.

High Speed Steel Heat resistant and suitable for cutting tough alloy steel.

Choose the right blades for the right works.

14 Teeth Per 25.4 mm..... For cutting soft solid steel, iron, rails, brass, bronze, copper and aluminium.

18 Teeth Per 25.4 mm For cutting tool steels, iron pipes and light angle iron.

24 Teeth Per 25.4 mm..... For cutting drill rods, medium sheet metal, tubing and solid brass.

32 Teeth Per 25.4 mm For cutting thin sheet metal and thin wall tubing.

How to order: CODE

Hacksaw blade, MATERIAL, LENGTH, TEETH per INCH

CODE			Unit Per Doz	
Carbon Steel	Tungsten Alloy Steel	High Speed Steel	Length mm	Teeth Per Inch
61 34 31	61 34 41	61 34 51	250	14
	32	52	250	18
	33	53	250	24
	34	54	250	32
61 34 35	61 34 45	61 34 55	300	14
	36	56	300	18
	37	57	300	24
	38	58	300	32

Machine/Power Saw Blades

Hoja de Segueta para Máquina/Hoja de Sierra

機械用弓鋸刃 机器 / 动力锯刃

Please indicate length and teeth per 25.4 mm.



Tungsten Alloy Steel

How to order: CODE

Machinesaw blade, tungsten alloy steel, LENGTH, THICKNESS, TEETH per INCH

CODE	Specification		Thickness mm	Teeth Per Inch	Unit Per Pc.
	Length mm	Width mm			
61 34 61	300	25	1.25	9	
62	300	25	1.25	10	
63	300	25	1.25	14	
61 34 64	300	25	1.65	9	
65	300	25	1.65	10	
66	300	25	1.65	14	
61 34 67	350	25	1.25	8	
68	350	25	1.25	9	
69	350	25	1.25	10	
61 34 70	350	25	1.65	8	

High Speed Steel

How to order: CODE

Machinesaw blade, high speed steel, LENGTH, THICKNESS, TEETH per INCH

Unit Per Pc.

CODE	Specification		Thickness mm	Teeth Per Inch	Unit Per Pc.
	Length mm	Width mm			
61 34 76	300	25	1.25	9	
77	300	25	1.25	10	
78	300	25	1.25	14	
61 34 79	300	32	1.60	6	
61 34 82	350	25	1.25	6	
84	350	25	1.25	10	
83	350	25	1.25	14	
61 34 87	350	32	1.60	4	
88	350	32	1.60	6	
89	350	32	1.60	10	

61

Hand Tools

19. Pin Vises / Hand Drills

Steel Pin Vises

Broqueros de Acero ピンバイス 工具轧头

For holding drills, taps, needles, files, etc. Jaw hardened and nickel chromed.



Type	CODE	No.	Maximum Jaw open mm	Overall Length mm	Unit Per Pc.
	61 35 01	No. 1	0 ~ 0.6	105	
		2	0 ~ 0.9	108	
		3	0 ~ 1.2	120	
		4	0 ~ 1.2	100	
	61 35 05	No. 5	1.3 ~ 2.2	104	
		6	2.3 ~ 3.2	108	
		7	3.3 ~ 4.2	112	
		8	4.3 ~ 5.2	116	
	61 35 09	No. 4A	0 ~ 1.2	110	
		5A	1.3 ~ 2.2	115	
		6A	2.3 ~ 3.2	120	
		7A	3.3 ~ 4.2	125	
		8A	4.3 ~ 5.2	130	

Hand Chuck Vises with Wood Handle



Broqueros Manuales con Mango de Madera
木柄ビンバイス 手转卡盘钳

Will hold larger diameter tools than the steel pin vise. The 3 jaw chuck locks tight to any device with the indicated diameter.

Unit Per Pc.

CODE	61 35 17	61 35 18
No.	No. 1	No. 2
Jaw Opening	0 - 4 mm	0 - 6 mm

Straight Hand Drills

Three Jawed Chuck



Taladro Manual Rectos/3 Mordazas

手廻しボール（ハンドドリル） 手滚球（手操）

Designed for light drilling work with a 3 jaw-chuck. Used with straight drills maximum up to 10 mm in diameter.

61 35 30	Drill, hand straight 3-jaw chuck	Pc.
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Straight Breast Drills

Two-Gear & Two-Jaw



Taladro Manual Antepecho/2 Mordazas

胸当ドリル 直式手摇钻

Two speed drill in one set. Will operate with straight shank drills up to 12.5 mm in diameter.

61 35 31	Drill, breast, straight 2 gear & 2 jaw	Pc.
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Ratchet Type Braces

Taladro Manual Berbiqui クリックボール 棘轮式手摇曲柄钻



Open ratchet type, finished in high grade chrome. To be operated with straight shank drills of up to 13 mm in diameter.

61 35 32	Brace, ratchet type up to 13 mm	Pc.
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20. Auger Bits / Gimlets

Machine Auger Bits

Barreno Máquina マシンオーガー 机械式螺旋钻头

Used for large timber work and heavy construction. Made from special bit steel for use with electric drills. Shank is straight and round.



Unit Per Pc.

CODE	Diam. mm	CODE	Diam. mm
61 35 61	6	61 35 66	21
62	9	67	24
63	12	68	27
64	15	69	30
65	18		

Japanese Gimlets

Barrenos Japoneses 和錐 日本手钻



For marking or pre-holing for screws on a wooden board.

61 35 71	Gimlet, Japanese	Pc.
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21. Planes / Wood Gouges

Bench Jack Planes

Cepillos de carpintero

西洋カンナ 刨台平面夹具



Cutter end and side size adjustable.
Cutter size: 40 mm & 50 mm.

CODE	61 36 01	61 36 02	61 36 03
Width	40 mm	45 mm	50 mm

Wood Butt Chisels

Formón 平のみ 木制平头铲刀



The blade and socket are forged in one piece. High grade steel. Heat-treated and tempered. Select hard wood handle.

CODE	Blade Width mm	CODE	Blade Width mm
61 36 10	3	61 36 15	18
11	6	16	24
12	9	17	30
13	12	18	36
14	15	19	42

Wood Gouges

Gubia 丸のみ 木制圆凿



Made from high grade steel, heat-treated and tempered. Select hard wood handle.

CODE	Blade Width mm	CODE	Blade Width mm
61 36 25	6	61 36 28	15
26	9	29	18
27	12	30	24

22. Trowels / Putty Knives

Trowels

Paletas コテ 小铲子



Polished mounting securely fastened to the handle. Polished spring steel blades.

Heart type		Point Type	
CODE	Blade Length mm	CODE	Blade Length mm
61 36 51	145	61 36 57	150
52	150	58	165
53	160	59	180
54	170	60	195
55	180	61	210
61 36 56	190	61 36 62	225
		63	240
		64	255

Putty Knives

Espátulas para Masilla パテナイフ 油灰刀

High carbon, cutlery steel, oil hardened blade, tempered and glaze finished.



CODE	Blade Width mm	CODE	Blade Width mm
61 36 71	25	61 36 75	75
72	40	76	90
73	50	77	100
74	65		

23. Shovels

Shovels

Palas Cuadradas スコップ 方形铁锹



Square

Blade is forged in one piece from a solid bar of special treated steel for heavy duty work.

CODE	Overall Length mm	Blade Size Width x Length mm
61 36 85	970	240 x 300
86	1,050	250 x 367
87	1,070	270 x 395



Polycarbonate

Made from polycarbonate shovel with wooden handle. Much lighter than conventional steel shovel, but has temperature resistance and impact resistance. Overall length is 1,200 mm.

61 36 89	Shovel, polycarbonate, square, overall length 1,200 mm.	Pc.
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24. Tool Belts

Electrician's Tool Belts

Cinturones para Herramientas de Electricista

電工ベルト 电工工具带



A high-quality leather belt with pouches specially designed for use by electricians.

61 36 91	Leather belt for electrician, With 3 tool pockets	Pc.
92	" with 4 tool pockets	"

Electrician's Tool Bags

Bolsas para Herramientas de Electricista
電工腰袋 电工工具袋

Tools are sold separately. Available in leather and canvas.



Leather



Canvas

61 36 95	Electrician's tool bag, leather	Pc.
96	Electrician's tool bag, canvas	"

25. Pipe Benders

Pipe Benders

Curvadoras de Tubo パイプベンダー 弯管器

Made of malleable steel with preset jaws which are equipped with receiving grooves for holding the pipe to assure accurate, good fitting bends. This bender is designed with a fitting support and bending shoe so the pipes do not kink or flatten.



Unit Per Pc.

CODE	For Pipe Size		Handle Length mm	Unit Per Pc.
	Gas	Conduit		
61 37 01	10A	5/8 in	1,200	
02	15A	3/4	1,200	
03	20A	1	1,500	
04	25A	1-1/4	1,700	
05	30A	1-1/2	1,800	
61 37 06	40A	2 in	2,000	
07	50A	2-1/2	2,100	

Hydraulic Pipe Benders

Portable

Curvadoras de Tubo Hidráulicos/Portátil
油圧パイプベンダー 液压弯管器

Designed for bending rigid conduit pipes, steel pipes, etc. Capable of making a full bend of up to 90° of 20A to 100A pipes.



Unit Per Set

CODE	Power Tons	Weight Kg	Standard Attached Shoes
61 37 11	10	60	20A, 25A, 32A, 40A & 50A
12	20	150	65A, 80A & 100A

26. Screw Clamps / Vises

C-Type Screw Clamps

Abrazaderas Tipo C o torniquete シャコ万力

C 螺栓夹头

Drop forged from strong special steel and heat-treated. The screws are made from tough, wrought steel, heat-treated and threaded for strength and rapid adjustment.



CODE	Opening mm	CODE	Opening mm	Unit Per Pc.
61 37 16	25	61 37 21	125	
17	38	22	150	
18	50	23	200	
19	75	24	250	
20	100	25	300	

Hand Vises

Entenallas 手万力 手动虎钳



Drop forged from strong special steel. For holding tools, etc. firmly by hand. The opening size is about the same size as the jaw width.

Unit Per Pc.

CODE	Opening	Overall Length mm	CODE	Opening	Overall Length mm	Unit Per Pc.
61 37 51	25 mm	100 mm	61 37 53	38 mm	150 mm	
52	32	125				

Pipe Vises

Tornillo Banco para Tuberías

パイプ万力 管子台虎钳



Both upper and lower jaws are made of specially selected tool steel and will not wear out. The vise frame is made of malleable iron. The base has a flat bottom and can be mounted on any plain surface.

Unit Per Set

CODE	Nominal Size	Capacity mm	Height mm
61 37 55	50	10 - 60.5	240
56	80	10 - 77	280
57	105	10 - 102	335
58	130	10 - 128	390
59	170	10 - 166	480

Pipe Vises with Stand

Tornillo banco para Tuberías con pie

脚付パイプ万力 有支架管子虎钳



This portable pipe vise has been designed for use in areas where a permanent installed vise is not available. Has a folding stand which keeps good balance during working operation.

Unit Per Set

CODE	For Pipe Hold Size	Height mm	Weight kg
61 37 62	8A - 50A	1,100	12.5
63	10A - 90A	1,180	17.0

Clamp Base Vises

Tornillo Banco de Sobremesa
卓上小型取付万力 桌虎钳



Unit Per Pcs.

CODE	Jaws		Weight kg
	Width mm	Opening mm	
61 37 65	40	40	
66	50	50	
67	63	57	
68	75	60	

Parallel Bench Vises

Tornillo Banco バイス 虎钳

Square Cylinder

The body of this square cylinder bench vise is made of forged cast iron. The jaws are made of a replaceable alloy steel. This vise is convertible between stationary and swivel type by simply attaching or removing the swivel base assembly.



Unit Per Pcs.

CODE	Jaws			Weight kg
	Width mm	Opening mm	Depth mm	
61 37 70	57	60	39	2.7
71	65	65	44	3.9
72	77	82	50	5.6
73	90	92	61	9.5
74	103	117	76	14.6
61 37 75	116	135	79	19.8
76	128	162	82	22.5
77	152	200	90	31.1
78	206	240	100	38.8
79	255	300	140	68.4

Round Cylinder

The body and slidings are made of specially selected, shock resistant high quality cast iron. Built for heavy duty use and designed for accuracy. The jaws are made of heat-treated steel and are replaceable. Handles have finger protecting rubber grommets on each end. This vise can be also used in connection with a swivel base.



Unit Per Pcs.

CODE	Jaws			Weight kg
	Width mm	Opening mm	Depth mm	
61 37 81	85	85	65	10
82	110	110	83	18
83	127	125	95	26
84	153	150	100	36
85	215	200	114	85

With Swivel Base

These vises can easily be rotated on their base by turning a clasp and then fixed in the most convenient position for the job.



Unit Per Pcs.

CODE	Jaws		Length mm	Height mm	Weight kg
	Width mm	Opening mm			
61 37 86	100	135	370	190	14.5
87	140	180	470	230	27.0

Swivel Bases, Assembly

Bases Giratorias バイス用回転ベース 虎头钳夹块

Sturdily constructed, the swivel base vises 61 37 73 and larger rotate a full 360°, while 61 37 72 and smaller rotate only 280°. They can be positively locked by simple adjustment of the locking attachment.

For 61 37 70 - 72
Vise size 280°For 61 37 73 - 79
Vise size 360°

61 37 88	Swivel base assembly for 61 37 70 - 72, 280°	Pc.
89	Swivel base assembly for 61 37 73 - 79, 360°	"

Vise Jaw Pads Magnet Type

Mordazas para Tornillo Banco マグネット式バイスロッキン 虎钳夹块

Protect fine work in vises with corrugated jaw facings. A piece of aluminium angle with two magnets make the piece stick fast to the jaw, converting any reed vise jaw face to a smooth and soft surface. 3 sizes available. When you request the vise jaw pads fixed with screw, please specify exact dimensions of screw size, number of screws and distance of screws.



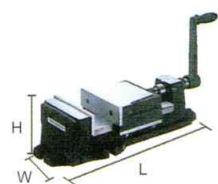
Unit Per Pr.

CODE	Width	Material	CODE	Width	Material
61 37 91	100 mm	Aluminium	61 37 93	150 mm	Aluminium
92	125 mm				

Milling Vises

Prensas Mecánicas ミリングバイス 车工钳

Suitable to hold small parts for milling on the milling machine. F type : Fixed base, K type : with Swivel base.

Vises
Milling F TypeVises
Milling K Type

CODE	Jaw	Body	Max. Clamping Power (kN)	Weight Kg	Unit Per Pc.
	W x Open x Depth mm	L x W x H mm			
F Type (Fixed Base)					
61 37 41	102 x 65 x 35	310 x 123 x 84	7.84	8	
42	132 x 82 x 37	382 x 148 x 98	9.80	12	
43	153 x 112 x 43	465 x 183 x 109	12.74	21	
44	204 x 146 x 63	608 x 233 x 145	16.66	43	
K Type (with Swivel Base)					
61 37 46	102 x 65 x 35	310 x 123 x 84	7.84	8	
47	132 x 82 x 37	382 x 148 x 98	9.80	12	
48	153 x 112 x 43	465 x 183 x 109	12.74	21	
49	204 x 146 x 63	608 x 233 x 145	16.66	43	

Steel Tool Boxes

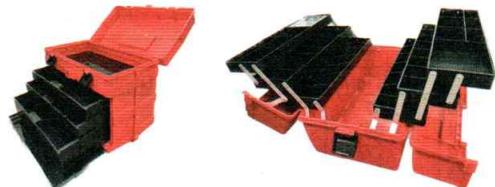


Spare Parts Box Suitcase Quonset V-Type

Unit Per Pc.

CODE	Shape	Dimensions in mm
		Length x Width x Height
61 38 05	Spare Parts Boxes	200 x 150 x 100
		350 x 200 x 200
		400 x 400 x 150
		400 x 400 x 300
		800 x 400 x 300
61 38 10	Suitcase	260 x 135 x 75
		300 x 160 x 75
		360 x 200 x 75
61 38 13	Quonset	260 x 120 x 100
		290 x 150 x 100
		350 x 150 x 100
61 38 16	V-Type	540 x 210 x 190
		700 x 210 x 190

Plastic Tool Boxes



Rectangular box with Drawers

V-Type

Unit Per Pc.

CODE	Shape	Dimensions in mm
		Length x Width x Height
61 38 19	Rectangular Box with Drawers	420 x 240 x 330
		450 x 270 x 230

Parts Cabinets

Gabinetes con Separaciones パーツキャビネット 配件柜



Unit Per Set

CODE	Drawers	Size W x D x H mm
61 38 21	10	243 x 238 x 253
	15	358 x 238 x 253
	24	358 x 238 x 379
61 38 24	40	487 x 238 x 500
	72	487 x 238 x 880
	72	555 x 275 x 880
61 38 27	21	440 x 275 x 570
	36	574 x 272 x 690
	48	574 x 272 x 880

27. Tool Boxes / Part Cabinets

Handy Tool Sets

Juegos Prácticos de Herramienta 手提工具セット 便携工具组

Basic tool set furnished in a carrying case contains the necessary tools for mechanics to perform daily maintenance activities.



61 38 01



61 38 02

Contents in One Set

61 38 01	61 38 02
Diagonal Cutting Plier	Diagonal Cutting Plier
Long Nose Plier	125 mm
Side Cutting Plier	150 mm
Screwdriver Set (handle in neon)	150 mm
Handle only Tweezers	125 mm
Adjustable Wrench	150 mm
Soldering Iron, 100V 30W	150 mm
Solder, Paste, Punch, Chisel, Pencil, Duster-Cloth	Phillips Screwdriver
	Nut Driver
	Alignment Driver
	File (Flat and Round)
	Soldering Iron, 100V 60W
	Solder Tip Cleaner
	Heat Sink
	Solder Aid (2-Pcs.)
	Convex Rule, Solder
61 38 01	Handy tool set carrying case Contains 14 tools
61 38 02	Handy tool set carrying case Contains 20 tools

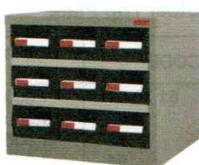
Tool Boxes

Cajac de Herramienta 工具箱 工具箱

Various types of tool boxes and tool cabinets made of steel or plastic are available.

Steel Drawer

Steel made drawers encased in a steel frame.



Unit Per Set

CODE	Drawers	Size W x D x H mm
61 38 31	10	245 x 240 x 255
32	15	360 x 240 x 255
33	24	360 x 240 x 380
34	40	477 x 240 x 465
35	72	475 x 240 x 870

Plastic Parts Cases

Estuches de Plástico con Separaciones

プラスチックパーティクルーケース 塑料配件箱



Suitcase type parts case made of plastic. The inside is divided into small compartments.

Unit Per Pcs.

CODE	Size W x D x H mm	Compartments
61 38 36	333 x 228 x 72	16
37	360 x 252 x 104	15

Plastic Multi Tool Boxes

Cajas de plástico para herramientas

ハンガーラックコンテナ 塑料多功能工具箱



Unit Per Pcs.

CODE	Colour	Capacity ltr	Size mm
			Width x Depth x Height
61 38 41	Red	1.0	113 x 201 x 75
42	Blue		
61 38 43	Blue	2.4	150 x 201 x 125
44	Yellow		
61 38 45	Blue	5.1	143 x 401 x 140
46		10.3	225 x 400 x 175
47		22.3	450 x 400 x 175

Tools & Parts Cabinets

Herramientas y Gabinetes 工具部品収納キャビネット 工具和备件柜

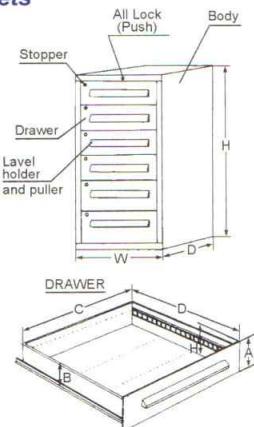
Designed, engineered and built to industrial standards to withstand continuous and rugged service. Suitable for use in marine storage systems. As a wide range of fabrications of models are possible, please ask or write for catalogues before ordering.

Master Tools & Parts Cabinets

The system cabinet consists of 4 standard body sizes and 5 standard drawer sizes, and by their combination, adjusting the drawer rail position, many types of cabinets can be fabricated.

Storing capacity is up to 1,000 kg. Comes equipped with a device to prevent the cabinet from moving when the ship is pitching and rolling.

The standard sizes of the bodies and drawers are as follows.



Cabinet Body

How to order: CODE

Master tools & parts cabinet body, steel, HEIGHT, WIDTH, DEPTH

Unit Per Pcs.

CODE	Height mm	Width mm	Depth mm
61 38 51	902	713	711
52	1,002	713	711
53	1,202	713	711
54	1,402	713	711

Cabinet Drawer Only

How to order: CODE

Master tools & parts cabinet drawer, steel, SIZE A, C and D mm

Unit Per Pcs.

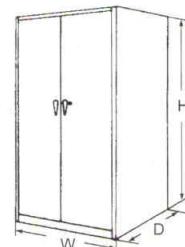
CODE	A mm	B mm	C mm	D mm	H mm
61 38 55	150	90	600	600	125
56	200	140	600	600	175
57	250	140	600	600	225
58	300	200	600	600	275
59	350	200	600	600	325

Master Tools & Parts Lockers

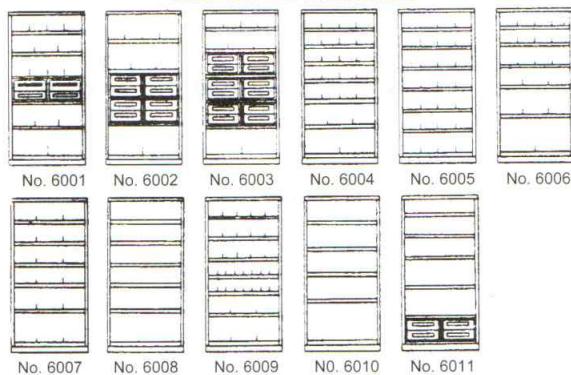
Equipped with full height locking doors, adjustable shelves, and separators. There are 11 standard models whose inside arrangements are illustrated below.

Locker Size

H mm	W mm	D mm
1,800	900	600



ELEVEN TYPE LOCKER



Master Tools & Parts Locker

Unit Per Set

CODE	Type No.	Weight kg	CODE	Type No.	Weight kg
61 38 61	6001	145	61 38 67	6007	124
62	6002	152	68	6008	112
63	6003	179	69	6009	142
64	6004	134	70	6010	105
65	6005	136	71	6011	133
61 38 66	6006	125			

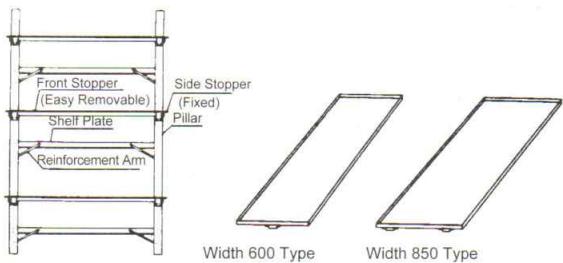
Steel Top Plate

Unit Per Set

CODE	Width mm	Depth mm	Height mm	Weight Kg
61 38 91	1,000	700	800	165
92	1,500	700	800	202
93	1,800	700	800	237
94	2,000	700	800	251
95	2,000	1,000	800	280
61 38 96	1,800	1,000	800	265

Shelves:

Standard types are illustrated below, but the number of plates can vary. Also, free spacing plates are available. Specify the type required by the shelf and frame dimensions listed below.

**How to order: CODE**

Shelves, steel, WIDTH, DEPTH, and HEIGHT mm

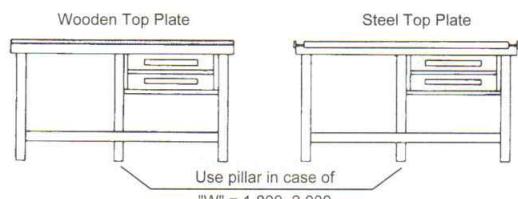
Shelf

Unit Per Set

CODE	Width mm	Depth mm	Height mm	Weight Kg	Capacity Kg
61 38 75	1,200	600	2,300	124	540
76	1,200	850	2,300	160	360
77	1,400	600	2,300	137	490
78	1,400	850	2,300	178	330
79	1,600	600	2,300	149	440
61 38 80	1,600	850	2,300	196	300

Work Benches

Heavy duty design for use in the Engine Room. Wooden top plate and steel top plate types are available.

**How to order: CODE**

Work bench, steel, TYPE of TOP PLATE, WIDTH, DEPTH and HEIGHT mm

Wooden Top Plate

Unit Per Set

CODE	Width mm	Depth mm	Height mm	Weight Kg
61 38 85	1,000	700	800	154
86	1,500	700	800	189
87	1,800	700	800	222
88	2,000	700	800	234
89	2,000	1,000	800	270
61 38 90	1,800	1,000	800	256

Steel Top Plate

Unit Per Set

CODE	Width mm	Depth mm	Height mm	Weight Kg
61 38 91	1,000	700	800	165
92	1,500	700	800	202
93	1,800	700	800	237
94	2,000	700	800	251
95	2,000	1,000	800	280
61 38 96	1,800	1,000	800	265

28. Drum Opening Spanners / Drum Cocks**Drum Opening Spanners****Malleable Steel**

Llaves para Abrir bidón Maleable ドラム缶用スパンナ 开桶板手

A tool designed for opening drums, plugs and caps in an easier, quicker and safer way.



61 40 01 Spanner, drum opening

Pc.

Drum Cocks**for 1-1/2 & 2 inch**

Gifos de Bidón/Para 1-1/2 y 2 pulgadas ドラムコック 油桶考克

Drum cock has invasive fittings, one of a 1-1/2" thread size and the other of a 2" thread size. Will fit to all kinds of drums and can safely hold oil, gasoline, kerosene, alcohol, light varnishes, clear lacquers, and solvents of all kinds.

61 40 04 Cock, drum oil, adjustable 1-1/2 & 2 inch

Pc.

**29. Drum Pumps****Rotary Hand Pumps**

Bombas de Transvase Rotoria ロータリーポンプ 手摇泵

Economical and durable barrel and refueling pump unit complete with spout, suction pipe and bung attachment. Most often used for dispensing light to medium grade cutting and lubricating oils, solvents, and fuels.



61 40 06 Rotary hand pump 3/4 inch

" 1 "

Pc.

Plastic Hand Pumps

Bombas Manuales de Achique, Plástico

プラスティック製ポンプ 塑料手泵

A plastic, manual, suction pump; used for all purpose light pumping or dispensing work. Overall length 540 mm.



61 40 10	Pump, hand, plastic	Pc.
----------	---------------------	-----

Plastic Hand Pumps for Drum

Bombas Manuales de Achique para Bidón, Plástico
プラスティック製ドラム用ポンプ 油桶用塑料手泵

Same as above but of a larger size. Overall length is 1,200 mm.



61 40 11	Pump, hand plastic for drum	Pc.
----------	-----------------------------	-----

Wing Pumps, Hand Operated

Bombas de Achique Rotativa Manual ウイングポンプ 翼式手动泵

This semi-rotary pump will produce a steady stream of liquid. A double blade impeller assures a high pumping rate with greater efficiency. To be installed between pipes.



Unit Per Pcs.

CODE	Pipe Size mm	Capacity per Minute ltr	Weight Kg
61 40 14	15	14	4.7
15	20	18	6
16	25	28	8
61 40 17	32	36	12
18	40	54	17
19	50	75	27

30. Drum Hooks / Lifting Clamps

Drum Hooks

Gafas Descarga Bidones ドラム用フック 桶钩

For 1 Drum

Designed for lifting drum barrels with a hanging drum rib by hooks. Hooks with wire or chain can be made to order if required.



61 40 25	Drum hook, chain, for one drum	Set
----------	--------------------------------	-----

For 2 Drums

Quadruple chain sling with master link & drum hooks for lifting two drum barrels simultaneously.



61 40 26	Drum hook, chain, for 2 drums	Set
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Clamps

Garra クランプ 轧头

Drum Clamp

Designed to accommodate a large variety of drums with or without the lids removed. Drums can be lifted from a horizontal or vertical position and can also be reversed.



Max. Jaw Opening mm	Capacity Tons	Weight Kg
18	0.5	2
61 40 28	Clamp, drum, capacity 0.5 ton	Pc.

Steel Plate Clamp

Suitable for use in the vertical lifting of steel plates. Please specify the model type required based upon the size of the jaw opening and the lifting capacity of the clamp.



Unit Per Pcs.

CODE	Capacity Tons	Max. Jaw Opening	Eye ID mm	Weight Kg
61 40 30	0.5	22	35	1.5
31	1	28	46	3
32	2	35	61	6
33	3	41	74	9
34	5	54	92	18

Steel Structure Clamp

Suitable for use in lifting steel structures such as H, I, C, L and T shaped steel. Please specify the model type required based upon the size of the jaw opening and the lifting capacity of the clamp.



Unit Per Pcs.

CODE	Capacity Tons	Jaw Opening mm	Eye ID mm	Weight Kg
61 40 37	1	1 - 13	23	1.5
38	2	3 - 22	30	3.7
39	3	22 - 45	36	8.1

31. Hose Bands / Pipe Clamps

Hose Bands

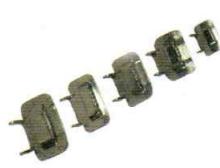
Abrazaderas de Manguera ホースバンド 喉箍

An extremely flexible one piece hose band that gives perfect circumference contact even on irregular surfaces. Made from galvanized steel and stainless steel sealed by gear drive principle, this heavy duty clamp will assure a leak proof seal. When ordering, please indicate the outside diameter of the corresponding hose.



Steel

CODE	Size mm	CODE	Size mm	CODE	Size mm	Unit Per Pcs
61 40 51	8-14	61 40 55	22-32	61 40 59	68 - 85	
52	11-17	56	32-44	60	77 - 95	
53	13-20	57	46-56	61	87 - 112	
54	15-24	58	58-75			



Banding Buckle

Banding Screw Buckle

Stainless Steel

CODE	Size mm	CODE	Size mm	CODE	Size mm	Unit Per Pcs
61 40 65	8-14	61 40 69	22-32	61 40 73	68 - 85	
66	11-17	70	32-44	74	77 - 95	
67	13-20	71	46-56	75	87 - 112	
68	15-24	72	58-75			

Banding Tool : Tensioning capability over 1 ton weight 2 kg.

Banding Band : 30 mtrs/roll of 5 sizes stainless steel made.

Banding Buckle : 100 pcs/box of 5 sizes stainless steel made.

Banding Screw Buckle : 50 and 25 pcs/box 3 sizes.

Hose Bands**Extra Heavy Duty**

Abrazaderas de Manguera/Reforzadas

High Strength Hose Band 软管卡箍

Double Bolt**Interlock**

Made from malleable iron.

Made from structural steel.



Unit Per Pcs.

Double Bolt Type			Interlock Type			
CODE	For Hose O.D. mm	CODE	For Hose O.D. mm	CODE	For Hose O.D. mm	Unit Per Pcs.
61 37 94	30 - 40	61 40 86	140-153	61 40 92	31.0 - 35.0	
99	35 - 45	61 38 40	155-165	93	40.0 - 44.0	
61 38 00	40 - 50	61 40 87	165-175	94	47.5 - 52.5	
03	45 - 55	61 38 48	170-180	95	56.5 - 60.5	
04	50 - 60	49	180-190	96	73.0 - 77.0	
61 40 80	60 - 65	61 40 88	195-205			
61 38 18	65 - 75	61 38 50	200-210			
61 40 81	78 - 85	61 40 89	215-225			
82	85 - 95	61 38 60	220-230			
83	90 - 100	72	230-240			
61 38 30	100 - 110	61 38 73	240-250			
38	115 - 125	61 40 90	285-300			
39	135 - 145					

Straub Couplings

Acoplamientos Straub ストラブカップリング 管接头

A very useful clamp for connecting pipes easily and quickly without using pipe fittings or doing welding work. Designed for use with casing, rubber sleeve, bolt nut and washers. A grip type and flexible type are available.



Grip Type

Flex Type

Banding Clamps & Tools

Abrazaderas y Herramientas バンドクランプ 卡箍工具

These products have a wide range of applications for hose and pipe fastening and are used in almost all industries. Tensioning tools, band, buckles, performed clamps, hose couplings, mounting brackets, accessories and spare parts offer a universal and economical fastening system. The products will connect, clamp, fasten, secure and fix hose, pipe, cables, signs, boards, etc.



Banding Tool



Banding Band

Main Material Stainless Steel SUS 316, 304 & Galvanized

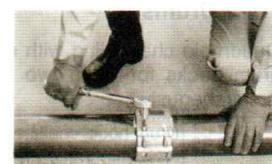
Rubber Sleeves EPDM For Seawater, Air, Inert Gas, etc.

NBR For Oil, Organic Gas

Working Pressure Up to 16 kgf/cm²

EPDM denotes Ethylene Propylene Dien Rubber

NBR denotes Acrylonitrile-butadiene Rubber



How to order: CODE

Pipe coupling, Straub, grip type(Grip-L or Metal Grip), MATERIAL of SLEEVE, NOMINAL SIZE

Unit Per Pc.

Straub-Grip-L Type

Rubber (EPDM) Sleeve			Rubber (NBR) Sleeve		
CODE	Nominal Size	Pipe OD mm	CODE	Nominal Size	Pipe OD mm
61 41 20	20A	26 - 28	61 41 26	20A	26 - 28
21	25	33 - 35	27	25	33 - 35
22	32	37 - 39	28	32	37 - 39
23	40	47 - 49	29	40	47 - 49
31	50	57 - 61	41	50	57 - 61
61 41 32	65	74 - 78	61 41 42	65	74 - 78
33	80	87 - 93	43	80	87 - 93
34	100	112 - 118	44	100	112 - 118
35	125	137 - 142	45	125	137 - 142
36	150	165 - 171*	46	150	165 - 171*
61 41 24	200	217 - 221**	61 41 30	200	217 - 221**
25	250	270 - 276***	37	250	270 - 276***

Working Pressure: * 13 bar, ** 10 bar, *** 4 bar

Unit Per Pc.

Straub-Metal-Grip Type - Significantly stronger design

Rubber (EPDM) Sleeve			Rubber (NBR) Sleeve		
CODE	Nominal Size	Pipe OD mm	CODE	Nominal Size	Pipe OD mm
61 41 38	150	165 - 171*	61 41 47	150	165 - 171*
39	200	217 - 221**	48	200	217 - 221**
40	250	270 - 276***	49	250	270 - 276***

Working Pressure: *16 bar (SUS304), **16 bar (SUS304), ***12 bar (Galvanized)

How to order: CODE

Pipe coupling, Straub, flex type, MATERIAL of SLEEVE, NOMINAL SIZE

Unit Per Pc.

Straub-Flex Type

Rubber (EPDM) Sleeve			Rubber (NBR) Sleeve		
CODE	Nominal Size	Pipe OD mm	CODE	Nominal Size	Pipe OD mm
61 41 59	40A	47 - 50	61 41 69	40A	47 - 50
50	50	57 - 61	60	50	57 - 61
51	65	74 - 78	61	65	74 - 78
52	80	87 - 93	62	80	87 - 93
53	100	112 - 118	63	100	112 - 118
61 41 54	125	137 - 142	61 41 64	125	137 - 142
55	150	165 - 171	65	150	165 - 171
56	200	211 - 221*	66	200	211 - 221*
57	250	263 - 273**	67	250	263 - 273**
58	300	314 - 324***	68	300	314 - 324***

Working Pressure: * 10 bar, ** 8 bar, *** 7 bar

Fire Proof Jackets for Straub Coupling

The Fire Proof Jacket can be added to Straub Couplings that have already been installed, quickly and easily upgraded to the Fire-Fence version, in case fire protection is required. Available for models Straub-Metal-Grip and Straub Grip-L. Please specify the size of coupling when ordering.

**How to order: CODE**

Straub-FireFence Upgrade Kit to Straub-Metal-Grip or Straub-Grip-L coupling, NOMINAL SIZE

Unit Per Pc.

Straub-FireFence Upgrade Kit

to Straub-Grip-L Couplings			to Straub-Metal-Grip Couplings		
CODE	Nominal Size	Pipe OD mm	CODE	Nominal Size	Pipe OD mm
61 42 71	20A	26.9	61 42 83	20A	26.9
72	25	33.7	84	25	33.7
73	32	38.0	85	32	38.0
74	40	48.3	86	40	48.3
75	50	60.3	87	50	60.3
61 42 76	65	76.1	61 42 88	65	76.1
77	80	88.9	89	80	88.9
78	100	114.3	90	100	114.3
79	125	139.7	91	125	139.7
80	150	168.3	92	150	168.3
61 42 81	200	219.1	61 42 93	200	219.1
82	250	273.0	94	250	273.0

Straub Clamps

Abrazaderas Straub ストラブクランプ 管夾



A clamp for the quick repair of pit holes, punctures or splits in steel pipe. Repairs leaks on water, gas, oil and pressure steam lines up to normal working pressure 16 kgf/cm². The features are the same as the Straub Couplings. Coupling material is Stainless Steel SUS316.

How to order: CODE

Pipe clamp, Straub, MATERIAL of SLEEVE, NOMINAL SIZE

Unit Per Pc.

Straub-Open-Flex Type

Rubber (EPDM) Sleeve			Rubber (NBR) Sleeve		
CODE	Nominal Size	Pipe OD mm	CODE	Nominal Size	Pipe OD mm
61 41 79	40A	47 - 50	61 41 89	40A	47 - 50
70	50	57 - 61	80	50	57 - 61
71	65	74 - 78	81	65	74 - 78
72	80	87 - 93	82	80	87 - 93
73	100	112 - 118	83	100	112 - 118
61 41 74	125	137 - 142	61 41 84	125	137 - 142
75	150	165 - 171	85	150	165 - 171
76	200	211 - 221*	86	200	211 - 221*
77	250	263 - 273**	87	250	263 - 273**
78	300	314 - 324***	88	300	314 - 324***

Working Pressure: * 10 bar, ** 8 bar, *** 7 bar

Rapid Response ClampsAbrazadera de respuesta rápida
緊急修理用クランプ 緊急修理用夹具

The fastest and easiest way to temporarily repair pipe leaks and bursts. Taking less than 60 seconds to install by one operator and featuring a fully self contained design, which does not require the use of tools. Made from marine-grade stainless steel and featuring an innovative patented design, the system features a choice of three grades of material in the lip-seal,

making it suitable for water, potable water, steam, gas and most chemicals/petroleum liquids.

It fits pipe sizes ranging from 1.5" - 36" (DN38 mm - DN930 mm) and is available in four clamp widths, with each covering a wide range of diameters. It is a reusable repair clamp and can be applied to pressurized pipes up to 20 bar. Clamps are all ABS approved.

Material Specification

Casing	Stainless Steel SS 316
Lip-Seal	Nitrile, Neoprene or Therban
Working Temperature	Up to 165 DEG C

How to order: CODE

Rapid Response Clamp, NOMINAL SIZE, CLAMP WIDTH, SEAL (NITRILE, NEOPRENE or THERBAN)

Unit Per Pcs.

CODE	Pipe Dia to Seal mm (inch)	Clamp Width (mm)	Effective Seal Width (mm)	Number of Cam Lock Handles
61 53 01 02 03 04	38 - 75 (1.5" - 3")	70	40	Single (1)
		148	118	Double (2)
		210	180	Triple (3)
		272	242	Quad (4)
61 53 09 10 11 12	75 - 100 (3" - 4")	70	40	Single (1)
		148	118	Double (2)
		210	180	Triple (3)
		272	242	Quad (4)
61 53 13 14 15 16	100 - 220 (4" - 8")	70	40	Single (1)
		148	118	Double (2)
		210	180	Triple (3)
		272	242	Quad (4)
61 53 17 18 19 20	220 - 350 (8" - 14")	70	40	Single (1)
		148	118	Double (2)
		210	180	Triple (3)
		272	242	Quad (4)
61 53 21 22 23 24	350 - 500 (14" - 20")	70	40	Single (1)
		148	118	Double (2)
		210	180	Triple (3)
		272	242	Quad (4)

*Larger sizes up to DN930 (36") are available upon request.

Name of Mfr.: World Wide Metric Inc.

Material Specification

	Type I	Type IV
Casing	AISI 304/DIN 1.4301	AISI 316L/DIN 1.4301
Fasteners	Alloy Steel, PTFE Coated	AISI 316 / 316L
Gasket	EPDM (NBR is available on request)	
Working Pressure		16 Bar

How to order: CODE

Pipe coupling, TEEKAY Axilock-FP, Fire Resistant, NOMINAL SIZE, MATERIAL (Type I or Type IV), GASKET (EPDM or NBR), and SPECIFY THE SHIP'S CLASSIFICATION

Unit Per Pcs.

CODE	Pipe OD (mm)	O.D. Tolerance (mm)	CODE	Pipe OD (mm)	O.D. Tolerance (mm)
61 42 30 31 32 33	21.3	21.0 - 21.6	61 42 51 52 53 54	98.0	97.0 - 100.0
	26.9	26.6 - 27.3		101.6	100.5 - 103.5
	28.0	27.7 - 28.4		104.0	103.0 - 106.0
	30.0	29.7 - 30.4		108.0	107.0 - 110.0
34	33.7	33.3 - 34.1	55	110.0	109.0 - 112.0
61 42 35 36 37 38	35.0	34.7 - 35.4	61 42 56 57 58 59	114.3	113.0 - 116.0
	38.0	37.0 - 39.0		118.0	117.0 - 120.0
	42.4	41.4 - 43.4		127.0	126.0 - 129.0
	44.5	43.5 - 45.5		129.0	128.0 - 131.0
39	48.3	47.3 - 49.3	60	133.0	132.0 - 135.0
61 42 40 41 42 43	54.0	53.0 - 55.0	61 42 61 62 63 64	139.7	139.0 - 142.0
	57.0	56.0 - 58.0		141.3	140.5 - 143.5
	60.3	59.0 - 62.0		144.0	143.0 - 146.0
	63.0	62.0 - 65.0		154.0	153.0 - 156.0
44	67.0	66.0 - 69.0	65	159.0	158.0 - 161.0
61 42 45 46 47 48	70.0	69.0 - 72.0	61 42 66 67 68 69	165.0	164.0 - 167.0
	73.0	72.0 - 75.0		168.3	167.0 - 170.0
	76.1	75.0 - 78.0		170.0	169.0 - 172.0
	82.5	81.5 - 84.5		193.7	193.0 - 196.0
49	84.0	83.0 - 86.0	70	219.1	218.0 - 221.0
61 42 50	88.9	88.0 - 91.0			

Note: Working pressure for pipe OD 193.7 mm and 219.1 mm is 12 Bar

Name of Mfr.: Teekay Couplings Ltd.

Fire Resistant Couplings

Teekay Axilock-FP

Acoplamientos resistentes al fuego

耐火性カップリング 防火型管道连接器



The Teekay Axilock-FP represents the ultimate in high security fire protected mechanical pipe couplings. With its unique internal fire sleeve and double casing design, it is plain to see why this coupling is the primary pipe connection of choice in the marine and naval market sectors. The Axilock-FP has been tested to military standards for shock and fire resistance and is fully compliant with current IACS regulations, including ISO19921/19922 fire testing and ISO1182 non-combustibility testing.

Available in two types for material selection, Type I(AISI 304) and Type IV(AISI 316L). Type approved by all the major marine classification bodies so please specify the ship classification when ordering.

Repair Clamp Joints for Elbow Pipe

Grapa de sujeción para reparación de codos de tuberías

エルボーバイプ用クランプジョイント 卷管用夹紧接头

To protect and repair the leakage on cracked or welded elbow (tee, cross) pipes line.



Unit Per Pcs.						
CODE	Type	Size	Length mm	W/P kgf/cm ²		T.Q. (N.m)
				Industrial	Ship	
61 40 08	RCH-E	15A	26.3	22	11	3 - 5
09	RCH-E	20A	26.3	18	8	3 - 5
12	RCH-E	25A	26.3	18	8	3 - 5
13	RCH-E	32A	26.3	18	8	3 - 5
20	RCH-E	40A	26.3	18	8	3 - 5
61 40 21	RCH-E	50A	41.8	16	7	12 - 15
22	RCH-E	65A	41.8	16	7	12 - 15
23	RCH-E	80A	52.4	14	7	20 - 25
24	RCH-E	100A	52.4	14	7	20 - 25
27	RCH-E	125A	52.4	14	7	30 - 32
61 40 29	RCH-E	150A	52.4	14	7	30 - 32
35	RCD-E	200A	57.5	12	6	32 - 35
36	RCD-E	250A	57.5	12	6	32 - 35
40	RCD-E	300A	58.5	10	5	45 - 50
41	RCD-E	350A	58.5	10	5	45 - 50
61 40 42	RCD-E	400A	58.5	10	5	55 - 60
43	RCD-E	450A	58.5	8	4	55 - 60
44	RCD-E	500A	58.5	7	3	65 - 70

*W/P: Working Pressure T.Q: Locking Torque Value

Name of Mfr.: YOUNGNAM METAL CO.,LTD

Unit Per Pcs.						
CODE	Type	Size	Length mm	W/P kgf/cm ²		T.Q. (N.m)
				Industrial	Ship	
61 40 45	RCH-E	15A	26.3	22	11	3 - 5
46	RCH-E	20A	26.3	18	8	3 - 5
47	RCH-E	25A	26.3	18	8	3 - 5
48	RCH-E	32A	26.3	18	8	3 - 5
49	RCH-E	40A	26.3	18	8	3 - 5
61 40 50	RCH-E	50A	41.8	16	7	12 - 15
62	RCH-E	65A	41.8	16	7	12 - 15
63	RCH-E	80A	52.4	14	7	20 - 25
64	RCH-E	100A	52.4	14	7	20 - 25
76	RCH-E	125A	52.4	14	7	30 - 32
61 40 77	RCH-E	150A	52.4	14	7	30 - 32
78	RCD-E	200A	57.5	12	6	32 - 35
79	RCD-E	250A	57.5	12	6	32 - 35
91	RCD-E	300A	58.5	10	5	45 - 50
97	RCD-E	350A	58.5	10	5	45 - 50
61 40 98	RCD-E	400A	58.5	10	5	55 - 60
99	RCD-E	450A	58.5	8	4	55 - 60
61 41 00	RCD-E	500A	58.5	7	3	65 - 70

*W/P: Working Pressure T.Q: Locking Torque Value

Name of Mfr.: YOUNGNAM METAL CO.,LTD

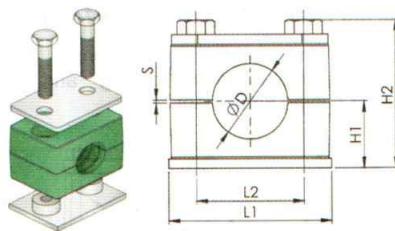
Tube Clamps

Abrazaderas para tubos チューブクランプ 管夹

Tube clamps help prevent the loosening of joints and welds by reducing noise, absorbing shock and dampening vibration. In addition to preventing vibration transmission, they provide solid support that eases the stress caused by unequal movements in tubing installations. Clamp kits for each series include: clamp body, weld plate, cover plate and bolts. Clamps are available in metric and imperial sizes. Hardware available in Metric or UNC Thread, as well as steel or stainless steel. Llaves de Vaso ソケットレンチ 套筒扳手套装

Standard Series (According to DIN 3015/1)

For average load and moderate vibration installations. Ideal for mobile equipment, machine tools and instrumentation plumbing applications.



Materials

Clamp body : Polypropylene

Cover plates : Galvanized steel (ST-37)

Screws/Bolts : Galvanized steel (ST-37)

Weld plates : Phosphated steel (ST-37)

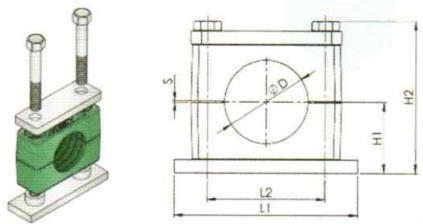
"Kits also available with Stainless steel hardware."

Unit Per Pcs.						
CODE	Size D mm	Nom.	Inch	Dimensions mm		
				L1	L2	H1
Group S1						
61 38 74	6	-	-	-	-	-
81	6.4	-	-	1/4	-	-
82	8	-	-	5/16	-	-
83	9.5	-	-	3/8	36	20
84	10	R 1/8	-	-	16.5	37
97	12	-	-	-	0.4	-
Group S2						
61 38 98	12.7	-	-	1/2	-	-
99	13.5	R 1/4	-	-	-	-
61 39 00	14	-	-	-	42	26
01	15	-	-	-	19.5	43
02	16	-	-	5/8	-	-
03	17.2	R 3/8	-	-	-	-
04	18	-	-	-	-	-
Group S3						
61 39 05	19	-	-	3/4	-	-
06	20	-	-	-	-	-
07	21.3	R 1/2	-	-	-	-
08	22	-	-	7/8	50	33
09	23	-	-	-	21	46
10	25	-	-	-	-	-
11	25.4	-	1	-	-	-
Group S4						
61 39 12	26.9	R 3/4	-	-	-	-
13	28	-	-	60	40	24
14	30	-	-	52	-	-
Group S5						
61 39 15	32	-	-	1-1/4	-	-
16	33.7	R 1	-	-	-	-
17	35	-	-	-	-	-
18	38	-	-	1-1/2	71	52
19	40	-	-	-	32	68
20	42	R 1-1/4	-	-	-	-
Group S6						
61 39 21	44.5	-	-	1-3/4	-	-
22	48.3	R 1-1/2	-	-	86	66
23	50.8	-	2	-	36	76
Group S7						
61 39 24	57.2	-	-	2-1/4	-	-
25	60.3	R 2	-	-	-	-
26	63.5	-	-	2-1/2	122	94
27	70	-	-	2-3/4	51.5	107
28	73	-	-	-	-	-
29	76.1	R 2-1/2	3	-	-	-
Group S8						
61 39 30	88.9	R 3	-	3-1/2	-	-
31	101.6	-	4	4	148	120
					64	132
					0.8	-

Name of Mfr.: World Wide Metric

Heavy Series (According to DIN 3015/2)

For higher load and vibration installations. Applications include primary metal manufacturing and heavy-duty construction or mining equipment.



Materials

Clamp body : Polypropylene
Cover plates : Galvanized steel (ST-37)
Screws/Bolts : Galvanized steel (ST-37)
Weld plates : Phosphated steel (ST-37)

"Kits are also available with Stainless steel hardware."

Unit Per Pcs.

CODE	Size D mm	Nom.	Inch	Dimensions mm					S
				L1	L2	H1	H2		
Group H1									
61 39 32	6	-	-						
33	6.4	-	1/4						
34	8	-	5/16						
35	9.5	-	3/8						
36	10	R 1/8	-						
37	12	-	-						
38	12.7	-	1/2	74	33	24	55	0.6	
39	13.5	R 1/4	-						
40	14	-	-						
41	15	-	-						
42	16	-	5/8						
43	17.2	R 3/8	-						
44	18	-	-						
Group H2									
61 39 45	19	-	3/4						
46	20	-	-						
47	21.3	R 1/2	-						
48	22	-	7/8						
49	25	-	-	86	45	32	71	0.6	
50	25.4	-	1						
51	26.9	R 3/4	-						
52	28	-	-						
53	30	-	-						
Group H3									
61 39 54	32	-	1-1/4						
55	33.7	R 1	-						
56	35	-	-						
57	38	-	1-1/2	100	60	38	83	0.6	
58	40	-	-						
59	42	R 1-1/4	-						
Group H4									
61 39 60	44.5	-	1-3/4						
61	48.3	R 1-1/2	-						
62	50.8	-	2						
63	55	-	-						
64	57	-	2-1/4	140	90	54.5	117	2	
65	60.3	R 2	-						
66	63.5	-	2-1/2						
67	65	-	-						
68	70	-	2-3/4						
Group H5									
61 39 69	73	-	2-7/8						
70	76.1	R 2-1/2	3						
71	80	-	-	180	122	70	150	2	
72	82.5	-	3-1/4						
73	88.9	R 3	3-1/2						

(to be continued)

CODE	Size D mm	Nom.	Inch	Dimensions mm				
				L1	L2	H1	H2	S
Group H6								
61 39 74	100	-	-					
75	101.6	R 3-1/2	-					
76	108	-	4-1/4					
77	114.3	R 4	-					
78	127	-	5					
79	133	-	5-1/4					

Group H7								
61 39 80	139.7	R 5	-	7				
81	152.4	-	6					
82	159	-	6-1/4					
83	165	-	6-1/2					
84	168.3	R 6	-					

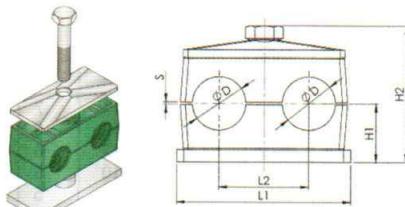
Group H8								
61 39 85	177.8	-	7					
86	193.7	-	7-5/8					
87	216	-	8-1/2					
88	219.1	R 8	-					

Group H9								
61 39 89	244.5	-	-					
90	273	R 10	-					
91	323.9	R 12	-					

Name of Mfr. : World Wide Metric

Twin Series (According to DIN 3015/3)

For installations with closely placed lines. Ideal for general industrial use and mobile applications with moderate vibration.



Materials								
Clamp body	: Polypropylene							
Cover plates	: Galvanized steel (ST-37)							
Screws/Bolts	: Galvanized steel (ST-37)							
Weld plates	: Phosphated steel (ST-37)							
"Kits are also available with Stainless steel hardware."								

Unit Per Pcs.								
CODE	Size D mm	Nom.	Inch	Dimensions mm				
				L1	L2	H1	H2	S
Group T1								
61 39 94	6	-	-					
95	6.4	-	1/4					
96	8	-	5/16					
97	9.5	-	3/8					
98	10	R 1/8	-					
99	12	-	-					

Group T2								
61 40 00	12.7	-	1/2					
61 41 02	13.5	R 1/4	-					
08	14	-	-					
14	15	-	-					
90	16	-	5/8					
97	17.2	R 3/8	-					
99	18	-	-					

(to be continued)

CODE	Size D mm	Nom.	Inch	Dimensions mm					Unit Per Pc.
				L1	L2	H1	H2	S	
Group T3									
61 42 00	19	-	3/4						
18	20	-	-						
19	21.3	R 1/2	-						
20	22	-	7/8	70	36	23.5	54.5	0.7	
24	23	-	-						
25	25	-	-						
26	25.4	-	1						
Group T4									
61 42 27	26.9	R 3/4	-						
28	28	-	-	85	45	25.5	58.5	0.7	
29	30	-	-						
Group T5									
61 42 95	32	-	1-1/4						
96	33.7	R 1	-						
97	35	-	-						
98	38	-	1-1/2	110	56	32	71.5	0.7	
99	40	-	-						
61 43 00	42	R 1-1/4	-						

Name of Mfr.: World Wide Metric

32. Carborundum Paste

Grinding & Lapping Compound

(Valve Compounds)

Pasta de Esmeril (Compuestos para Válvulas)

バルブコンパウンド 金剛砂磨研膏

For precision lapping, fitting, surfacing, polishing and other general use in machine shops. Universally used for grinding valves. Supplied in 450 grm tin. Please specify grit number when ordering.



Unit Per Tin

CODE	Grade	Grit #	Applications	Unit Per Tin
61 42 01	Micro	3000	Precision lapping and high profile polishing to mirror finishing of metal parts.	
02		2000		
03		1500		
04		1200		
05		1000		
06		800		
61 42 07	Very Fine	600	Fine surface lapping, fine polishing for protection seating of valves, bearing and matting components.	
08		500		
61 41 91		400		
61 42 09	Fine	320	Surface finishing, e.g. valve seats, bearings, bushings, etc.	
10		280		
61 41 92	Medium	240	Surface lapping/reseating exhaust and intake valves.	
61 42 11	Fine	220		
61 42 12	Medium	180	Cleaning of corroded bolt threads & sharpening shears, etc.	
13		150		
61 41 93	Coarse	120	Spot removal of uneven surfaces e.g. conditioning of new gears for smooth running.	
61 42 14		100		
15		80		
61 41 94		60		
61 42 16	Very Coarse	50	Fast removal of high spots and very rough metal surfaces.	
61 42 15		40		
61 42 17		36		

Nozzle Lapping Paste

Pasta Lubricante para Boquillas ノズル用ラッピングペースト 钻孔膏

High grade Silicon Carbide abrasive paste for nozzle lapping. Supplied in 60 grm/tin. Please specify grit number when ordering.



CODE	Grade	Grit	Unit Per Tin
61 42 21	Fine	1200	
61 42 22	Medium	1000	
61 42 23	Coarse	800	

Name of Mfr.: Skatool Marine

Blue Paste - Prussian Blue

Pasta Azul-Azul Prusia ブルー ペースト 研磨膏 (藍油)

For lapping of bearings, high pressure valves, etc. Improved type on red lead for precision lapping work. A jelly-like paste made of super corpuscular dyes furnished in tubes.



61 41 96 | Blue paste, 120 grm/tube | Tub

Tapping Paste

Lubricante de Pasta para taponear y barrenar タッピングペースト 攻丝润滑剂



Used for precision tapping and fitting. It is also a very useful paste for cutting marks, using tapes, drills, reamers, etc.

61 41 98 | Tapping paste 1 kg | Tin

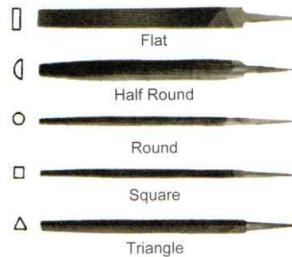
33. Files

Machinist Files

Limas Mecánicas 鉄工ヤスリ

铁锉刀

The illustration right shows the types of files commonly available. These files have double cut teeth as is most common for use under heavier pressure where a fine finish is not required. Single cut files for smoother finishes are also available upon request. Specify from the following tables the type of file required based upon the type of work to be done and the material being used.



How to order: CODE

File, SHAPE, TYPE of CUT, LENGTH

Flat Files - Double Cut

Used by engineers for all kinds of works.

CODE	Cut	Length mm	CODE	Cut	Length mm
61 43 01	Bastard	150	61 43 15		150
02		200	16		200
03		250	17		250
04		300	18		300
05		350	19		350
06		400	20		400
61 43 08	Second Cut	150	61 43 21		150
09		200	22		200
10		250	23		250
11		300	24		300
12		350	25		350
13		400	26		400

Half Round Files - Double Cut

Used mostly in 200, 250 & 300 mm length on concaved surfaces.

Unit Per Pcs.					
CODE	Cut	Length mm	CODE	Cut	Length mm
61 43 28	Bastard	150	61 43 42	Smooth	150
29		200	43	(細)	200
30		250	44	(細)	250
31		300	45	(細)	300
32		350	46	(油)	350
33		400	47		400
61 43 35	Second Cut	150	61 43 49	Dead	150
36		200	50	Smooth	200
37		250	51	(細)	250
38		300	52	(油)	300
39		350	53	(油)	350
40		400	54		400

Triangle Files - Double Cut

Used for cleaning and smoothing out corners and angles. Not suitable for saw filling due to the sharp edges.

Unit Per Pcs.					
CODE	Cut	Length mm	CODE	Cut	Length mm
61 44 15	Bastard	150	61 44 29	Smooth	150
16		200	30	(細)	200
17		250	31	(細)	250
18		300	32	(油)	300
19		350	33	(油)	350
20		400	34		400
61 44 22	Second Cut	150	61 44 36	Dead	150
23		200	37	Smooth	200
24		250	38	(細)	250
25		300	39	(油)	300
26		350	40	(油)	350
27		400	41		400

Round Files - Double Cut

Used on curved surfaces and for enlarging round holes. Sometimes called a rattrail file.

Unit Per Pcs.					
CODE	Cut	Length mm	CODE	Cut	Length mm
61 43 56	Bastard	150	61 43 70	Smooth	150
57		200	71	(細)	200
58		250	72	(細)	250
59		300	73	(細)	300
60		350	74	(細)	350
61		400	75		400
61 43 63	Second Cut	150	61 43 77	Dead	150
64		200	78	Smooth	200
65		250	79	(細)	250
66		300	80	(油)	300
67		350	81	(油)	350
68		400	82		400

Square Files - Double Cut

These types of files are mainly used for enlarging rectangular holes.

Unit Per Pcs.					
CODE	Cut	Length mm	CODE	Cut	Length mm
61 43 84	Bastard	150	61 44 01	Smooth	150
85		200	02	(細)	200
86		250	03	(細)	250
87		300	04	(細)	300
88		350	05	(細)	350
89		400	06		400
61 43 91	Second Cut	150	61 44 08	Dead	150
92		200	09	Smooth	200
93		250	10	(細)	250
94		300	11	(油)	300
95		350	12	(油)	350
96		400	13		400

Needle File Sets

Juegos de Lima de Aguja 組ヤスリ 什錦锉

File sets which are used for precision work. Available in sets consisting of 5 to 12 pieces. Please specify the number of pieces you require in a set as well as the length and the cut of the files as shown in the tables below.



How to order: CODE

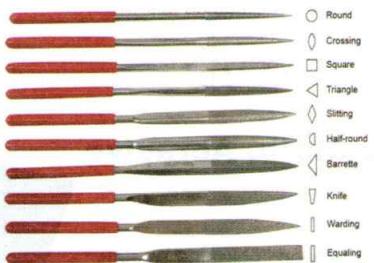
Needle file set, LENGTH, NUMBERS/set, TYPE of CUT

CODE	Cut	Contents	Unit Per Set
215 mm / 5 pcs Set			
61 45 31	2nd Cut	Flat, Half Round, Round,	
32	Smooth	Square and Triangle	
33	D.SMOOTH		
200 mm / 8 pcs Set			
61 45 34	2nd Cut	Flat, Half Round, Round,	
35	Smooth	Square Triangle, Mill,	
36	D.SMOOTH	Shinogi, and Oval	
185 mm / 10 pcs Set			
61 45 37	2nd Cut	Added Knife Edge and Half	
38	Smooth	Round to 8 pcs Set	
39	D.SMOOTH		
170 mm / 12 pcs Set			
61 45 40	2nd Cut	Added Oval, Half Moon	
41	Smooth	Shape to 10 pcs Set	
42	D.SMOOTH		

Electroplated Diamond Needle File Sets

Conjunto de limas de aguja adiamantadas con revestimiento electrolítico
電気めっきダイヤモンド加工組やすり 电镀金刚砂锉刀组

The electroplated diamond needle file set is used by metal workers for precise filing on stone, metal, glass and sculptures. They are also ideal for delicate filing, shaping and creating inside cuts. Files are electroplated uniformly using 150# ~ 240# diamond grit onto high grade steel. Different 10 file shapes included in these sets offer a variety of use for different applications: Equaling, Half-round, Triangle, Square, Round, Warding, Crossing, Knifing, Barrette and Slitting. Size : 4 x 160 mm.



61 45 43 File set, needle, electroplated diamond, 10's Set

Double Saw Files

Limas Dobles de Sierra 両刃摺込やすり 锯齿锉

For filing saw blade teeth and various types of circular saws.



CODE	Length mm	CODE	Length mm	Unit Per Pcs
61 45 51	75	61 45 54	150	
52	100	55	175	
53	130	56	200	

File Handles

Mangos de Lima ヤスリ柄 锉刀柄

Well balanced and shaped handle made of moisture absorbing hard wood.



Unit Per Pcs.

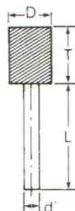
CODE	61 45 60	61 45 61	61 45 62
Length	100 mm	125 mm	150 mm

34. Grinding Wheels/Disc Paper

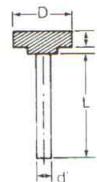
Mounted Wheels

Muelas Taladros Esmerilar 軸付き砥石 回转锉

The mounted wheels are designed for use when ordinary grinding wheels cannot be used. Used in connection with air or electric drilling machines of 6 mm capacity. Please specify the number of the required shape.



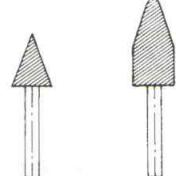
W W with Reinforcement A-4 A-5



A-11 A-12 A-21 A-25 A-26



A-35 A-37 AJ-1 AJ-2



AJ-3 AJ-4 AJ-5 AJ-6 AJ-7



How to order : CODE

Mounted wheel with 6 mm dia shank, TYPE of SHAPE, SIZE D, T, and d mm

CODE	Size mm				CODE	Size mm				Unit Per Pcs.					
	D	T	d	L		D	T	d	L						
Shape W						Shape A-12									
61 45 65	16	16	6	40	61 45 87	16	32	6	40						
66	16	25	6	40	Shape A-21										
67	16	32	6	40	61 45 88	25	25	6	40						
68	19	19	6	40	Shape A-25										
69	19	25	6	40	61 45 89	25	25	6	40						
61 45 70	19	38	6	40	Shape A-26										
71	25	25	6	40	61 45 90	16	16	6	40						
72	25	38	6	40	Shape A-35										
73	25	50	6	40	61 45 91	25	10	6	40						
74	32	19	6	40	Shape A-37										
61 45 75	32	32	6	40	61 45 92	32	8	6	40						
76	38	19	6	40	Shape AJ-1										
77	38	25	6	40	61 45 93	19	25	6	40						
78	38	38	6	40	Shape AJ-2										
79	50	25	6	40	61 45 94	19	38	6	40						
Shape W with Reinforcement						Shape AJ-3									
61 45 80	32	6	6	40	61 45 95	19	38	6	40						
81	38	6	6	40	Shape AJ-4										
82	38	13	6	40	61 45 96	19	45	6	40						
83	50	13	6	40	Shape AJ-5										
Shape A-4						61 45 97	25	13	6	40					
61 45 84	32	32	6	40	Shape AJ-6										
Shape A-5						61 45 98	25	50	6	40					
61 45 85	19	28	6	40	Shape AJ-7										
Shape A-11						61 45 99	25	50	6	40					
61 45 86	22	50	6	40											

Grinding Wheel Dressers

Rectificadoras de muelas

研削砥石ドレッサー 砂轮修整器

Designed for dressing the round grinding stone. Cutter is attached to the bush of the hardened steel case and the bush rotates on the shaft. Attached dust-proof washer is inserted on both sides of the bush to prevent intrusion of sand grains.



CODE	Item	Unit
61 46 06	Dresser Grinding Wheel	Set
07	Wheel Extra for Grinding Dresser 50's	Pkt
08	Wheel Extra Block Type for Grinding Dresser	Set

Disc Sanding Paper, Abrasive

Disco Papel Abrasivo ディスクペーパー 盘式砂纸

Designed for use with portable, grinding machines on all kinds of surfaces (rust & paint removing, feather edging, etc.). Each individual cutting grain is firmly anchored in a resin type adhesive which will withstand high grinding heat.



How to order: CODE

Disc paper, abrasive, DIAM mm, GRIT #

Unit Per Pcs.

CODE	Grit	CODE	Grit	CODE	Grit
Diam. 100 mm					
61 46 11	16	61 46 16	40	61 46 21	120
12	20	17	50	22	150
13	24	18	60	23	180
14	30	19	80	24	220
15	36	20	100	25	240
Diam. 125 mm					
61 46 26	16	61 46 31	40	61 46 36	120
27	20	32	50	37	150
28	24	33	60	38	180
29	30	34	80	39	220
30	36	35	100	40	240
Diam. 150 mm					
61 46 41	16	61 46 46	40	61 46 51	120
42	20	47	50	52	150
43	24	48	60	53	180
44	30	49	80	54	220
45	36	50	100	55	240
Diam. 180 mm					
61 46 56	16	61 46 61	40	61 46 66	120
57	20	62	50	67	150
58	24	63	60	68	180
59	30	64	80	69	220
60	36	65	100	70	240

Grit Numbers are classified as follows:

Coarse Grit No. 16 – 40

Medium Grit No. 50 – 120

Fine Grit No. 150 – 240

Emery Cloth, Abrasive

Tela de Esmeril, Abrasiva

エメリークロス 金钢砂布



Excellent for hand polishing metals.

Size: 230 x 280 mm.

Unit Per Shrt.

CODE	Grit	CODE	Grit	CODE	Grit
61 46 81	30	61 46 87	100	61 46 93	280
82	36	88	120	94	320
83	40	89	150	95	400
84	50	90	180		
85	60	91	220		
61 46 86	80	61 46 92	240		

Emery Tapes, Abrasive

Cinta de Esmeril, Abrasiva エメリーロール 金钢砂布带

Easy to use by simply tearing off the required length of strip. Used for metal cleaning and polishing jobs. The grain is selected aluminium oxide attached to a flexible cloth strap. Length of tape (roll): 36.5 mtr.



How to order: CODE

Emery tape, abrasive, WIDTH mm, GRIT #

Unit Per Rls.

CODE	Grit	CODE	Grit	CODE	Grit
Width 25 mm					
61 47 01	30	61 47 05	80	61 47 09	180
02	40	06	100	10	240
03	50	07	120	11	320
04	60	08	150	12	400
Width 40 mm					
61 47 13	30	61 47 17	80	61 47 21	180
14	40	18	100	22	240
15	50	19	120	23	320
16	60	20	150	24	400
Width 50 mm					
61 47 25	30	61 47 29	80	61 47 33	180
26	40	30	100	34	240
27	50	31	120	35	320
28	60	32	150	36	400



Unit Per Sh.

CODE	Grit	CODE	Grit	CODE	Grit
61 47 66	80	61 47 71	220	61 47 76	400
67	100	72	240	77	500
68	120	73	280	78	600
69	150	74	320	79	700
70	180	75	360	80	800

*Grit No. 120 is recommended for general sanding.

Sand Paper, Abrasive

Papel de Lija, Abrasivo サンドペーパー 砂纸

Ideal abrasive for hand sanding wood, paint fillers, paint under coats and varnishes. Sheet size: 230 x 280 mm.



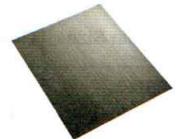
Unit Per Sh.

CODE	Grit	CODE	Grit	CODE	Grit
61 47 51	40	61 47 55	100	61 47 59	220
52	50	56	120	60	240
53	60	57	150	61	320
54	80	58	180	62	400

Sandpaper, Wet & Dry

Papel de Lija, Abrasivo サンドペーパー 砂纸

Flexible and more durable to sand irregular shapes than most other sandpaper thanks to closed-coat abrasive bonding with a waterproof resin. The abrasive particles are bonded with a waterproof adhesive that permits the use of water, oil, and other lubricants. To be used on metal, wood plastic fillers to gain a smooth finish. Sheet size: 230 x 280 mm.



CODE	Grit	CODE	Grit	CODE	Grit
61 47 37	80	61 47 43	240	61 47 49	600
38	100	44	280	50	800
39	120	45	320	63	1,000
40	150	46	360	64	1,200
41	180	47	400	65	1,500
61 47 42	220	61 47 48	500	61 47 81	2,000

Silicon Paper, Abrasive Waterproof (Crocus Paper)

Papel Silicon a Abrasivo Imprmeable (Papel de Azafrán)

耐水シリコンペーパー 耐水砂紙

Designed for hand sanding lacquers and under coats together with water. Used in marine and auto body refinishing. Will leave no scratch marks. The flexible cloth is coated with selected silicon carbide grain. Size: 230 x 280 mm.

Carborundum Oil Stones

Piedra Asentar Combinado 油砥石 金钢砂油磨石

**Carborundum oil stone:**

For carpenters and engineers. May be used dry or with oil or water. Sufficiently porous to assure a good grinding or cutting action in combination with wax or oil.

Combination stone:

A combination of two grit sizes. One side coarse for very dull tools, the other one with a fine grit for clean edging work. May be used wet or dry.

CODE	No.	Dimensions mm
61 47 85	3	100 x 25 x 13
86	24	115 x 38 x 16
87	29	150 x 50 x 25
88	0	205 x 50 x 25
89	Combination	205 x 50 x 25

Carborundum Round Edge Slips

Piedra Afilar Tipo Cuña 檍形油砥石 金钢砂楔形油磨石



A useful abrasive carborundum stone for grinding or edging of tools with curved edges. Maybe used dry or with a moderate application of oil.

CODE	No.	Dimensions mm
61 47 91	20	100 x 25 x 6.4 x 1.6
92	13	115 x 45 x 13 x 3
93	14	115 x 45 x 10 x 3
94	15	115 x 45 x 6.4 x 1.6

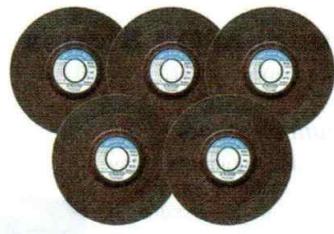
Abrasive Wheels

Discos Abrasivos 研削砥石 砂轮片

Abrasive wheels of various constructions for marine use in machine working and reconditioning parts. These wheels are generally used for cutting, deburring, blending and cleaning operations, and for surfacing finished hard steel, stainless steel, aluminium, carbon and brass. Abrasive wheels, regardless of the type, are constructed by organic or inorganic bonding methods.

1. Organic Bonded Wheels (Resinoid Bonded Wheel)
 Organic wheels are wheels which are bonded by means of an organic material such as resin, rubber, shellac or other similar bonding agents.

2. Inorganic Bonded Wheels (Vitrified Bonded Wheels)
 Inorganic wheels are wheels which are bonded by means of an inorganic material such as clay, glass, porcelain, sodium silicate, magnesium oxychloride, or metal. Wheels bonded with clay, glass, porcelain, or related ceramic materials are characterized as "vitrified bonded wheels."



Grinding Wheel Speed

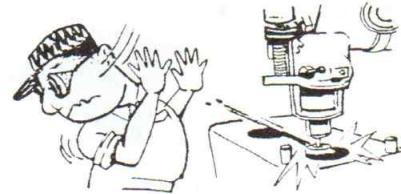
Disco Desbaste 研削丸砥石の周速度 研磨圆形磨石的周速

Note of Caution when ordering grinding wheels:

Surface meter per minutes (SMPM) is the distance in meters that any one abrasive grain on the peripheral surface of a grinding wheel travels in 1 minute.

$$\text{Smpm} = 3.1416 \times \text{Diameter in Meter} \times \text{rpm}$$

The speed at which a grinding wheel works is important because use at too slow a speed wastes abrasive without getting much useful work in return, where as an excessive speed may result in hard grinding action and may introduce the danger of breakage. The grits, grade and structures recommended for specific grinding operations are usually based on the assumption that approximately the recommended speeds will be employed. If for some reason they can not be, then the grade at least must usually be changed to suit the particular condition.



Identification Symbols for Abrasive Wheels. (ISO. JIS)

	No. 1 Straight Wheels	A	305 x 25 x 127	C	60	K	8	V	8J	2,000 mtr/min.
No.	Shape	Face	Size	Kind of Abrasive	Grain Size	Grade	Structure	Kind of Bond	Bond Modification	Max. Speed
1	Straight	A		A (=Brown Alumina)	Coarse 10 ↑ 240	Soft E ↑ 0	Dense F 1	V=	1L	1,500
2	Cylinder				12 280	G	H 2	Vitrified	2Q	
0	Discs	B		WA	14 320	I	J 3	B=	4T	2,000
3	Single Taper			(=White Alumina)	16 400	K	L 4	Resinoid	4U	
4	Double Taper	C	OD x T x HD		20 500	M	N 5	BF=	5O	2,400
5	Recessed One Side				24 600	P	Q 6	Resinoid	5L	
6	Straight Cup			PA	30 700	R	S 7	Reinforced	5S	2,700
7	Double Recessed	D		(=Pink Alumina)	36 800	T	U 8	R=	6V	
8	Safety				46 1,000	V	W 9	Rubber	6V	3,000
9	Double Cup	E	Thickness	C	54 1,200	X	Y 10	RF=	8J	
10	Dovetail			(=Black Silicon Carbide)	60 1,500	Z	Hard 11	Rubber	8M	3,600
11	Flaring Cup	F			70 2,000			Reinforced	9L	
12	Dish				80 2,500				91L	4,800
13	Saucer	N	Hole Diam.	GC	90 3,000					
16	Cone & Plug			(=Green Silicon Carbide)	100 Very					
20	Relieved	M			120 Fine ↓					
27	Depressed Center Offset Type				150					
28	Depressed Center U				180					
30	Cutting	P			220					
								Open	G7	6,000

Definitions and Limitations of Wheel Shapes

Definiciones y Limitaciones de formas de Disco
標準形状一覧表標準表 标准形状列表标准表

Type No.	Name and Dimension	Illustration	Type No.	Name and Dimension	Illustration
1	Straight $D \times T \times H$		11	Flaring Cup $D \times T \times H$ $E \geq T/5$, $K > 7$ Flange Dia $+2R$	
2	Cylinder $D \times T \times W$ $W \leq T$		12	Dish $D \times T \times H$ $K >$ Flange Dia	
0	Discs $D \times T \times H$ $W > T$		13	Saucer $D \times T \times H$ $K >$ Flange Dia	
3	Single Taper $D \times T \times H$		16	Cone & Plug	
4	Double Taper $D \times T \times H$		20	Relieved $D \times T \times H$ $E \geq T/2$, $K >$ Flange Dia	
5	Recessed One Side $D \times T \times H$ $E \geq T/2$		27	Depressed Center Offset Type $D \times U \times H$	
6	Straight Cup $D \times T \times H$ $E \geq T/5$, $W \leq E$		28	Depressed Center UD x U x H	
7	Double Recessed $D \times T \times H$ $E \geq T/2$		30	Cutting $D \times T \times H$	
8	Safety				
9	Double Cup				
10	Dovetail				

Standard Shapes of Wheel Faces

No.	Shape	No.	Shape	No.	Shape
A		D		N	
B		E		M	
C		F		P	

When ordering abrasive wheels, please refer to the aforementioned "identification symbols for abrasive wheels" and specify the following points.

How to order: 61 - 48 - 20

Shape	Straight, Disc, Recessed, etc.
Face.....	A, B, C.....etc.
Size.....	Outside diameter x Thickness x Hole diam.
Kind of Abrasive.....	Aluminium oxide or Silicon carbide
Grain size.....	36 or 46
Grade.....	K or L ...
Structure	3 or 4 ...
Kind of Bond	Vitrified or Resinoid
Detailed Bond Type	8J
Max. Speed.....	R.P.M. 2,000, 4,000.....etc.

Grinding Wheel Standard Surface Speed Table

Dia mm	305	355	405	455	510	610	660
R.P.M.	12"	14"	16"	18"	20"	24"	26"
1,300	m / min. 1,200	m / min. 1,500	m / min. 1,700	m / min. 1,900	m / min. 2,100	m / min. 2,400	m / min. 2,700
1,400	1,300	1,600	1,800	2,000	2,200	2,600	2,900
1,500	1,400	1,700	1,900	2,200	2,400	2,800	
1,600	1,500	1,800	2,000	2,300	2,600	3,000	
1,700	1,600	1,900	2,200	2,400	2,700	3,200	
1,800	1,700	2,000	2,300	2,600	2,900	3,400	
1,900	1,800	2,100	2,400	2,700	3,000	3,600	
2,000	1,900	2,200	2,500	2,900	3,300		
2,100	2,000	2,300	2,700	3,000	3,500		
2,200	2,100	2,500	2,800	3,300	3,700		
2,300	2,200	2,600	2,900	3,400	3,800		
2,400	2,300	2,700	3,100	3,600	4,000		
2,500	2,400	2,800	3,200				
2,600	2,400	2,900					
2,700	2,500	3,000					
2,800	2,600						
2,900	2,700						
3,000	2,800						

Some common types of abrasive wheels are described below with their respective specifications.

Resinoid Offset Grinding Wheels

Grain No. 36

Disco de desbaste/Grano No.36

レジノイドオフセット砥石 轮式偏心磨轮 (树脂)

Grain size No. 36 is widely used on ships for all purpose grinding and cutting jobs. Surface meter per minute 4,300.



How to order: CODE

Wheel, grinding, offset, resinoid, grain No. 36, OUT DIAM x THICKNESS x HOLE DIAM mm, 4,300 mtr/min.

CODE	Outer Diam. mm	Thickness mm	Hole Diam. mm	Unit Per Pcs.
61 48 01		3		
02	100	4	15	
03		6		
61 48 04		3		
05	125	4	22	
06		6		
61 48 07		3		
08	150	6	22	
09		8		
61 48 10		3		
11	180	6	22	
12		8		
61 48 13		6		
14	205	8	22	
61 48 15		6		
16	230	8	22	

Resinoid Cut-Off Wheels

Disco de Corte レジノイド切断砥石 轮式切割磨轮

These resin bond cutting wheels have a big advantage over rubber cut-off wheels. They resist very high cutting heats, have an aggressive cutting action, and a longer disc life. Grain No. 36 (medium grain) is recommended for general purpose ships use.



How to order: CODE

Wheel cut-off, resinoid, grain No. 36, OUT DIAM x THICKNESS x HOLE DIAM mm, 4,300 mtr/min.

CODE	Outer Diam. mm	Thickness mm	Hole Diam. mm	Unit Per Pcs.
61 48 51	75	1.5	9.53	
52		2.0		
61 48 53	100	1.5	12.7	
54		2.0		
61 48 55	150	1.5	9.53	
56		2.0		
61 48 57	205	1.5	12.7	
58		2.0		
61 48 59	255	2.0	15.88	
60		1.5		
61		2.0	9.53	
61 48 62	305	1.5	12.7	
63		2.0		
61 48 64	355	2.0	22.23	
65		2.5		
66	405	2.0	15.88	
67		2.5		
68	455	2.0	22.23	
69		2.5		
70	505	2.0	25.40	
71		2.5		
72	555	2.0	22.23	
73		2.5		
74	605	2.0	25.40	
75		2.5		
76	655	2.0	25.40	
77		2.5		
78	705	2.5	30.0	
79		3.0		
80	755	3.0	25.40	
81		3.5		
82	805	3.0	30.0	
83		3.5		
84		3.0	25.40	

Abrasive Speed Discs

Silicon Carbide

Discos abrasivos de velocidad, Carburo de silicio
炭化ケイ素入り研削砥石 碳化硅砂轮

Used for multiple applications, from heavy corrosion and rust removal to thick coating on metal components. Made from embedded abrasive (silicon carbide) which are bonded in a flexible fibre disc and can conform to shape. Ideal as a paint stripping disc, essentially it will strip and clean almost anything without damaging the metal. It does not shed on rust encrusted pieces, does not load and clog with soft metals, sticky coating or adhesives.

It is compatible with any M14 125 mm grinder. Packed with 10 pcs.



61 48 91	Abrasive speed disc silicon carbide, Trelawny 491.4005, 10 pcs/pkt	Pcs.
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35. Winches/Chain Hoists

Portable Hand Winches

Dabrantante Manual Portátil 手動式ワインチ 便携式手摇绞车

Portable hand winches for light lifting, lowering, or hoisting. Complete with an automatic safety brake. Made of a strong steel frame with a solid center drum. Can be used in any position. Available in a non-gear type or with ratchet gears.



CODE	Lifting Capacity kg	Reeling Up Length mtr	Applicable Rope Diam mm	Weight kg	Unit Per Set
Non-gearied Type					
61 49 01	100	30	5.0	7.5	
02	300	30	6.3	12.0	
03	500	40	6.3	14.0	
04	1,000	40	8.0	18.5	
05	2,000	40	9.0	25.0	
06	3,000	40	12.5	44.0	
Ratchet Geared Type					
61 49 11	100	30	5.0	7.5	
12	300	30	6.3	12.0	
13	500	40	6.3	14.0	
14	1,000	40	8.0	18.5	
15	2,000	40	9.0	25.0	
16	3,000	40	12.5	44.0	

Link Chain Hand-Lever Hoists

Polipastos de Palanca

レバーブロック 握杆式链条葫芦

A small, light and strong hoists designed for all of the applications in the professional field such as transportation, bridge, general construction, civil engineering, shipbuilding, and forestry. Grade 100 chain uses a shorter and narrower link profile for greater surface area contact, which improves wear resistance and overall tensile strength. The hoist uses a Weston-style load brake with four braking surfaces, two brake pads and two brake pawls for added safety. Safety options such as load signal and overload limiter are available as well.



Unit Per Set

CODE	Capacity (tons)	Standard Chain (mtr)	Min. Distance Between Hooks (mm)	Weight (kg)
61 50 01	0.8	1.5	280	5.7
02	1.6	1.5	335	8.0
03	2.5	1.5	375	11.2
04	3.2	1.5	395	15.0
05	6.0	1.5	540	26.0
61 50 20	9.0	1.5	680	40.0

Spur-Gear Chain Hoists

Polipastos Manuales de Cadena

チェーンブロック 直齿轮链条葫芦

A rugged body and hand wheel cover made of heavy gauge high-impact steel, giving much needed protection in extreme conditions and demanding applications to see every job through to the end.

Made from heat-treated alloy steel for higher uniform strength, the chain guards not only against scarring and wear, but it keeps workers safer on the job. A dry-type mechanical brake ensures outstanding stopping power and safety for high performance operation. Options such as explosion proof and overload limiter are available.



Unit Per Set

CODE	Rated load (ton)	Standard lift (mtr)	Min. Distance between hooks (mm)	Weight (kg)
61 50 06	0.5	2.5	285	1.0
07	1	2.5	295	1.0
08	1.5	2.5	350	1.0
09	2	3	375	2.0
18	2.5	3	420	2.0
61 50 10	3	3	510	3.0
11	5	3	600	7.0
19	7.5	3.5	770	12.0
12	10	3.5	760	17.0
13	15	3.5	1,020	48.0
61 50 14	20	3.5	1,180	72.0
15	30	3.5	1,300	114.0
16	40	3.5	1,480	197.0
17	50	3.5	1,560	294.0

Non-Spark Chain Hoists

Polipastos de Cadena Anti-chispa

防爆用チェーンブロック 防爆式链条葫芦

Specially designed for LNG-LPG vessels and tankers, but also essential for factories handling explosive materials. Made of beryllium material except for the gears which are tightly covered by copper alloy casings assuring no-sparking during operation.

How to order: CODE

Hoist, chain, non-spark, beryllium copper alloy,
LIFTING CAPACITY tons



Unit Per Set

Beryllium Copper Alloy

CODE	Lift. Cap. Ton	Lift. Cap. mtr	Tested Cap. Ton	Min. Dist. Hooks mm	Weight kg
61 50 21	0.5	2.5	0.75	330	15.9
22	1	3	1.5	390	35.2
23	2	3	3	520	44
24	3	3	4.75	690	65
25	5	3	7.5	710	102

Trolleys

Polipastos con Carro トロリー 滑輪吊車

Plain and geared type trolleys are available. They are adaptable running rails of 9 varieties in width and are easy to set up even on running rails with a rugged surface. Equipped with closed type high grade bearings. Running wheels are suitable for both I-Beam and H-Beam running rails.



Plain Trolley



Geared Trolley

How to order: CODE

Trolley, TYPE, LIFTING CAPACITY tons

Unit Per Pc.

CODE	Capacity Ton	Fit Beam Size (mm)				Weight kg	
		Width		Height			
		Min	Max	Min	Max		
Plain Trolley							
61 50 31	1/2	75	125	100	150	6.0	
32	1	75	125	125	250	10.0	
33	2	100	150	150	400	18.5	
34	3	100	150	180	400	26.0	
35	5	125	175	250	450	44.0	
Geared Trolley							
61 50 36	1	75	125	125	250	14.0	
37	2	100	150	150	400	23.5	
38	3	100	150	180	400	33.5	
39	5	125	175	250	450	53.5	

36. Gear Pullers / Bearing Pullers

Gear & Wheel Pullers

2-Arm

Extractores de 2 Garras Articuladas o Universales
ギヤプーラー(2本足) 二臂式齿轮拉马

Designed for moving hard to pull gears, bearings or pulleys which are stuck from rust or over friction. Easy to set up and operate, just hook over the gears or wheel and tighten the screw. Will pull anything that is within arms reach and the maximum weight capacity. The arms and yokes are made of forged steel and the steel forcing screw is hardened to avoid flaring or thread damage.



G Type



GL Type

How to order: CODE

Puller, gear & wheel, 2-arm, TYPE, MAXIMUM SPREAD mm

Unit Per Set				
CODE	Maximum Spread mm	Maximum Reach mm	Capacity Tons	Weight kg
Pullers Type "G"				
61 50 50	75	55	2	0.4
51	100	70	4	0.8
52	150	100	6	1.8
53	200	240	8	3.8
54	250	250	10	6.0
Pullers Type "GL"				
61 50 61	100	150	4	1.0
62	150	190	6	2.3
63	200	275	8	4.4
64	250	300	10	7.0
65	300	350	12	10.0
61 50 66	375	400	15	13.0
67	450	440	18	16.0

Gear & Wheel Pullers

3-Arm

Extractores de 3 Garras Articuladas o Universales
ギヤプーラー(3本足) 三臂式齿轮拉马

Drop forged from vanadium steel. This rigid 3 arm puller has been designed for situations where the use of a 2 arm puller is not possible.



How to order: CODE

Puller, gear & wheel, 3-arm, MAXIMUM SPREAD mm

CODE	Maximum Spread mm	Maximum Reach mm	Capacity Tons	Weight kg	Unit Per Set
61 50 70	125	140	5	3	
71	200	200	10	6	
72	300	270	20	17	
73	375	290	25	30	
74	450	320	30	48	

Bearing Puller Sets for Inner Ring

Juegos de Extractores de Rodamientos/para Anillo Interior
ベアリングプーラーセット 轴承拔全套

The slide hammer bearing puller set has been designed for removing "hard-to-pull" bearings without damaging the bearing housing. Expansion grippers are available from No. 00 to 06. These numbers 00 to 06 are indicating the last two numbers of the bearing number. When ordering, please make sure to indicate the last two bearing figures to get the right tools for your work. The expansion grippers are drop forged from vanadium alloy steel, heat-treated and chrome plated.



Remarks: Sold by set only.

Components		
1 Sliding hammer	5 Grippers, no. 00-06	
1 Steel case		

Bearing Puller Kits for Inner & Outer Ring

Juegos de Extractores de Rodamientos para Anillo Interior y Exterior
ベアリングプーラーキット 轴承拔成套工具

This bearing puller kit has been designed to remove the inner and outer bearing rings from bearings mounted to various fittings, shafts, etc. Made of drop forged, heat-treated vanadium alloy steel. This bearing kit is available from No. 00 to 12. These 2 figures indicate the last two numbers of the bearing. For example: Bearing series No. 6004 to be ordered: No. 04.



Components		
1 Sliding hammer	8 Grippers, no. 00-12	
1 Standard puller	1 Opening stopper	
1 One end ring spanner	1 Hexagon wrench	
1 Steel case		

61 50 82	Bearing puller kit for inner & outer ring, 8 grippers no. 00-12 in steel case	Set
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Hydraulic Bearing Pullers

Extractores Hidráulicos de Rodamientos

油压式ベアリングプーラー 轴承拉马液压泵

Designed for the removal of frozen bearings, wheels and other gears of various sizes without hammering or heating. 2 and 3 arm coupling pullers are available in a capacity from 10 to 20 and 50 tons. They are light in weight and of a compact design. Any hand or motor pump with a sufficient oil capacity may be connected to the puller.



Puller, bearing, hydraulic 2 arm.

How to order: CODE

Puller, bearing, hydraulic 2-arm, CAPACITY tons, complete with ram, pump & hose

Unit Per Set

	CODE	61 50 85	61 50 86	61 50 87
2 ARM	Capacity Tons	10	20	50
	Maximum Reach mm	210	315	490
	Maximum Open mm	250	350	500
	Applicable Ram Stroke	150 mm 255 mm	126 mm	153 mm 300 mm

Puller, bearing, hydraulic 3 arm.

How to order: CODE

Puller, bearing, hydraulic 3-arm, CAPACITY tons complete with ram, pump & hose

Unit Per Set

	CODE	61 50 90	61 50 91	61 50 92
3 ARM	Capacity Tons	10	20	50
	Maximum Reach mm	210	314	490
	Maximum Open mm	300	420	600
	Applicable Ram Stroke	150 mm 255 mm	126 mm	153 mm 300 mm

Hydraulic Pumps for Bearing Puller

Bombas Hidráulicas para Extractores de Rodamientos

油压式ベアリングブーラー用油圧ポンプ



The hydraulic pumps listed below are the most suitable types for use with the above mentioned hydraulic bearing pullers.

Unit Per Pcs.

CODE	Capacity up to	Max. Required Pressure	Tank Oil Capacity
61 50 95	20 ton		700 cc
97	50 ton	700 kgf/cm²	1,500 cc

High Pressure Rubber Hose for Hydraulic Bearing Puller

Mangera de Alta Presión

高压ゴムホース 液压式轴承拉马用高压橡胶管

High pressure hydraulic hose for use with the above mentioned hydraulic bearing pullers. Their specifications are as follows.



Unit Per Pcs.

CODE	Hose Size x Length	Coupling	Max. Working Pressure
61 51 01	6 mm x 2 mtr	PT 3/8	
02	6 mm x 4 mtr	PT 3/8	
03	6 mm x 6 mtr	PT 3/8	700 kgf/cm²

37. Hydraulic Jacks

Portable Hydraulic Jacks

Gatos Hidráulicos Portátiles

ポータブル油圧ジャッキ

便携式液压千斤顶



Made with a forged steel base, tool steel pump piston, and a high quality pump cup packing. A bronze guide bearing is used at the bottom of the precision ground ram. The ram cap is steel forged. Fixed with a hardened release, lowering valve. The handle is a knurled, interlocking type.

Unit Per Set

CODE	Capacity Tons	Height		Weight kg
		Closed	Extended	
61 51 11	2	180 mm	360 mm	2.6
12	4	188	382	3.5
13	5	230	470	5.3
14	7	230	465	6.7
15	10	240	480	7.9
61 51 16	15	245	495	10.1

Ratchet Type Journal Jacks

Gatos Hidráulicos Portátiles

ラチェット式ジャーナルジャッキ

便携式液压千斤顶



Designed with tremendous power in a compact space for short powerful lifts. Made of heat-treated alloy steel forgings with special bronze nuts. The ratchet mechanism is fully enclosed. Each jack is furnished with a heat-treated steel lever bar.

Unit Per Set

CODE	Capacity Tons	Height		Weight kg
		Closed	Extended	
Lower	61 51 20	15	255 mm	380 mm
	21	25	255 mm	380 mm
	22	35	280 mm	410 mm
	23	50	290 mm	420 mm
	24	100	310 mm	415 mm
Middle	61 51 25	10	280 mm	430 mm
	26	25	395 mm	645 mm
	27	30	350 mm	550 mm
	28	35	410 mm	660 mm
	29	50	445 mm	695 mm
Higher	61 51 30	25	485 mm	815 mm
	31	35	535 mm	885 mm
	32	50	555 mm	905 mm

Hydraulic Jacks

Catros Hidráulicos 油压ジャッキ 液压千斤顶

Useful for operating a variety of hydraulic tools. It is most suitable as a hydraulic opener for ships hatch covers but is also used for a variety of purposes at shipyard construction and factory job sites.



Lifting and lowering tests are executed at 100 % rated capacity. Horizontal capacity is guaranteed at up to 1/20 of the total rated capacity. The cylinder and piston are made of heat-treated, reinforced chromemolybdenum steel and the inner linings of the cylinder piston and the rod are plated with hard chrome. The couplings and screws for attachments are interchangeable. A wide variety of series and models are available. Please specify lifting capacity tons and stroke mm when ordering.

Returning System by Spring Force

1. Available for horizontal extending or inverse operation (like press).
2. Requires only one piece of connecting rubber hose.

How to order: CODE

Hydraulic jack, spring return type, CAPACITY tons, STROKE mm

CODE	61 51 36	61 51 37	61 51 38	61 51 39
Capacity (ton)	10	10	20	20
Stroke (mm)	35	150	50	125
Closed Height (mm)	140	308	154	295
Outer Diam. (mm)	57	57	86	86
Weight (kg)	2.6	5.3	5.8	11
Pump Applicable	61 51 56	61 51 57	61 51 56	61 51 57

CODE	61 51 40	61 51 41	61 51 42	61 51 43
Capacity (ton)	30	50	50	50
Stroke (mm)	125	25	50	150
Closed Height (mm)	312	100	220	320
Outer Diam. (mm)	102	127	127	127
Weight (kg)	16.8	8.6	19	28
Pump Applicable	61 51 57	61 51 56	61 51 57	61 51 59

Returning System by Hydraulic Force

1. Horizontal extension or inverse extension (like press) feasible, because of hydraulic returning.
2. Most adequate for remote controlled operation.(Requires 2 pieces of hose, for returning purpose)
3. No damage occurs in Guide-part, even when strokes are extended to maximum.

How to order : CODE

Hydraulic jack, hydraulic return type, CAPACITY tons, STROKE mm

CODE	61 51 46	61 51 47	61 51 48	61 51 49
Capacity (ton)	10	20	20	20
Stroke (mm)	150	55	150	300
Closed Height (mm)	338	205	390	540
Outer Diam. (mm)	57	86	86	86
Weight (kg)	6	8.4	16	20
Pump Applicable	61 51 62	61 51 62	61 51 62	61 51 63

CODE	61 51 50	61 51 51	61 51 52	61 51 53
Capacity (ton)	50	50	100	100
Stroke (mm)	150	300	150	300
Closed Height (mm)	377	602	462	613
Outer Diam. (mm)	127	127	170	170
Weight (kg)	33.9	51.8	69	86
Pump Applicable	61 51 63	61 51 64	61 51 64	61 51 65

Hydraulic Pumps for Hydraulic Jack

Bombas Hidráulicas para Gato Hidráulico
油圧ジャッキ用ポンプ 液压千斤顶的液压泵

A wide range of hydraulic pumps are available, the two most common types which are applicable to the Jacks described in the former chapter are as follows:



Hand-Operated Pumps for Spring Return Jack



Widely used as the hydraulic source for the 720 kgf/cm² hydraulic jack group.

The main body is of forged special steel, has long durability, with safety valve recessed. Pumps are classified according to effective oil volumes into 5 categories (0.3, 0.7, 0.9, 1.3, 2.3 litres respectively). Oil volumes are the base for pump selection. Applicable to spring return system jacks.

How to order: CODE

Hydraulic pump for spring return jack, OIL VOLUME ltr

CODE	Usable Oil Volume ltr	Max. Working Pressure kgf/cm²		Output Volume per Stroke cc		Connection Thread PT	Weight kg
		Low	High	Low	High		
61 51 56	0.3	30	720	5	1.0		3.5
57	0.7	30	720	11	2.0		7.2
58	0.9	30	720	11	2.0	3/8	7.9
59	1.3	30	720	11	2.0		9.1
60	2.3	30	720	24	2.0		13.8

Hand-Operated Pumps for Hydraulic Return Jack

To be used as the hydraulic source for the hydraulic return jack of 720 kgf/cm² series. Has a high and low automatic control-valve, the low pressure pump operates up to the loading of 30 kgf/cm². This means larger output volume and higher speed without loss of capacity. As the safety-valve is recessed inside, operation is assured. Applicable to hydraulic spring return jacks.

How to order: CODE

Hydraulic pump for hydraulic return jack, OIL VOLUME ltr

CODE	Usable Oil Volume ltr	Max. Working Pressure kgf/cm²		Output Volume per Stroke cc		Connection Thread PT	Weight kg
		Low	High	Low	High		
61 51 62	0.9	30	720	11	2.0		9.0
63	1.3	30	720	11	2.0		10.1
64	2.3	30	720	24	2.0	3/8	14.8
65	6.0	30	720	24	2.0		20.5

High Pressure Hose for Hydraulic Jacks

Manguera de Alta Presión para Gatos Hidráulicos

油圧ジャッキ用高圧ゴムホース

液压千斤顶的高压胶管

Available in 3 sizes of rubber or nylon made, fitted with coupling. Length of 2 mtrs.



How to order: CODE

High pressure hose with coupling for hydraulic jack, SIZE mm x 2 mtr

Unit Per Pcs.

CODE	Size	Pressure Kgf/cm²	Flow Ltr/Min	Thread
Rubber Hose				
61 51 66	6 mm	720	8	PT 3/8 x PT 3/8
67	9 "	720	20	PT 1/2 x PT 3/8
68	12 "	720	40	PT 1/2 x PT 1/2
Nylon Hose				
61 51 69	5 mm	720	8	PT 3/8 x PT 3/8
70	8 "	720	20	PT 1/2 x PT 3/8
71	11 "	720	40	PT 1/2 x PT 1/2

38. Nut Splitters / Flange Jacks

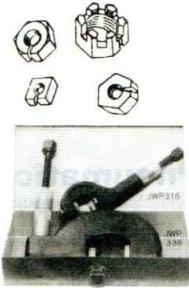
Hydraulic Nut Splitters

Tronzatueras 油圧式ナットスプリッター

液压螺帽割刀

Splits frozen or rusted nuts without damage to the bolt. It is conveniently sized to work in hard to reach places. Made of the finest steel, heat-treated and forged for long service. To operate, just use a regular hand wrench and turn the power screw which has a hydraulic pump built inside multiplying the power exerted upon it.

A set is composed of two models:
No. 316 size up to 1/2" BSW
(Across Flat 20 mm)



No. 336 size up to 7/8" BSW (Across Flat 33 mm)
Sold in sets only.

61 51 80	Nut splitter, hydraulic size up to 1/2" and 7/8" BSW, 2 pcs/set	Set
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Heating Looseners for Stuck Bolt & Nut

Separador de calor de tornillos y tuercas atascados

錆付きボルトナット用加熱式弛緩セット

加热型锈死螺栓螺母拆卸器



This extremely handy tool uses induction to precisely heat a nut, steering knuckle, bearing or any other object made of magnetizable metal. In less than a minute this can heat steel to 300 till 600 degrees Celsius, and since heat causes it to expand you can remove it in a snap.

The heat generated through induction technology can be applied to parts of all different sizes: stuck nuts, bolts, steering knuckles, nipples, bearings and so forth. It generates no open fire, so it's safe to use.

To establish the right interaction between the "iDuctor" and the object to be heated, the tool is accompanied by a set of nine coils in metric sizes M8, M10, M12, M16, M20, M24, and M30. It also comes with a flexible 'wrappable' coil measuring 110 cm long. The coils are easily changed by hand.

The "iDuctor" is also usable for other specific purposes in addition to heating stuck parts, such as heating and removing coating layers from steel. Special tools are available for this specific application.

Time and power are easily adjustable. Power source: AC 220 V. The "iDuctor" is CE certified.

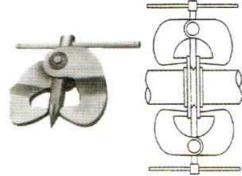
61 51 81	Heating Loosener for stuck bolt & nut "iDuctor" AC 220V	Set
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Name of Mfr.: TK Tools Industrial Equipment

Flange Jacks

Extractor de Bridas フランジジャッキ 法兰千斤顶

The jacks exert tremendous pressure smoothly and evenly. The flanges are parted quickly and held in perfect alignment without damage to flange faces. Sold in 2 pcs/set only.



CODE	No.	For Pipe Size mm				Weight Per Pair kg
		5 kgf/cm² Cast Iron	10 kgf/cm² Cast Iron	16 kgf/cm² Cast Iron	20 kgf/cm² Cast Iron	
61 51 84	20	50 - 500	50 - 500	25 - 300	20 - 300	6
	30	400 - 1,200	450 - 600	300 - 600	300 - 600	12

39. Pipe Cleaners

Plumber's Snake Wire Pipe Cleaners (Sani Snakes)

Desatascadores de Muelle パイプ清掃機 蛇形钢丝管道清通器

Used for unclogging pipes and drains. The flexible coil of non-corrosive spring steel will remove most obstructions. The wire spring is available in diameters from 6 mm to 13 mm.



CODE	Dimensions Diam. x Length	For Pipe Inner Diam.
61 52 01	6 mm x 5 mtr	20 - 32 mm
02	6 mm x 7.5 mtr	20 - 32 mm
03	6 mm x 10 mtr	20 - 32 mm
61 52 04	10 mm x 10 mtr	38 - 75 mm
05	10 mm x 15 mtr	38 - 75 mm
61 52 06	13 mm x 10 mtr	75 - 100 mm
07	13 mm x 15 mtr	75 - 100 mm

40. Rivets / Riveters

Hand Rivets

Remaches Manuales ハンドリベット 手铆钉

These simple and easy-to-use rivets fasten products together easily and effectively...no complicated installations, expensive equipment or skilled operators are needed. Just drill a hole, insert and set a rivet from the same side....and high fastening connections are achieved quickly. High strength, precision-made hollow rivets are assembled on a solid mandrel. They are specially useful for blind fastening....where no access to the reverse side is available.

Hand Riveter Tools

Herramientas Remachadoras Manuales

ハンドリベッター 手动铆钉套装

Designed to set all standard size of blind rivets.



Plier Type



Bellow Type

Unit Per Pr.

CODE	Type	Overall Length mm	Capacity Rivet Diam. mm
61 52 30	Plier	260	2.4, 3.2, 4.0, 4.8
31	Bellow	325 - 900	2.4, 3.2, 4.0, 4.8

61

Hand Tools

Hand Riveter Kits

Estuches para remachadoras Manuales

手動リベッター携帯キット 手动铆钉工具

Contains a plier type hand riveter tool and two different diameter rivets, sized 3.2 mm and 4.0 mm each in two different lengths. Furnished in a steel carrying case.



61 52 33 Hand riveter kit in steel case

Set

Blind Rivets for Riveter

Remaches para Remachadoras ブラインドリベット 铆钉

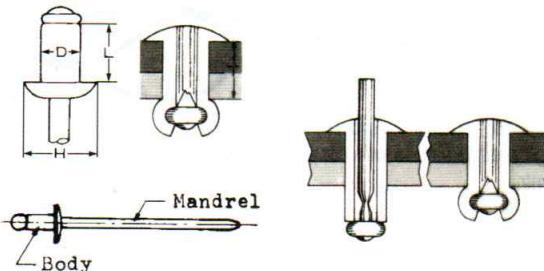
High strength, precision-made hollow rivets assembled on a solid mandrel. They are specially useful for "blind" fastening where no access to the reverse side is available. Rivets are made in various sizes with head styles in aluminium, steel, monel, copper and stainless steel. Two types of standard rivets, open and closed, are available but the most common open type is described below.



Standard Open Type

Standard open type rivet is a hollow rivet, pre-assembled on to a headed pin or mandrel. The mandrel is designed to fracture at a pre-determined point during the setting operation,

when the lamination forming the structure being fastened, have been drawn closely together and the whole join is tight. Normally on the vessel the rivet of aluminium alloy body and steel mandrel are used. Unless otherwise specified the aluminium alloy body and steel mandrel type will be supplied. Please specify diameter and length in mm when ordering.



How to order: CODE

Blind rivet, open type, aluminium alloy body & steel mandrel, RIVET DIAM x LENGTH mm

CODE	Rivet Dia mm D	Length mm L	Required Hole dia mm	Unit Per Pkt	
				Rivetting Range mm	Pcs in Pkt
61 52 36	2.4	5.7	2.5	1.0 - 3.2	100
61 52 37	3.2	4.4	3.3	1.0 - 1.6	100
	3.2	6.3	3.3	1.6 - 3.2	100
	3.2	8.0	3.3	3.2 - 4.8	100
	3.2	9.8	3.3	4.8 - 6.4	100
61 52 41	4.0	6.9	4.1	1.2 - 3.2	100
	4.0	8.6	4.1	3.2 - 4.8	100
	4.0	10.4	4.1	4.8 - 6.4	50
	4.0	14.0	4.1	6.4 - 9.6	50
61 52 45	4.8	7.5	4.9	1.6 - 3.2	50
	4.8	9.3	4.9	3.2 - 4.8	50
	4.8	11.1	4.9	4.8 - 6.4	50

Pneumatic Riveters

Remachadoras Neumáticas エアーリベッター 气力铆钉器

Designed to set all standard sizes of blind rivets and works by compressed air to set rivets securely and quietly for large jobs. The pneumatic type works smoothly with little impact, creates no noise and assures that the rivets stay loaded in the nozzle. Allow to set aluminium, steel, and stainless steel rivets with light operations. Working air pressure is 0.5 to 0.6 MPa.



61 52 51 Pneumatic riveter
Riveting capacity - 2.4, 3.2, 4.0, 4.8 φmm

Set

Staple Guns Heavy Duty

Grapadoras Heavy Duty ガンタッカー 重型订书机

A heavy-duty staple gun with metal construction, ideal for professional or DIY use. Compact, light weight and impact-resistant metal die-cast body for use type 53 staples (6-14 mm).



61 52 61	Staple gun, heavy duty, type 53 staples	Pc.
61 52 62	Staple for staple gun, type 53 (6-14 mm) 1.000 pcs/Box	Box

41. Stainless Steel Tools

Stainless Steel Tools

Herramientas de acero inoxidable ステンレス製工具 不锈钢工具

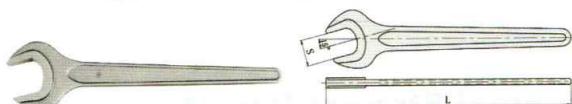
Various stainless steel tools are available and they show the following characteristics.

- 1) Resistant to corrosion and avoid steel material from corrosion in use.
- 2) Retain heat, and heat is difficult to be transmitted.
- 3) Higher rigidity than steel material
- 4) Difficult to conduct electricity compared to copper.
- 5) Simple cleaning.

Stainless Steel Single Open End Wrenches

Opening 15° Angle

Llaves de tuercas de boca abierta de un solo extremo de acero inoxidable
ステンレス製片口スパナ 不锈钢单头呆扳手



CODE	Opening mm	Length mm	CODE	Opening mm	Length mm
61 60 01	8	95	61 60 12	32	275
02	10	100	13	34	290
03	12	110	14	36	310
04	13	140	15	41	345
05	14	140	16	46	375
61 60 06	17	160	61 60 17	50	410
07	19	170	18	55	450
08	22	195	19	60	490
09	24	220	20	65	530
10	27	240	21	70	570
61 60 11	30	260	61 60 22	75	610

Stainless Steel Double Open End Wrenches

Opening 15° Angle

ステンレス製両口スパナ 不锈钢呆扳手



CODE	Opening mm	Length mm	CODE	Opening mm	Length mm
61 60 25	5.5 x 7	90	61 60 40	21 x 26	205
26	6 x 7	92	41	22 x 24	210
27	8 x 10	100	42	23 x 26	220
28	10 x 11	115	43	24 x 27	230
29	10 x 12	120	44	24 x 30	233

(to be continued)

61 60 30	12 x 13	128	61 60 45	26 x 32	243
31	12 x 14	130	46	27 x 30	250
32	14 x 17	150	47	30 x 32	265
33	17 x 19	170	48	30 x 36	270
34	17 x 21	173	49	32 x 36	300
61 60 35	19 x 21	182	61 60 50	34 x 36	300
36	19 x 22	185	51	36 x 38	330
37	19 x 24	190	52	36 x 41	330
38	20 x 22	195	53	38 x 40	330
39	21 x 23	200	54	41 x 46	360

S.Steel 12 Point Single End Offset Wrenches

Offset 60°

Llaves inglesas acodadas de un solo extremo de 12 puntos de acero inoxidable

ステンレス製片目スパナ 不锈钢单头梅花扳手



Unit Per P.c.					
CODE	Opening mm	Length mm	CODE	Opening mm	Length mm
61 60 55	22	190	61 60 60	36	295
56	24	215	61	41	330
57	27	230	62	46	365
58	30	255	63	50	400
59	32	265	64	55	445

S.Steel 12 Point Single End Angle Wrenches

45° Angle

Llaves angulares de 12 puntos de un solo extremo de acero inoxidable

ステンレス製片目アンダ尔斯パナ 45° 不锈钢单弯头梅花扳手



Unit Per P.c.					
CODE	Opening mm	Length mm	CODE	Opening mm	Length mm
61 60 65	10	119	61 60 74	32	295
66	13	151	75	34	307
67	14	151	76	36	307
68	17	174	77	38	340
69	19	207	78	41	340
61 60 70	22	207	61 60 79	46	370
71	24	250	80	50	400
72	27	250	81	55	430
73	30	295			

S.Steel Striking 12 Point Ring Wrenches

Llaves de estrella de 12 puntos de golpeo de acero inoxidable

ステンレス製打撃メガネスパナ 不锈钢敲击扳手



Unit Per Pcs.					
CODE	Opening mm	Length mm	CODE	Opening mm	Length mm
61 60 85	24	165	61 60 92	41	225
86	27	175		93	235
87	30	185		94	250
88	32	185		95	265
89	34	200		96	274
61 60 90	36	205	61 60 97	65	298
91	38	215		98	320

60° Offset

Unit Per Pcs.

CODE	Opening mm	Length mm	CODE	Opening mm	Length mm
61 64 55	14	270	61 64 61	30	430
56	17	310	62	32	430
57	19	330	63	36	460
58	22	350	64	41	490
59	24	370	65	46	520
61 64 60	27	400			

S.Steel Open & 12 Point Box Wrenches

Llaves de tuercas de boca abierta y de tubo de 12 puntos de acero inoxidable
ステンレス製片目 / 片口スパナ 不锈钢单头梅花 / 单头呆扳手



Unit Per Pcs.

CODE	Opening mm	Overall Length mm	CODE	Opening mm	Overall Length mm
61 64 01	8	120	61 64 15	26	290
02	9	135	16	27	290
03	10	135	17	30	320
04	11	150	18	32	340
05	12	150	19	34	360
61 64 06	13	175	61 64 20	36	360
07	14	175	21	38	430
08	17	195	22	41	430
09	19	215	23	46	480
10	20	215	24	50	520
61 64 11	21	245	61 64 25	55	560
12	22	245	26	60	595
13	23	265	27	65	595
14	24	265	28	70	630

61

Hand Tools

S.Steel 12 Point Double End Wrenches

Llaves de 12 puntos de doble extremo de acero inoxidable
ステンレス製両目スパナ 不锈钢单头梅花扳手

15° Offset

Unit Per Pcs.

CODE	Opening mm	Overall Length mm	CODE	Opening mm	Overall Length mm
61 64 31	5.5 x 7	115	61 64 43	21 x 23	285
32	6 x 7	115	44	21 x 26	320
33	8 x 10	130	45	22 x 24	310
34	10 x 11	140	46	24 x 27	340
35	10 x 12	140	47	24 x 30	350
61 64 36	12 x 13	160	61 64 48	26 x 32	370
37	12 x 14	160	49	27 x 30	360
38	14 x 17	220	50	30 x 32	380
39	17 x 19	250	51	30 x 36	395
40	17 x 22	250	52	32 x 36	405
61 64 41	19 x 22	280	61 64 53	34 x 36	420
42	19 x 24	310	54	36 x 41	445

S.Steel Combination Ring & Spud Wrenches

Llaves combinadas de estrella y de cola de acero inoxidable
ステンレス製シノ付片目スパナ 不锈钢单头呆扳手

S.Steel Adjustable Wrenches

Llaves ajustables de acero inoxidable

ステンレス製モンキースパナ 不锈钢活动扳手



Unit Per Pcs.

CODE	Length mm	Max Jaw Opening mm	CODE	Length mm	Max Jaw Opening mm
61 64 66	100	13	61 64 70	300	36
67	150	18	71	375	46
68	200	24	72	450	55
69	250	30	73	600	65

S.Steel Straight Pipe Wrenches

Llaves para tubos rectas de acero inoxidable

ステンレス製パイプレンチ 不锈钢套筒扳手



Unit Per Pcs.

CODE	Length mm	Max Jaw Opening mm	CODE	Length mm	Max Jaw Opening mm
61 64 75	200	25	61 64 79	450	60
76	250	30	80	600	75
77	300	40	81	900	125
78	350	50	82	1,200	150

S.Steel Hook Spanner Wrenches

Llaves de gancho de acero inoxidable

ステンレス製引掛けスパナ 不锈钢钩形扳手



Unit Per Pcs.

CODE	Circle Diam. mm	Overall Length
61 64 85	34 to 36	170 mm
86	40 to 42	176 mm
87	45 to 50	209 mm
88	52 to 55	212 mm
89	58 to 62	244 mm
61 64 90	68 to 75	250 mm
91	80 to 90	284 mm
92	95 to 100	288 mm
93	110 to 115	337 mm

Clip-on Tools

Combination Wrenches



Unit Per Pc.					
CODE	Art. No.	Size mm	CODE	Art. No.	Size mm
61 07 60	K17105	5.5	61 07 71	K17117	17
61	K17106	6		93	18
62	K17107	7		72	19
63	K17108	8		94	20
64	K17109	9		73	21
61 07 65	K17110	10	61 07 74	K17122	22
66	K17111	11		75	23
67	K17112	12		76	24
68	K17113	13		95	25
69	K17114	14		78	27
61 07 92	K17115	15	61 07 79	K17130	30
70	K17116	16		80	32

Adjustable Wrenches, Heavy Duty



CODE	Art. No.	Length		Max. Jaw Opening	Unit Per Pc.
		mm	inch		
61 13 31	K16904	110	4	17mm	
32	K16905	155	6	24 "	
33	K16908	205	8	29 "	
34	K16910	255	10	33 "	
35	K16912	305	12	38 "	
61 13 36	K16915	375	15	50 "	
37	K16918	455	18	60 "	
38	K16924	615	24	70 "	

Comfort Rubber Grip Screwdrivers

Round Blade



- Slotted Screwdriver

+ Phillips Screwdriver

Unit Per Pc.					
CODE	Art. No.	Size mm	CODE	Art. No.	Size mm
61 22 46	F56102	3x75	61 22 52	F56202	#0x75
47	F56107	5.5x100		53	F56207 #1x100
48	F56115	6x150		54	F56215 #2x150
49	F56120	8x200		55	F56220 #3x200
50	F56121	8x250		56	F56221 #3x250
61 22 51	F56122	8x300	61 22 57	F56222	#3x300

90° Universal Pipe Wrenches



Unit Per Pr.			
CODE	Art. No.	Size	Length mm
61 13 40	P104209	3/4"	280
41	P104210	1"	320
42	P104220	1-1/2"	420
43	P104220	2"	560
44	P104230	3"	630
61 13 45	P104240	4"	740

45° Universal Pipe Wrenches S-Shape

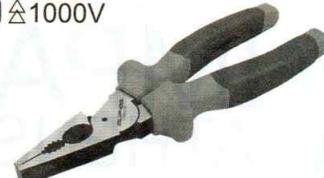


Unit Per Pr.			
CODE	Art. No.	Size	Length mm
61 13 15	P104301	1/2"	235
16	P104310	1"	330
17	P104315	1-1/2"	420
18	P104320	2"	535
19	P104330	3"	652

VDE Insulated Linesman Pliers

CR-V DVE GS △1000V

IEC 60900
DIN EN 60900

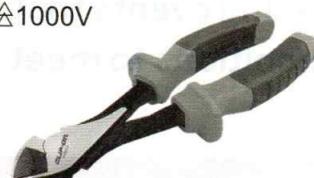


Unit Per Pr.				
CODE	Art. No.	Size	Capacity Steel Wire mm	Length mm
61 16 37	V46010	6"	Ø2.0	162
38	V46011	7"	Ø2.0	185
39	V46012	8"	Ø3.0	200

VDE Insulated H/D Diagonal Cutters

CR-V DVE GS △1000V

IEC 60900
DIN EN 60900



Unit Per Pr.				
CODE	Art. No.	Size	Capacity Steel Wire mm	Length mm
61 16 76	V46015	6"	Ø2.0	160
77	V46009	7"	Ø2.0	180
78	V46016	8"	Ø3.0	200

VDE Insulated Round Nose Pliers

CR-V VDE Δ 1000V

IEC 60900
DIN EN 60900



Unit Per Pr.			
CODE	Art. No.	Size	Length mm
61 16 79	V46018	6"	170

Bearing Puller Set

BPK55 For Inner Ring

The slide hammer bearing puller set is designed for removing "hard-to-pull" bearings without damaging the bearing housing.

BPK65 For Inner & Outer Ring

The bearing puller set is designed to remove the internal and external bearing rings from bearings mounted to various fittings, shafts, etc.



Unit Per Set.

CODE	Art. No.	Content
61 50 81	A113061	Sliding Hammer * 1 Set Internal Claw * 5 Pcs Steel Case * 1 Pcs
61 50 82	A113062	Sliding Hammer * 1 Set Internal Claw * 8 Pcs Gear Puller * 1 Pcs Flare Nut Wrench * 1 Pcs Hexagon Key Wrench * 1 Pcs Steel Case * 1 Pcs

Bearing Feeler Gauges



Used for measuring main bearing clearance of marine engine.

When the rod "S" has been pressed through the pipe "R", the pipe "R" can be pushed away from the brass by further pressing on the rod "S" and when a distance "a" is obtained it is easy to feel the fit of the feeler in the clearance.



Obs. Keep "R" against the journal as long as the feeler is in the bearing.

Unit Per Set.

CODE	Art No.	Range mm	Contents mm
65 05 87	M90012	0.75-0.95	0.75, 0.80, 0.85, 0.90, 0.95
88	M90022	0.65-0.85	0.65, 0.70, 0.75, 0.80, 0.85
89	M90032	0.05-0.35	0.05, 0.1, 0.15, 0.2, 0.25, 0.30, 0.35
90	M90042	0.40-0.70	0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70
91	M90052	0.75-1.05	0.75, 0.80, 0.85, 0.90, 0.95, 1.00, 1.05
65 05 92	M90062	0.40-0.60	0.40, 0.45, 0.50, 0.55, 0.60
93	M90072	0.10-1.10	0.10, 0.20, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00, 1.10
94	M90082	0.15-0.6*	(0.15, 0.20, 0.25, 0.30, 0.35), (0.40, 0.45, 0.50, 0.55, 0.60)

*All Blades are consist of: 0.05, 0.10 and 0.15mm thickness gauges.

Micro Adjusting Torque Wrenches GY Series Preset



Accuracy +/-3%

CODE	Art. No.	Square Drive	Torque Range Nm/lb-in	Graduation	Length mm	Weight g
61 14 71	K16801	1/4"	2.5-12/20-105	0.05	280	680
72	K16802	1/4"	4-20/30-180	0.15	280	680
73	K16804	3/8"	6.0-30/50-250	0.25	315	820

CODE	Art. No.	Square Drive	Torque Range Nm/lb-in	Graduation	Length mm	Weight g
61 14 74	K16805	3/8"	20-100/15-75	0.5	443	1,040
75	K16806	1/2"	40-200/30-150	1.0	465	1,160
76	K16807	1/2"	50-350/37-260	2.0	525	1,300
77	K16808	3/4"	100-500/80-400	5.0	700	3,000
78	K16809	3/4"	160-800/120-600	5.0	1,040	5,900
61 14 79	K16810	3/4"	200-1,000/150-750	5.0	1,040	5,900
80	K16811	1"	160-800/120-600	5.0	1,040	5,900
81	K16812	1"	200-1,000/150-750	5.0	1,040	5,900
82	K16813	1"	300-1,500/258-1,069	10.0	1,260	9,200

Reusable Interlocking Stencils

Reusable, adjustable and interlocking. Gothic-style characters for horizontal composition. Stencils adjust quickly for perfect character alignment, spacing and clean, bold characters. Made of brass, suitable for marking shipments, making signs and other identification on ships.



45 Piece Letter & Figure Sets

CODE	Art. No.	Size	Content
61 31 61	M120151	1"	A-Z*1
62	M120152	1-1/2"	0-9*1
63	M120153	2"	Other:
64	M120154	2-1/2"	Plain Ender*2, Period*1,
65	M120155	3"	Ender*1, Comma*1,
61 31 66	M120156	4"	Dash*1, Period*1,
67	M120157	5"	Spacer*2, &*1"
68	M120158	6"	

78 Piece Letter & Figure Sets

CODE	Art. No.	Size	Content
61 31 31	M120161	1"	A-P*2, Q*1, R-U*2, V*1,
32	M120162	1-1/2"	W*2, X-Z*2,
33	M120163	2"	0-9*2
34	M120164	2-1/2"	Other:
35	M120165	3"	Plain Ender*2, Period*2,
61 31 36	M120166	4"	Spacer*2, Comma*1,
37	M120167	5"	Apostrophe*1, Dash*1,
38	M120168	6"	Period Ender*1, &*1"

S.Steel Allen Hexagon Wrenches

Llaves hexagonales Allen de acero inoxidable
ステンレス製六角棒スパナ 不锈钢内六角扳手



CODE	Across Flat (mm)	L (mm)	H (mm)	CODE	Across Flat (mm)	L (mm)	H (mm)
61 68 01	1.5	59	25	61 68 11	10	110	45
02	2	59	25		12	119	48
03	2.5	59	25		13	130	52
04	3	59	25		14	140	54
05	4	65	30		15	150	58
61 68 06	5	79	32	61 68 16	15	156	60
07	6	85	37		17	162	63
08	7	88	43		18	168	65
09	8	92	44		19	173	69
10	9	97	44		20	177	72

Stainless Steel Side Cutting Pliers

Alicates de corte lateral de acero inoxidable
ステンレス製ペンチ 不锈钢老虎钳



CODE	Length	Weight (grm)
61 68 21	150 mm	180
22	175 mm	355
23	200 mm	465

Stainless Steel Combination Pliers, Slip Joint

Alicates ajustables de acero inoxidable, junta deslizante
ステンレス製コンビネーションプライヤー 不锈钢鲤鱼钳



CODE	Length	Max Slip Opening
61 68 24	150 mm	8 mm
25	200 mm	13 mm

Stainless Steel Diagonal Cutting Pliers

Alicates de corte diagonal de acero inoxidable
ステンレス製斜ニッパー 不锈钢斜口钳

This heavy duty diagonal cutting pliers is designed for cutting hard wires, etc. at close quarters.



CODE	Length	Weight (grm)
61 68 26	150 mm	245
27	200 mm	410

Stainless Steel Long Nose Side Cutting Pliers Plastic Covered Handle

Alicates de punta larga de corte lateral de acero inoxidable
ステンレス製ラジオペンチ 不锈钢尖嘴钳

An ideal tool for quick repair and electronic works.



CODE	Length	Weight (grm)
61 68 28	150 mm	245
29	200 mm	410

Stainless Steel Water Pump Pliers

Alicates de bomba de agua de acero inoxidable
ステンレス製ウォーターポンププライヤー 不锈钢水泵钳



61 68 30	Water Pump Pliers, Stainless Steel Opening Max. 32 mm	Pr.
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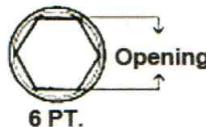
Stainless Steel Socket Wrenches

Llaves de tubo de acero inoxidable
ステンレス製ソケットレンチ 不锈钢套筒扳手

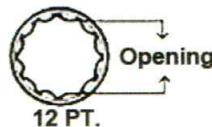
Made of stainless steel, suitable for work with stainless steel bolt to avoid "contact corrosion".



When ordering, please indicate the size of the square drive opening at the back of the socket : 9.5 mm (3/8"), 12.7 mm (1/2"), 19.0 mm (3/4").



6 PT.



12 PT.

9.5 mm (3/8") Drive 12 Point

Unit Per Pcs.

CODE	Opening mm	Overall Length mm
61 68 31	5	28
32	5.5	28
33	6	28
34	7	28
35	8	28
61 68 36	9	28
37	10	32
38	11	32
39	12	32
40	13	32
61 68 41	14	32
42	16	32
43	17	32
44	19	32

12.7 mm (1/2") Drive 12 Point

Unit Per Pc.

CODE	Opening mm	Overall Length mm
61 68 45	6	40
46	7	40
47	8	40
48	9	40
49	10	40
61 68 50	11	40
51	12	40
52	13	40
53	14	40
54	15	40
61 68 55	17	40
56	19	42
57	20	42
58	21	43
59	22	43
61 68 60	23	43
61	24	43
62	26	43
63	27	46
64	30	46
61 68 65	32	46

19 mm (3/4") Drive 12 Point

Unit Per Pc.

CODE	Opening mm	Overall Length mm
61 68 66	17	50
67	19	50
68	21	55
69	22	55
70	24	55
61 68 71	26	55
72	27	55
73	30	60
74	32	60
75	35	60
61 68 76	36	60
77	38	60
78	41	65
79	46	65
80	50	70

Stainless Steel Ratchet Handles for Socket Wrenches

Mango de trinquete de acero inoxidable para llaves de tubo

ステンレス製ラチェットハンドル 不锈钢棘轮手柄

Made of stainless steel, suitable for work together with stainless steel socket wrenches.



Unit Per Pc.

CODE	Square Drive	Overall Length mm	Weight (grm)
61 68 81	9.5 mm (3/8")	200	290
82	12.7 mm (1/2")	245	690
83	19.0 mm (3/4")	320	1,570

42. Non-Sparking Tools**Non-Sparking, Non-Magnetic & Non-Corrosive for Tankers, LPG and LNG Vessels**

Two types of non-spark tools are available, a high quality grade beryllium copper alloy material and a standard grade aluminium bronze alloy. These tools are non magnetic and non corrosive. The sizes of the items specified below are standard, but larger or smaller sizes are available upon request.



Sparkless Safety Tool on Grinding



Sparking Alloy Tool on Grinding

Non-Spark Single Open End Wrenches

Llaves Planas Simple Ant-chispa

防爆用片口スパナ

防爆单开口扳子



Unit Per Pc.

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Opening mm	CODE	Opening mm
61 54 01	8	61 54 21	10
02	10	22	12
03	12	23	14
04	14	24	17
05	17	25	19
61 54 06	21	61 54 26	21
07	23	19	22
08	26	27	23
09	29	20	24
10	32	28	26
61 54 11	35	61 54 38	27
12	38	29	29
13	41	39	30
14	46	30	32
15	50	31	35
61 54 16	54	61 54 40	36
17	58	32	38
18	63	33	41
		34	46
		35	50
		61 54 36	58
		37	67

Non-Spark Double Open End Wrenches

Llaves Planas Doble anti-chispa

防爆用両口スパナ

防爆双开口扳子



15° Angle

Unit Per Pc.

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Opening mm	CODE	Opening mm
61 54 41	8 x 9	61 54 60	8 x 10
42	10 x 12	61	9 x 10
43	12 x 14	62	10 x 12
44	14 x 17	63	12 x 14
45	17 x 19	64	14 x 17

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Opening mm	CODE	Opening mm
61 54 46	17 x 21	61 54 65	17 x 19
47	19 x 21	66	17 x 21
48	21 x 23	67	19 x 21
49	21 x 26	56	19 x 22
50	23 x 26	68	21 x 23
61 54 51	26 x 32	61 54 69	21 x 26
52	32 x 35	57	22 x 24
53	35 x 41	70	23 x 26
54	41 x 46	58	24 x 27
55	41 x 50	59	24 x 30
		61 54 71	26 x 29
		72	26 x 32
		77	27 x 30
		73	29 x 32
		78	30 x 32
		61 54 74	32 x 35
		79	32 x 36
		75	35 x 41
		88	36 x 41
		76	41 x 46

Non-Spark Open & 12 Point Box Wrenches

Llaves poligonales abiertas y de 12 puntos que no generan chispas
防爆用片口スパナ 防爆呆梅两用扳手

Made of beryllium copper alloy.



Unit Per Pcs.

CODE	Opening mm	CODE	Opening mm
61 54 89	24	61 55 11	32
61 55 00	30	12	36

Non-Spark 12 Point Single End Offset Wrenches

Llaves de Estrella Simple Acordada Anti-chispa
防爆用片目スパナ
防爆单头开口扳手



15° Offset

Unit Per Pcs.

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Opening mm	CODE	Opening mm
61 54 80	17	61 54 90	17
81	21	91	19
82	26	92	21
83	32	93	23
84	35	94	26
61 54 85	41	61 54 95	32
86	46	96	35
87	50	97	41
		98	46
		99	50

Non-Spark 12 Point Single End Angle Wrenches

Beryllium Copper Alloy

Llaves de Estrella Simple Angulada Anti-chispa
防爆用片目アングルスパナ 十二角单头弯颈防爆梅花扳手



15° Angle

Unit Per Pcs.

CODE	Opening mm	CODE	Opening mm
61 55 01	17	61 55 06	32
02	19	07	35
03	21	08	41
04	23	09	46
05	26	10	50

Non-Spark 12 Point Double End Wrenches

Llaves de Estrella Anti-chispa

防爆用両目スパナ 十二角双头防爆梅花扳手



15° Offset

Unit Per Pcs.

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Opening mm	CODE	Opening mm
61 55 13	10 x 12	61 55 26	12 x 14
14	10 x 13	27	14 x 17
15	12 x 14	28	17 x 19
16	14 x 17	29	17 x 21
17	17 x 19	30	19 x 21
61 55 18	17 x 21	61 55 24	19 x 22*
19	19 x 21	31	21 x 26
20	21 x 26	25	22 x 24*
21	26 x 32	32	23 x 26
22	32 x 35	35	24 x 27*
61 55 23	35 x 41	61 55 42	24 x 30*
		33	26 x 32
		43	27 x 30*
		50	30 x 32*
		34	32 x 35
		61 55 57	32 x 36*
		64	36 x 41*

Remark : * marked sizes are 45° Offset

Non-Spark Combination Open & Spud Wrenches

Llaves Plana 1 Boca para Estructuras Anti-chispa

防爆用シノ付片口スパナ 开口和尖端防爆扳手



15° Angle Head

Unit Per Pcs.

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Opening mm	CODE	Opening mm
61 55 36	17	61 55 44	17
37	21	45	21
38	26	46	26
39	32	47	32
40	35	48	35
61 55 41	41	61 55 49	41

Non-Spark 12 Point Single End Angle Wrenches

Beryllium Copper Alloy

Llaves de Estrella Simple Angulada Anti-chispa
防爆用片目アングルスパナ 十二角单头弯颈防爆梅花扳手

Non-Spark Combination Ring & Spud Wrenches

Llaves Estrella 1 Boca para Estructuras Anti-chispa
防爆用シノ付片目スパナ
防爆尖尾梅花扳手



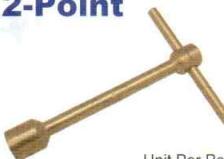
Unit Per Pcs.

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Opening mm	CODE	Opening mm
61 55 51	17	61 55 58	17
52	21	59	21
53	26	65	24*
54	32	60	26
55	35	70	27*
61 55 56	41	61 55 76	30*
		61	32
		62	35
		77	36*
		63	41

Remark : * marked sizes are 45° Offset

Non-Spark T-Type 12-Point Box Wrenches

Llaves Tipo-T Anti-chispa
防爆用T型ボックスレンチ
T型十二角防爆套筒扳手



Unit Per Pcs.

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Opening mm	CODE	Opening mm
61 55 66	19	61 55 71	17
67	24	72	19
68	30	73	24
69	36	74	26
		75	30

Non-Spark Striking Single Open End Wrenches

Beryllium Copper Alloy

Llaves Fija de Golpe Anti-chispa
防爆用打擊スパナ 防爆用打擊扳手



Unit Per Pcs.

Beryllium Copper Alloy			
CODE	Opening mm	CODE	Opening mm
61 55 80	30	61 55 83	36
81	32	84	41
82	35	85	46

Non-Spark Striking 12 Point Ring Wrenches

Llaves Estrella de Golpe anti-chispa
防爆用打擊メガネスパナ
敲击式十二角防爆棘轮扳手



Unit Per Pcs.

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Opening mm	CODE	Opening mm
61 55 90	26 (6 point)	61 56 01	26
91	32 (6 ")	02	27
92	35 (6 ")	03	30
93	41 (6 ")	04	32
94	46 (6 ")	05	35

(to be continued)

		Unit Per Pcs.	
61 55 95	50 (6 point)	61 56 06	36
96	58 (6 ")	07	41
97	63 (6 ")	08	46
98	71 (12 ")	09	50
		10	55

Non-Spark Striking 12 Point Ring Wrenches with Spring Washer

Anillo de 12 puntas sin chispa Llaves con arandela elástica
スプリングワッシャー付き打撃メガネスパナー
带弹簧垫圈的敲击式巨型隔板



Aluminium Bronze safety striking wrench adapted two spring washers inside the 12 point ring, which enable the wrench to remain in place without having to hold it for free hand hammer striking.

CODE	Opening mm	Overall Length (mm)	Unit Per Pcs.	
			For Bolt Size MM	WW
61 55 78	24	160	M16	-
79	27	180	M18	-
86	30	190	M20	-
87	32	190	M22	W3/4
88	36	205	M24	-
61 55 89	41	225	M27	W1
99	46	240	M30	W1-1/8
61 56 00	50	255	M33	W1-1/4
11	55	272	M36	-
14	60	272	M39	-
61 56 27	65	300	-	-
28	70	330	-	-
29	75	330	-	-

Name of Mfr.: Ampco Safety Tools

Non-Spark Hook Spanner Wrenches

Special Aluminium Bronze

Llaves de Gas Anti-chispa 防爆用引掛スパナ 钩形防爆板手

A tool to tighten and loosen round nuts with notches. Sizes fit to the outer diameter of round nuts.



Unit Per Pcs.

Special Aluminium Bronze		
CODE	61 56 12	61 56 13
For Hose Size mm	40	65

Non-Spark Adjustable Wrenches

Llaves Ajustables Anti-chispa 防爆用モンキー 活络防爆板手



Unit Per Pc.			
Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	O' all Length mm	CODE	O' all Length mm
61 56 15	150	61 56 22	150
16	200	23	200
17	250	24	250
18	300	25	300
19	375	26	375
61 56 20	450		

Non-Spark Ratchet Wrenches for Socket

Llaves de Carraca Anti-chispa

防爆用ラチェットレンチ

棘轮套筒防爆扳手



The size of this wrench is determined by its opening across flats, not by bolt diameter.

Unit Per Pc.

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Opening Across Flat mm	CODE	Opening Across Flat mm
61 56 30	17	61 56 40	17
31	26	41	19
32	32	42	21
33	35	43	22
34	41	44	24
61 56 35	50	61 56 45	26
36	58	46	27
37	63	47	30
		48	32
		49	35
		61 56 50	36

Non-Spark Straight Pipe Wrenches

Llaves para Tubo "Stillson" Anti-chispa

防爆用パイレン 防爆直管子板手



Unit Per Pc.

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	O' all Length mm	CODE	O' all Length mm
61 56 51	200	61 56 59	200
52	250	60	250
53	300	61	300
54	350	62	350
55	450	63	450
61 56 56	600	61 56 64	600
57	900	65	900

Non-Spark Socket Wrench Sets

Juegos de Llaves de Vaso Anti-chispa

防爆用ソケットレンチセット

防爆套筒扳手

Able to furnish 12.7 mm square drive set only.



Unit Per Set			
CODE	Rank	Square Drive	Contents
61 56 71	Special Aluminium Bronze	12.7 mm	8 sockets of m/m ... 10, 12, 14, 17, 19, 21, 23, 26 1 each of ... Speed T handle, Nut spinner handle, Sliding T handle, Universal Joint, Offset handle, Male ratchet handle and 3 length of extension bars.
61 56 72	Beryllium Copper Alloy	12.7 mm	15 sockets of m/m ... 9, 10, 12, 13, 14, 15, 16, 17, 17.5, 19, 21, 23, 26, 29, 32 1 each of ... Universal Joint, Cross bar, Male ratchet handle, Sliding T handle, Nut spinner handle, Speed T handle and 2 of extension bars.
61 56 73		12.7 mm	22 sockets of m/m... 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 26, 27, 28, 30, 32 1 each of... Deep socket, Universal joint, Male ratchet handle, Sliding T handle, Speed T handle, Driver socket, Offset handle and 2 of Extension bars.

Non-Spark Hexagon Allen Wrenches

Beryllium Copper Alloy

Llaves Allen (Hexagonal) anti-chispa

防爆用六角棒スパナ 内六角防爆扳手



Unit Per Pc.

Beryllium Copper Alloy			
CODE	Size mm	CODE	Size mm
61 56 90	2.5 x 56	61 56 94	6 x 90
91	3 x 63	95	8 x 100
92	4 x 70	96	10 x 122
93	5 x 80		

Non-Spark Ball Pein Hammers

Martillos de bola anti-chispa

防爆用ハンドハンマー 防爆钳工锤

Reliable ball pein hammer, will not produce sparks.



Unit Per Pc.

Special Aluminium Bronze		Beryllium Copper Alloy			
CODE	Nominal Size	Weight Grm.	CODE	Nominal Size	Weight Grm.
61 57 01	1/4	115	61 57 10	1/4	115
02	1/2	225	11	1/2	225
03	3/4	340	12	3/4	340
04	1	453	13	1	453
05	1-1/2	680	14	1-1/2	680
61 57 06	2	900	61 57 15	2	900
07	3	1,350	16	3	1,350

Non-Spark Testing Hammers

Martillos de Inspección Anti-chispa

防爆用テストハンマー 防爆检测锤



Unit Per Pc.			
Special Aluminium Bronze		Weight Grm	Beryllium Copper Alloy
CODE	Nominal Size		CODE
61 57 20	1/4	130	61 57 25
21	1/2	220	26
22	3/4	300	27
23	1	380	28
			1

Non-Spark Double Face Hammers with Handle

Mazas Doble Cara con Mango Anti-chispa
防爆用両面ハンマー 防爆双平面锤

This double face hammer head is furnished with a handle. If a handle is not required, please specify accordingly.



Special Aluminium Bronze		Weight kgs	Beryllium Copper Alloy	
CODE	Nominal Size		CODE	Nominal Size
61 57 30	3	1.36	61 57 40	3
31	4	1.81	41	4
32	5	2.27	42	5
33	6	2.72	43	6
34	8	3.63	44	8
61 57 35	10	4.53	61 57 45	10
36	12	5.45	46	12
37	15	6.8	47	15
38	20	9.0		

Non-Spark Chipping Hammers Handled

Piquetas con Mango Anti-chispa
防爆用ケレンハンマー 防爆敲锈锤

Designed for chipping of scale, rust or old paint in vessels where non-sparking safety tools are indispensable.



Special Aluminium Bronze		Weight Grm	Beryllium Copper Alloy	
CODE	Nominal Size		CODE	Nominal Size
61 57 51	1/2	225	61 57 55	1/2
52	1	340	56	3/4
		453	57	1
		680	58	1-1/2

Non-Spark Claw Hammers Handled

Martillos Uñas con Mango Anti-chispa
防爆用釘抜きハンマー 防爆羊角锤

One side for hammering and the other for pulling out nails.



Unit Per Pc.			
Special Aluminium Bronze		Weight Grm	Beryllium Copper Alloy
CODE	Nominal Size		CODE
61 57 70	1	453	61 57 75
		680	76
			1
			1-1/2

Non-Spark Cold Chisels

Cortafrios Anti-chispa

防爆用平タガネ 防爆冷凿

To be used on jobs where non-sparking cold chisels are required.



Unit Per Pc.

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Size mm	CODE	Size mm
61 58 01	10 x 150	61 58 09	20 x 200
02	15 x 150	10	27 x 200
03	17 x 180	11	27 x 250
04	21 x 200	12	27 x 300
05	23 x 200		
61 58 06	25 x 215		
07	25 x 300		

Non-Spark Concrete Chisels

Buril para Hormigón Anti-chispa

防爆用コンクリートタガネ 防爆水泥凿



Unit Per Pc.

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Size mm	CODE	Size mm
61 58 14	20 x 200	61 58 18	20 x 200
15	20 x 250	19	25 x 200
16	25 x 250	20	25 x 250
		21	30 x 300

Non-Spark Caulking Chisels Special Aluminium Bronze

Cinceles de Calafate Anti-chispa

防爆用コーキングタガネ

防爆填缝凿(直形)



Unit Per Pc.

Special Aluminium Bronze					
CODE	Type	Size mm	CODE	Type	Size mm
61 58 24	Straight	25 x 150	61 58 27	Bent	17 x 170
25	"	25 x 170	28	"	17 x 200
26	"	25 x 200	29	W/handle	125

Non-Spark Crowbars

Palanquetas que no generan chispas 防爆用クローバー

防爆撬棍

Made of beryllium copper alloy.



Unit Per Pc.

Round Body		Hexagon Body	
CODE	Blade Width x Overall Length mm	CODE	Blade Width x Overall Length mm
61 58 30	52 x 600	61 58 31	22 x 1,000

Non-Spark Pinch Bars

Palancas de pie de cobre que no generan chispas

防爆用こじり棒 防爆撬棒

Made of beryllium copper alloy.



Unit Per Pc.

61 58 32	Bar, pinch, blade width 30 mm x overall length 1,200 mm, non-spark, beryllium copper alloy	Pc.
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Non-Spark Hand Scrapers with Handle, Beryllium Copper Alloy

Rasqueta Manual con Mango Anti-chispa

防爆用スクリッパー 防爆手刮刀

Designed for scraping in areas where non-sparking tools are required.



Unit Per Pcs.

Beryllium Copper Alloy		
CODE	SIZE mm	Remark
61 58 40	40 x 75	with handle
41	75 x 115	"

Non-Spark Deck Scrapers with Handle

Palanquetas que no generan chispas

防爆用デッキスクレッパー 防爆撬棍

With 900 mm long handle.



Unit Per Pcs.

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Size mm	CODE	Size mm
61 58 43	50 x 900	61 58 44	50 x 900

Non-Spark Angle Scrapers

Rasqueta Angular anti-chispa

防爆用アンダルスクレッパー 防爆三角刮刀

Specify width and length when ordering.



Unit Per Pcs.

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Size mm	CODE	Size mm
61 58 46	40 x 250	61 58 48	40 x 270
47	40 x 300	49	50 x 300

Non-Spark Combination Pliers, Slip Joint

Alicates Combinados Anti-chispa

防爆用コンビネーションプライヤー 防爆鲤鱼钳

Designed for maximum gripping capacity to round objects.



Unit Per Pr.

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Length mm	CODE	Length mm
61 58 61	150	61 58 63	160
62	200	64	210

Non-Spark Side Cutting Pliers

Alicates Universales Anti-chispa

防爆用ベンチ

防爆钢丝钳

A non-sparking tool with powerful leverage and rigid side cutters.



Unit Per Pr.

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Length mm	CODE	Length mm
61 58 67	180	61 58 70	150
68	250	71	170
		72	200

Non-Spark Radio Pliers

Alicates para radio sin chispa

防爆用ラジオベンチ 防爆无线电钳

Long thin taper nose for use in close quarters. An ideal tool for quick electrical and repair works.



Unit Per Pr.

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Length mm	CODE	Length mm
61 58 75	150	61 58 76	160

Non-Spark Diagonal Cutting Pliers

Alicates diagonales Anti-chispa

防爆用斜角ニッパー 防爆斜口钳

This heavy duty diagonal cutting pliers is designed for cutting hard wires, etc. at close quarters.



Unit Per Pr.

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Length mm	CODE	Length mm
61 58 80	150	61 58 81	150

Non-Spark Water Pump Pliers

Tenacillas de Canal Anti-chispa

防爆用ウォーターポンププライヤー

防爆水泵钳



Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Size mm	CODE	Size mm
61 58 85	Water pump pliers, special aluminium bronze	61 58 86	Water pump pliers, beryllium copper alloy

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Length mm	CODE	Length mm
61 58 61	150	61 58 63	160
62	200	64	210

Non-Spark Slotted Screwdrivers, Plastic Handle

Destornilladores Plaos Anti-chispa, Mango de Plástico

防爆用ドライバー 防爆塑料柄螺丝刀

Note: The sizes listed are of blade length only, not overall length.



Unit Per Pcs.

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Blade mm	CODE	Blade mm
61 59 01	4.5 x 50	61 59 10	4.5 x 50
02	5 x 75	11	5.5 x 75
03	6 x 100	12	6 x 100
04	6 x 125	13	8 x 150
05	8 x 150	14	9 x 200
61 59 06	8 x 200	61 59 15	10 x 250
07	10 x 250	16	10 x 300
08	10 x 300		

Non-Spark Screwdrivers, Phillips, Plastic Handle

Destornilladores Anti-chispa, Philips, Mango de Plástico
防爆用プラスドライバー 防爆塑料柄十字螺丝刀

The sizes listed below are of blade size only, not overall length.



Unit Per Pcs.

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Blade mm	CODE	Blade mm
61 59 20	No. 1 x 75	61 59 25	No. 1 x 75
21	2 x 100	26	2 x 100
22	3 x 150	27	3 x 150
23	4 x 200	28	4 x 200

Non-Spark Drum Opening Spanners

Llaves para Abrir Bidones Anti-chispa
防爆用ドラムスパナー 防爆开口扳手

A tool specially designed to open drums, plugs, and caps of Japanese or foreign origin in an easy, quick, and safe way.



Unit Per Pcs.

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Overall Length mm	CODE	Overall Length mm
61 59 36	520	61 59 37	560

Non-Spark Valve Wheel Wrenches F Type

Llaves de Válvula anti-chispa/Tipo F
防爆用バルブホイールレンチ F型 防爆阀盘手

Specify length when ordering.



Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Opening Width x Overall Length mm	CODE	Opening Width x Overall Length mm
61 59 40	30 x 300	61 59 45	30 x 250
41	40 x 500	44	35 x 250
42	50 x 700	48	40 x 300
43	60 x 1,000	49	44 x 350
		61 59 46	50 x 300
		47	65 x 500
		50	68 x 500
		56	68 x 600
		Square Bar	
		61 59 57	44 x 350
		62	60 x 500

Non-Spark Square Shovels

Palas Cuadradas Anti-chispa 防爆用角スコップ 防爆方锹



Unit Per Pcs.

Special Aluminium Bronze		Beryllium Copper Alloy			
CODE	Blade mm	O' all Length mm	CODE	Blade mm	O' all Length mm
61 59 51	180 x 225	910	61 59 54	180 x 220	910
52	250 x 300	970	55	255 x 300	970
53	280 x 355	1,060			

Non-Spark Round Shovels

Palas Redondas anti-chispa 防爆用丸型スコップ 防爆圆式铲



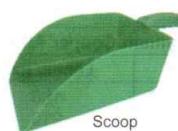
Unit Per Pcs.

Special Aluminium Bronze		Beryllium Copper Alloy			
CODE	Blade mm	O' all Length mm	CODE	Blade mm	O' all Length mm
61 59 58	225 x 290	970	61 59 59	224 x 292	970

Non-Spark Fibreglass Square Scoops & Shovels

Palas Cuadradas de fibra de vidrio anti-chispa
防爆用ファイバーガラス角スコップ 防爆玻璃钢方形铲

Made of fibreglass, a non-sparking safety tool, also will not scrape or strip the protective coating of a tank when sludging. Heavy duty, lightweight and most suitable tool for sludging oil tanks. Available in Scoop & Shovel.



Scoop

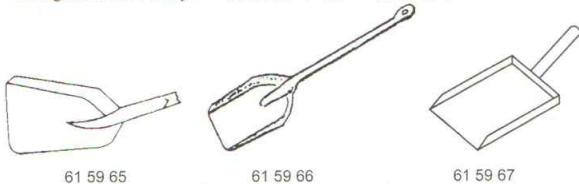


Shovel

CODE	Description	Blade (mm)	O' all Length (mm)
61 59 60	Scoop, square fiberglass non-spark	167 x 220	330
61 59 61	Shovel, square fiberglass non-spark	290 x 445	1,040

Non-Spark Dust Pans

Recogedores anti-chispa 防爆用チリ取り 防爆簸箕



Aluminium			Special Aluminium Bronze		
CODE	Blade mm	O' all Length mm	CODE	Blade mm	O' all Length mm
61 59 65	160 x 240	460	61 59 66 67	100 x 150 130 x 175	320 315

Non-Spark Putty Knives

Espátulas para Masilla Anti-chispa
防爆用パテナイフ 防爆油灰刀



Unit Per Pcs.

Special Aluminium Bronze		Beryllium Copper Alloy	
CODE	Size mm	CODE	Size mm
61 59 70	75 x 175	61 59 71 73 74 72 76	35 x 190 40 x 200 50 x 200 75 x 175 75 x 200

Non-Spark Heavy Duty Knives

Espátulas Uso Intensivo Anti-chispa 防爆用シーナイフ 防爆水手刀

Edged cutting blade length is 150 mm and overall length is 265 mm.



61 59 75	Knife, heavy duty, beryllium copper alloy, non-spark	Pcs.
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Non-Spark Hatchets

Hachas que no generan chispas 防爆用手斧 防爆斧子

Made of beryllium copper alloy.



61 59 77	Hatchet, blade length 85 mm x overall length 365 mm, non-spark, beryllium copper alloy	Pcs.
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Non-Spark Leak Repair Tool Kits

Kits de herramientas de reparación de fugas sin chispa
防爆用漏洩補修工具キット 防爆泄漏维修工具包

The range of non-spark leak repair tool kit provides fire and explosion protection while you are doing pipe repair job in environments where there is concern about sparks igniting flammable solvents, vapors, liquids, dusts or residues.

This range consists of 5 different non-spark pipe repair tools and materials configuration based on different principles to provide solutions for different pipe repair demand.

Non-Spark Leak Repair Banding Tool Kits

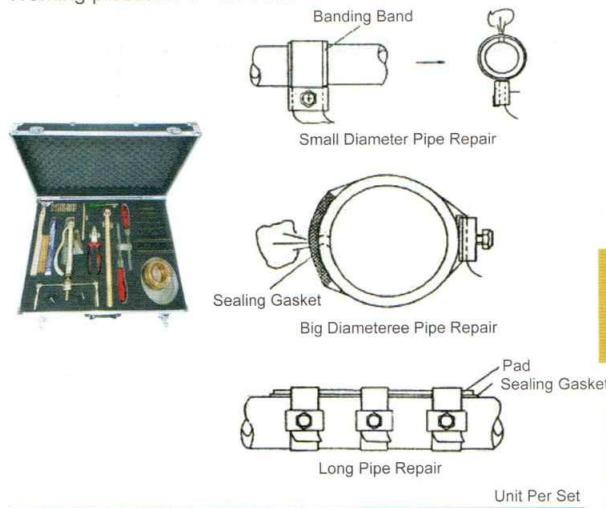
Kit de herramientas de bandas de reparación de fugas sin chispas
防爆用漏洩補修バンド工具キット 防爆泄漏维修工具包

This kit includes the banding band to compress the repaired part after sealing with sealing stick.

Features: Strong repair capacity but less consumables

Working temperature: -40 ~ +120°C,

Working pressure: 0 ~ 240 bar



CODE	61 59 78
Model	XR-20a
Content	Non-spark banding tool 1 pcs
	Non-spark banding band 2 rolls
	Non-spark banding buckle 10 pcs
	Non-spark wire brush 1 pcs
	Non-spark pad 9 pcs
	Magic steel repair stick 114 g 1 pcs
	Non-spark combination pliers 1 pcs
	Non-spark hammer 1 pcs
	Non-spark screwdriver (-)100 mm, (+)100 mm 2 pcs
	Non-spark adjustable wrench 150 mm, 300 mm 2 pcs
	Non-spark hexagon Allen key 1 pcs
	Non-spark flat chisel 1 pcs
	Rubber band 30 x 110 mm 2 rolls
	Aluminium storage box 1 pcs

Non-Spark Leak Repair Coupling Tools Kits

Kit de herramientas de acoplamiento de reparación de fugas sin chispa

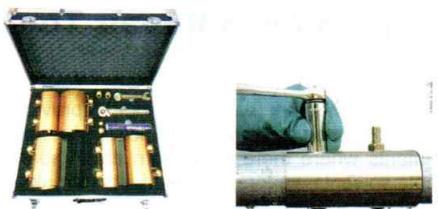
防爆用漏洩補修カッピングキット 防爆泄漏修复耦合套件

This kit includes the coupling to compress the repaired part after sealing with magic steel stick. Can repair the pipe size from 3/8" to 5" in diameter.

Features: easy and quick operation

Working temperature: -35 ~ +91°C

Working pressure: 0 - 10 bar



Unit Per Set

CODE	61 59 79
Model	XR-40c
Content	Non-spark pipe repair coupling 10, 15, 25, 30, 38, 50, 64, 76, 100, 127 mm Non-spark bolt M12, M14 Non-spark ratchet wrench 200 mm Non-spark double open wrench 17 x 19 mm Repair rubber pad 150 mm Magic-steel repair stick 114 g Non-spark deep socket 17 mm, 19 mm Aluminum storage box
	7 pcs 2 pcs 1 pcs 1 pcs 10 pcs 1 pcs 2 pcs 1 pcs

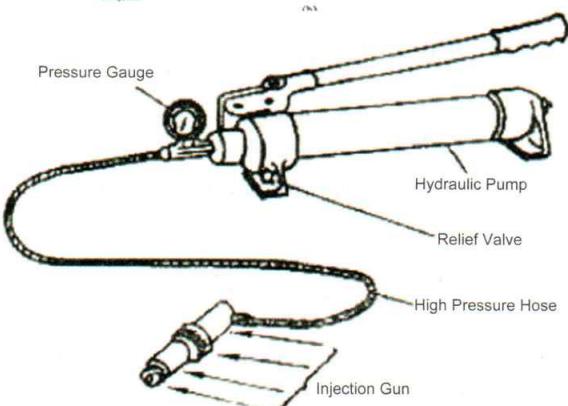
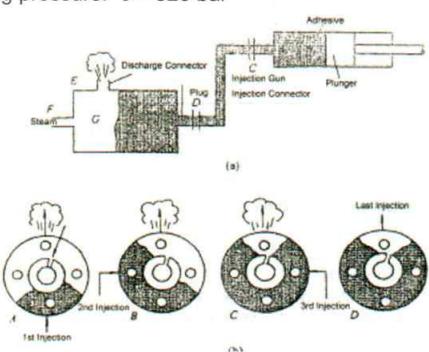
Non-Spark Leak Repair Injection Tool Kits

Kit de herramientas de inyección de reparación de fugas sin chispa
防爆用漏洩補修注入工具キット 防爆泄漏维修注射工具包

This kit is used to repair the high pressure and high temperature pipes or flanges. The hydraulic pump provides high power to the injection gun to penetrate the adhesives into the high pressure spraying leakage from cracks.

Features: High power, ideally to be used in extreme condition.

Working temperature: -200 ~ +600°C,
Working pressure: 0 – 320 bar



Unit Per Set

CODE	61 59 80
Model	XR-31i
Content	Hand hydraulic pump c/w coupler Hydraulic hose 2 m Non-spark injection gun Pressure Dial 60 MPa Non-spark piston valve Non-spark injection nut (M-12, 14, 16, 18, 20, 22, 24) Non-spark adjustable wrench 150 mm, 300 mm Non-spark double open wrench 14 x 17 mm, 19x22 mm Non-spark C-clamp Non-spark repair sticks red/green/white Aluminium storage box
	1 pcs 1 pcs 1 pcs 1 pcs 4 pcs 7 pcs 2 pcs 1 pcs 2 pcs 3 box 1 pcs

Non-Spark Leak Repair Magnetic Pressing Tools Kits

Kit de herramientas de prensado magnético de reparación de fugas sin chispa
防爆用漏洩補修磁気プレス工具キット 防爆泄漏维修磁压工具包

This kit is suitable for using in the magnetically conductive metal surfaces. Place a magnet pad on the leaking surface while pressing the adhesive into the crack. The powerful magnetic force enhances the repairing ability.



Features: Precise and complicated operation is not required – only simply press and lift the magnet to fulfill the fixing process.

Working temperature: -40 ~ +80°C,
Working pressure: 0 - 30 bar

Unit Per Set

CODE	61 59 81
Model	XR-11m
Content	Non-spark magnet X300 Non-spark connector 40 x 465 mm Non-spark bolt M14 Non-spark wire brush Non-spark hammer Non-spark adjustable wrench 150 mm, 300 mm Non-spark double open wrench 14 x 17 mm, 19 x 22 mm Non-spark screwdriver (-)100 mm, (+)100 mm Lead Buckshot Non-spark repair plate 120 x 170 mm Magic-steel repair stick 114 g Aluminium storage box
	1 pcs 1 pcs 2 pcs 1 pcs 1 pcs 2 pcs 2 pcs 2 pcs 9 pcs 4pcs 1 pcs 1 pcs

Non-Spark Leak Repair Wedges Kits

Kit de cuñas de reparación de fugas sin chispa
防爆用漏洩補修楔キット 防爆泄漏修复楔形工具包

This kit is used for all kinds of hole-like lower pressure repair operations. The wedges are made of red pine wood which is soft but tough, and can be easily and quickly fill the hole-like crack.

Features: Low cost and easiest operation, environment-friendly

Working temperature: -70 ~ +120°C,
Working pressure: -1 ~ 8 bar



Unit Per Set

CODE	61 59 82
Model	XR-50w
Content	Wood handle hammer Ø60 x 310 mm Cylinder taper wedge Ø7 x 50 x 255 mm Cylinder taper wedge Ø30 x 150 mm Taper wedge Ø25 x 100 x 60 mm Taper wedge Ø80 x 200 mm Taper wedge Ø45 x 100 mm Taper wedge Ø35 x 85 mm Taper wedge Ø30 x 85 mm Taper wedge Ø25 x 75 mm Triangle wedge 45 x 70 x 255 mm Triangle wedge 25 x 70 x 250 mm Triangle wedge 40 x 45 x 195 mm Triangle wedge 25 x 40 x 145 mm Triangle wedge 40 x 40 x 110 mm Aluminium storage box
	1 pcs 2 pcs 1 pcs

43. Bahco Tools

Bahco tools are made of selected Swedish steel, produced from high-grade iron ore containing a minimum of impurities. High quality steel combined with precision manufacture, technical know-how and skilled craftsmanship have made Bahco Tools famous throughout the world

Adjustable Wrenches

Llaves Ajustables
バーコモンキースパンナ
活动扳手



Unit Per Pcs.

CODE	Length		Max. Opening	Bahco Type No.
	mm	inch		
61 61 01	110	4-1/4	13 mm	8069
02	155	6	20 "	8070
03	205	8	27 "	8071
04	255	10	30 "	8072
05	305	12	34 "	8073
61 61 06	380	15	44 "	8074
07	455	18	53 "	8075
08	615	24	63 "	86
09	770	30	85 "	87

Pipe Wrenches

Bahco

Llaves para Tubo バーコパイブレンチ 萬向管钳



Unit Per Pr.

CODE	Length mm	Max Opening	Bahco Type No.
61 61 11	215	30 mm	140
12	280	36 mm	141
13	370	52 mm	142
14	555	78 mm	143
15	720	110 mm	144
61 61 16	940	160 mm	147

Corner Pipe Wrench



Unit Per Pr.

CODE	Length mm	Max. Opening	Bahco Type No.
61 61 20	320	40 mm	442B
21	430	65 mm	443B
22	535	78 mm	444B

Open & 12 Point Box Wrenches

PU Type

Llaves Combinadas/Tipo PU

バーコ片口スパナー 开口和十二角套筒扳手



Unit Per Pcs.

CODE	Opening mm	Bahco Type No.	CODE	Opening mm	Bahco Type No.
61 61 29	6	PU 6	61 61 44	21	PU21
30	7	PU 7	45	22	PU22
31	8	PU 8	46	23	PU23
32	9	PU 9	47	24	PU24
33	10	PU10	48	25	PU25
61 61 34	11	PU11	61 61 49	26	PU26
35	12	PU12	50	27	PU27
36	13	PU13	51	28	PU28
37	14	PU14	52	29	PU29
38	15	PU15	53	30	PU30
61 61 39	16	PU16	61 61 54	32	PU32
40	17	PU17	57	36	PU36
41	18	PU18			
42	19	PU19			
43	20	PU20			

Pliers

Bahco

Alicates Boca バーコベンチ 剪钳

Engineer's Sidecutting Pliers



2628G

Unit Per Pr.

CODE	Length mm	Bahco Type No.
61 62 13	167	2628G - 160
14	187	2628G - 180
15	207	2628G - 200

Letter G stands for vinyl covered handle.

Round Nose Pliers



Unit Per Pr.

CODE	Length mm	Bahco Type No.
61 62 21	152	2521G - 140

Snipe Nose Pliers

60° offset



Unit Per Pr.

CODE	Length mm	Bahco Type No.
61 62 27	174	2427G - 160
28	190	2427G - 200

Nippers**Bahco**

Alicates バーコニッパー 剪鉗

Side Cutting Nipper

Unit Per Pr.

CODE	Length mm	Bahco Type No.
61 62 31	140	1528 D

Bulldog End Cut Nipper

527D



1519D

Unit Per Pr.

CODE	Length mm	Bahco Type No.
61 62 36	160	527 D - 160
37	200	527 D - 200
40	230	1519 D

Cutters**Bahco**

Herramientas de Corte バーコカッター 切割工具

Bolt Cutter

Unit Per Pr.

CODE	Length mm	Capacity Wire ø	Bahco Type No.
61 62 51	465	6 mm	4559 -18
52	610	8 mm	4559 -24
53	760	9 mm	4559 -30
54	910	10 mm	4559 -36
55	1,070	11 mm	4559 -42

Cable Cutter

2520

Unit Per Pr.

CODE	Length mm	Cutting Capacity	Bahco Type No.
61 62 61	550	30 mm	2520

Screwdrivers

Destornilladores バーコねじ回し 螺丝刀

Round Blade for Slot Head Screw.



Unit Per Pr.

CODE	Blade Length	Bahco Type No.
61 63 01	50 mm	BE-6110
02	75 mm	BE-6120
03	100 mm	BE-6130
04	125 mm	BE-6140
05	125 mm	BE-6150
61 63 06	150 mm	BE-6160

Round Blade for Cross Head Screw.



Unit Per Pcs.

CODE	Tip No.	Blade Length	Bahco Type No.
61 63 10	0	60 mm	BE-5600
11	1	80 mm	BE-5610
12	2	100 mm	BE-5620
13	3	150 mm	BE-5630
14	4	200 mm	BE-5640

Blade with Hexagonal Section for Slot Head Screw.



Unit Per Pcs.

CODE	Blade Length	Bahco Type No.
61 63 16	100 mm	BE-6850
17	150 mm	BE-6860
18	175 mm	BE-6870
19	200 mm	BE-6880
20	200 mm	BE-6890

Short Blade for Slot Head Screw.



Unit Per Pcs.

CODE	Tip Size mm	Blade Length	Bahco Type No.
61 63 22	0.8 x 4.0	25 mm	BE-6540
23	1.2 x 8.0	25 mm	BE-6560

Short Round Blade for Cross Head Screw.

Unit Per Pcs.

CODE	Tip No.	Blade Length	Bahco Type No.
61 63 27	1	25 mm	BE-5710
28	2	25 mm	BE-5720

44. Ridgid Tools**Adjustable Wrenches**

Llaves Ajustables リジッドモンキーレンチ 活动扳手



Unit Per Pcs.

CODE	No.	Length		Jaw Open	
		inch	mm	inch	mm
Chrome					
61 65 01	704	4	100	1/2	10
	706	6	150	3/4	20
	708	8	200	7/8	25
	710	10	250	1-1/8	30
	712	12	300	1-5/16	35
61 65 06	715	15	375	1-11/16	40
	718	18	450	2-1/16	50
	724	24	600	2-7/16	60
Black					
61 65 11	704B	4	100	1/2	10
	706B	6	150	3/4	20
	708B	8	200	7/8	25
	710B	10	250	1-1/8	30
	712B	12	300	1-5/16	35
61 65 16	715B	15	375	1-11/16	40
	718B	18	450	2-1/16	50

Round Blade for Cross Head Screw.



Straight Pipe Wrenches

Llaves "Stilson" リジッドストレートパイプレンチ 直管扳手



Unit Per Pcs.

CODE	Overall Length in/mm	Jaw Opening in/mm	CODE	Overall Length in/mm	Jaw Opening in/mm
61 65 30	6/150	3/4 / 20	61 65 35	18/ 450	2-1/2 / 65
31	8/200	1 / 25	36	24/ 600	3 / 80
32	10/250	1-1/2 / 40	37	36/ 900	5 / 125
33	12/300	2 / 50	38	48/1,200	6 / 150
34	14/350	2 / 50	39	60/1,500	8 / 200

Aluminium Handle Straight Pipe Wrench

Llaves "Stilson" con Mango de Aluminio
リジッドアルミ柄ストレートパイプレンチ 铝柄管钳



Unit Per Pcs.

CODE	No.	Handle Length inch/mm	Jaw Opening inch/mm	Weight lbs
61 65 42	810	10/ 250	1-1/2 / 40	1
43	814	14/ 350	2 / 50	2-1/2
44	818	18/ 450	2-1/2 / 65	3-3/4
61 65 45	824	24/ 600	3 / 80	6
46	836	36/ 900	5/125	11
47	848	48/1,200	6/150	18 - 1/2

Heavy-Duty Chain Wrenches

Llaves de Cadena Uso Intensivo
リジッド強力型 チェーンレンチ 重型链条扳手



Unit Per Pcs.

CODE	No.	Capacity			Chain Length	
		Rated inch	Pipe mm	Actual O.D. inch	mm	inch
61 65 70	C-14	2	50	5	125	18-1/2
71	C-18	2-1/2	60	5	125	20-1/4
72	C-24	3	75	5	125	20-1/4
73	C-36	4-1/2	110	7-1/2	185	29
						725

Strap Wrenches

Llaves con Correa (Llave de Fleje)
リジッドストラップレンチ 皮带扳手



Unit Per Pcs.

CODE	No.	Capacity inch	Strap Width inch
61 65 76	1	1/8 ~ 2	1/2
77	2	1/8 ~ 2	1-1/8
78	5	1 ~ 5	1-3/4

Basin Wrenches

Llave Tuerca Lavabo Extensible リジッドベースンレンチ 盆扳手

An extension wrench specially designed for the installation or repair of sink basins. Spring loaded jaws provide fast one hand ratcheting in confined, difficult to reach areas.



Unit Per Pcs.

CODE	No.	Shank Length	Capacity
61 65 90	1010	10"	3/8 - 1-1/4"
61 65 91	1017	1 - 17"	3/8 - 1-1/4"
61 65 92	1019	1 - 17"	1-1/4" - 2-1/2"

Offset Hex Wrenches

Llaves Allen (Hexagonal) Acodada
リジッドオフセットヘックスレンチ 弯形六角管钳



Unit Per Pcs.

CODE	No.	Capacity	Jaw Opening	Length
61 65 94	E - 110	1-1/8" - 2-5/8"	2-5/8"	9-1/2"

Exposed Ratchet Drop Head Threaders

for Pipe Thread

Tarrajitas co Carraca de Cabezas Intercambiables

リジッドドロップヘッズスレッダー 沉头棘轮功丝扳手



This ratchet allows you to thread easily with a manual operation. This drop head style threader comes with a complete set of the necessary die sizes. Ratchet will cut a clean thread on the first time, it is not necessary to make a secondary cut.

Unit Per Set

CODE	No.	Capacity for Thread BSPT
61 66 01	00-R	1/8 to 1
03	12-R	1/8 to 2
04	R-200	1/8 to 2

Die Head for Drop Head Threaders

Cabezas para Tarrajitas

リジッドドロップヘッズスレッダー用ダイヘッド 功丝头

British standard pipe taper threaded head will be delivered unless another type of thread is specified.

Unit Per Pcs.

Size	No.00-R	No.12-R	No.R-200
	CODE		
1/8	61 66 05	61 66 30	61 66 91
1/4	06	31	92
3/8	07	32	93
1/2	08	33	94
5/8	09	34	95
1	61 66 10	61 66 35	61 66 96
1-1/4		36	97
1-1/2		37	98
2		38	99

Metal Carrying Cases for Drop Head Pipe and Bolt Threader

Estuches Metálicos para Terrajas

リジッドドロップヘッドスレッダー用金属ケース

管绞和螺栓功丝板手工具箱



Unit Per Pc.

CODE	Threader Type for	Weight kg
61 66 45	00 - R	3.4
47	12 - R	6.3

Ratchet Bolt Threaders

Terrajas Ajustables

リジッドラチェットボルトスレッダー

棘轮螺栓攻丝扳手

When ordering, please specify
type of thread.

Unit Per Pc.

CODE	No.	Capacity	
		inch	mm
61 66 54	00 - RB	1/4-1	6-25

Ratchet Threaders

Terrajas co carraca

リジッドラチェットスレッダー

棘轮螺栓攻丝扳手

British standard pipe taper thread will be delivered unless another type of thread is specified.



Unit Per Pc.

CODE	No.	Capacity	
		inch	mm
61 66 56	65R - TC	1-2	25-50

Dies for Ratchet Threaders

Peines para Terrajas con Carraca

リジッドラチェットスレッダー用ダイス

棘轮攻丝板牙



Unit Per Pc.

CODE	61 66 57	61 66 58	61 66 59	61 66 60
Size	1"	1-1/4"	1-1/2"	2"

Pipe Cutters

Ridgid

Corta-tubos Uso Intensivo

リジッド強力型パイプカッター

强力切管器

Heavy-Duty Pipe Cutters



1-A & 2-A

3-S, 4-S and 6-S

Unit Per Pc.

CODE	No.	Capacity	Weight lbs/kg
61 66 63	1 - A	1/8 - 1-1/4"	6-1/2 / 3.0
	2 - A	1/8 - 2"	7-1/4 / 3.2
61 66 68	3 - S	1" - 3"	15 / 6.8
	4 - S	2" - 4"	18 / 8.2
	6 - S	4" - 6"	24 / 10.1

Wide Roll Pipe Cutters



Unit Per Pc.

CODE	No.	Capacity		Weight kg
		inch	mm	
61 66 66	202	1/8 - 2	3-50	3.5

Heavy Duty 4-Wheel Pipe Cutters



No. 42-A

No. 44-S

Unit Per Pc.

CODE	No.	Capacity	Weight lbs/kg
61 66 72	42 - A	3/4" - 2"	7/3.1
	44 - S	2-1/2" - 4"	20/9.0

Spare Wheels for Ridgid Pipe Cutter



Unit Per Pc.

CODE	No.	Pipe Cutter Model	Range mm
61 66 75	F - 3	1-A, 2-A, 202, 42A	1/8 to 2"
76	F - 229	3-S, 4-S, 44-S	1 to 4"
77	F - 367	6-S	4 to 6"

Bolt Cutters

Corta-permos

リジットボルトカッター

螺栓剪刀



Unit Per Pc.

CODE	No.	Cut Diam inch/mm	Length inch/mm	Remark
61 66 80	N14S	1/4 / 6	15 / 379	Center Cut
	N18S	5/16 / 8	19 / 485	"
	N24S	3/8 / 10	26 / 652	"
	N30S	7/16 / 11	31 / 800	"
	N36S	1/2 / 13	38 / 958	"
61 66 85	N42S	9/16 / 14	44 / 1,115	Center Cut

Tubing Cutters

Ridgid

Cortatubos, Ridgid

リジットミゼットチューブカッター

切管器

Midget Tubing Cutters

Unit Per Pcs.

CODE	No.	Capacity		Length
		inch	mm	
61 67 51	103	to 5/8" O.D.	to 16 O.D.	54
52	104	to 15/16" O.D.	to 24 O.D.	65

Tubing Cutters

Unit Per Pcs.

CODE	No.	Capacity		Weight kg
		inch	mm	
61 67 54	150	1/8 - 1-1/8 O.D.	3-28 O.D.	0.4

Quick Acting Tubing Cutters

Unit Per Pcs.

CODE	No.	Capacity O.D.mm	Weight kg
61 67 60	151	6 - 42	0.4
61	152	6 - 66	0.9
62	153	32 - 90	0.9
63	154	48 - 116	1.4
64	156	100 - 170	1.9

Flaring Tools

Abocinadores フレーリング工具 扩管工具

CODE	No.	Flare	Tube Diameter O.D.		Unit Per Set
			Tube Diameter O.D.		
61 67 73	458	45°	1/8, 3/16, 1/4, 5/16, 3/8, 1/2, 5/8, 3/4		
61 67 75	455	45°	1/2, 5/8, 3/4, 7/8, 1		
61 67 76	377	37°	3/16, 1/4, 5/16, 3/8, 1/2, 5/8, 3/4		
61 67 77	375	37°	1/2, 5/8, 3/4, 7/8, 1		
61 67 78	458MM	45°	4, 4.75, 6, 8, 10, 12, 14, 16 mm		

Tube Benders**Ridgid**

Curvadoras de Tubo Tipo Palanca チュープベンダー 田埂式弯管机

Lever-Type Tube Benders

Unit Per Set

CODE	No.	Tube Diam O.D.	CODE	No.	Tube Diam O.D.
61 67 80	403	3/16"	61 67 86	406M	6 mm
81	404	1/4"	87	408M	8 mm
82	405	5/16"	88	410M	10 mm
83	406	3/8"	89	412M	12 mm
85	408	1/2"			

General Ratchet Lever-Type Tube Benders

Unit Per Set

CODE	No.	Tube Diam O.D.
61 67 92	358	For 5/8"
93	368	For 3/4"
94	378	For 7/8"

Hickey Type Heavy Wall Conduit Benders

Tenanza Curvadora Manual Uso Intensivo

リジッドヒッキー型コンジットベンダー

厚壁管弯管器

CODE	No.	Capacity mm	Weight kg
61 67 98	B - 1711	12, 19	1.3
99	B - 1712	25, 32	3.5

45. Torches / Leak Detectors**Kerosene Torches****(Blow Lamps)**

Soplete de Keroseno ケロシントーチ 煤油喷灯

This powerful burner produces a strong blue blast. The flame can be regulated as required for the job. Only to be operated with kerosene.

CODE	Tank Capacity	CODE	Tank Capacity
61 70 05	1 ltr	61 70 07	2 ltr
06	1.5 ltr		

Compact Gas Torches

Soplete Butano de Cartucho コンパクトガストーチ 小型气体喷灯

Lightweight, compact torch for soldering or fusing wax, paint, etc. Be careful not to open the cartridge when there is still some propane remaining inside. Specify whether the full set or the spare cartridge only is required when ordering.

Wide Cartridge



Long Cartridge

61 70 16 17	Complete Set with Burner, wide cartridge Spare gas wide cartridge	Set Pc.
61 70 18 19	Complete set with burner, long cartridge Spare gas long cartridge	Set Pc.

Refrigerant Gas Leak Detectors

Detector de fugas de gas refrigerante
冷媒ガス漏れ検知器 制冷气体泄漏探测器

Used to quickly and accurately isolate leaks in all commercial, industrial and automotive air conditioning and refrigeration systems. It detects all HFC, CFC and HCFC refrigerants including R134A, R12 as well as blends such as R404A, R407C, R410A, and others.

Fully automatic and requires very little power to operate by using state of the art microprocessor controlled technologies.



A spare sensor housed in the battery compartment, also insures no down time when sensors are damaged or need replacing (For TA 430VA).

Features:

- Simple, one button operation.
- Four sensitivity modes, 2 zero-resets for enabling quick and easy location of large and small leaks.
- Both visual and audible leak detection signal.
- Low battery indicator.
- Automatic power-off to conserve battery life.

CODE	61 70 22	61 70 23	Unit Per Pcs.
Model	TA430VA	TA430FR	
Applicable refrigerants	HFC/CFC/HCFC	HFC/CFC/HCFC/HFO	
Batteries	2 x 1.5V 'AA' Alkaline Batteries (3 VDC)	Rechargeable Lithium Battery (DC 3.7 V)	
Working Temperature	5 - 40°C	0 - 40°C	
Gas Sampling Method	Suction Type	NDIR Sensor	
Sensitivity	< 3g/year	< 1g/year	
Sensor Lifetime	Approx. 30 hours	-	
Probe Length	300 mm	190 mm	
Dimensions (mm)	190 x 57 x 38	290 x 320 x 110	
Weight (kg)	0.19	1.42	

Name of Mfr.: Core Enterprises Inc., Field piece

Foam Leak Detectors

Detectores de fugas de espuma
泡式ガス漏れ検知スプレー 泡沫气体泄漏检测喷雾器

A nonflammable, sensitive spray which will safely and effectively detect all kinds of gas or air leaks in seals, valves, cylinders, pipes, tanks, etc. When sprayed on the surface where a leak exists, it will detect by foaming, even in the low pressure leaks. It is not harmful to one's health and it has no effect upon the surface where sprayed. Foam leakage test shows foaming at 30 µm hole and differential pressure of 4-5 x 10³ Pa. NSF or other standard approved type is also available where you can use in galley.



61 70 24	Foam leak detector, 345 gm	Tin
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Leak Detectors Dye Check

Detectores de fugas Dye Check
リークディテクター カラーチェック 检漏仪 染色检查

Used for dye checking cracks for leaks. It consists of three different aerosol liquids to be used as cleaner, penetrant, and developer. Each aerosol can contains 300 cc (10 oz).



61 70 27	Leak detector, dye check, cleaner, 300 cc	Tin
61 70 28	Leak detector, dye check, penetrant, 300 cc	Tin
61 70 29	Leak detector, dye check, developer, 300 cc	Tin
61 70 30	Leak detector, dye check, 300 cc, 3 each/set	Set
61 70 26	Leak detector, dye check, 300 cc, 6's/set Cleaner x 3, Penetrant x 1, Developer x 2	Set

46. Ladders

Aluminium Alloy Ladders

Escaleras de Aluminio アップラダー 铝合金梯



Unit Per Set

CODE	Length mtrs	Safety Load at 75° Lean kg	Weight kg
61 71 01	2.4	100	4.3
02	3.0	150	6.5
03	4.0	150	8.4
04	5.0	150	10.3
05	6.0	150	12.2

2-Extension Ladders

Escaleras con 2 Extensiones de Aluminio

アルミ合金二連伸縮はしご 铝合金双股伸缩梯



Unit Per Set

CODE	Length		Safety Load at 75° Lean kg	Weight kg
	Extended mtrs	Folded mtrs		
61 71 10	4.5	2.8	100	10.5
11	5.1	3.1	150	13.5
12	6.5	3.8	150	16.2
13	7.2	4.1	150	18.3
14	7.8	4.4	150	19.7
61 71 15	9.2	5.1	150	26.2
16	10.6	5.8	150	29.5

3-Extension Ladders

Escaleras con 3 Extensiones de Aluminio

アルミ合金三連伸縮はしご 铝合金三股伸缩梯

Unit Per Set

Made in three sections of aluminium alloy with non-slip rungs and self-aligning safety shoes. Please specify the extended length when ordering.



Unit Per Set

CODE	Length		Safety Load at 75° Lean kg	Weight kg
	Extended mtrs	Folded mtrs		
61 71 20	6.5	3.1	150	20.4
21	8.5	3.8	150	28.6
22	10.6	4.5	150	39.6
23	12.6	5.2	150	45.9
24	14.7	5.8	150	52.0

Aluminium Alloy Step Ladders

Escaleras Tijera de Alumino

ハイステップ 铝合金踏步梯

A strong framed step ladder for use indoors or outdoors when cleaning, painting, or doing repair work. Each step is flat with non-slip gridding and there are non-slip rubber guide shoes at the bottom of the support legs. This ladder will safely support up to 100 kg of weight for up to 0.6 mtr height, and up to 160 kg of weight for 0.9 mtr height and more.



Unit Per Set

CODE	Height mtrs	Nos. of Steps	Weight kg
61 71 25	0.3	2	1.6
35	0.6	2	2.3
26	0.9	3	3
27	1.2	4	4
28	1.5	5	5
61 71 29	1.8	6	6
30	2.1	7	10
31	2.4	8	11.3
32	2.7	9	12.6
33	3.0	10	14
61 71 34	3.6	12	17

Aluminium Alloy Folding Ladders

Escaleras Plegables Tijera-Extensible de Aluminio

二つ折りアップラダー 铝合金折叠梯

Can be used as an extended-straight-folded-or step ladder. Non-slip round steps and non-slip rubber shoes at the bottom ends. Please specify the extended length when ordering.



Unit Per Set

CODE	Length		Weight kg
	Extended mtrs	Folded mtrs	
61 71 36	2.0	0.9	6.2
37	2.7	1.2	7.6
38	3.4	1.5	9.3
39	4.1	1.9	11.2
40	4.8	2.2	13.2

Aluminium Alloy Extension Ladders

Escaleras de extensión de aleación de aluminio

アルミ合金製伸縮はしご 铝合金伸缩梯



A compact storage size W:480 x D:83 x H:860 mm, and suitable for working at high place by extending to max length 3,800 mm. Max. withstand load: 100 kgs. Weight: 10 kg.

61 71 41	Ladder, extension, aluminium alloy, Max length 3,800 mm	Pc.
----------	---	-----

Aluminium Alloy Scaffolding Stands with Telescopic Leg

Andamios de aleación de aluminio con pata telescópica

アルミ製伸縮脚付足場台 带伸缩支腿的铝制脚手架平台



Scaffolding stands equipped with telescopic legs made of aluminium alloy. The telescopic legs can be extended or retracted to achieve varying heights, ensuring adaptability to various environment for maintenance work.

Unit Per Pcs.

CODE	Size mm		Load Capacity (kg)
	Top Panel	Adjustable Height	
61 71 06	400 x 881	730 – 1,030	100
07	400 x 1,200	730 – 1,030	100
08	400 x 1,200	1,030 – 1,470	100

Aluminium Alloy Foldable Working Benches

Bancos de trabajo plegables de aleación de aluminio

アルミ合金製折り畳み式作業台 铝合金可折叠工作台



A foldable working bench made of aluminium alloy. Easy to carry and place it at your favorable working place. Please make sure to lock the foot holding stoppers before stepping on.

Outer size: W410 x D1,100 x H500 mm, Stage size: 300 x 680 mm. Max. withstand load: 100 kg. Weight: 3.5 kg.

61 71 42	Bench, working, foldable, Aluminium alloy, W410 x D1,100 x H500 mm	Pc.
----------	--	-----

Aluminium Alloy Working Benches

Banco de trabajo de aleación de aluminio

アルミ製作業台 铝制工作台



Working bench made of aluminium alloy. You can select from 1 to 5 levels depending on your work applications. Handrail for high level bench is also available for your safety.

Unit Per Set

CODE	Level	Size mm		Load Capacity (kg)
		Panel	Height	
61 71 09	1	600 x 400	300	150
	17	600 x 400	600	150
	18	600 x 400	900	150
	19	800 x 400	1,200	150
	43	1,000 x 400	1,500	150

47. Trucks / Carriers

Wheelbarrows

Carretilla 手押し一輪車 手推车

A small hand-propelled vehicle with one or two wheels.



Unit Per Pc.

CODE	61 71 45	61 71 46
Wheel	One	Two

Spare Wheels for Wheelbarrow

Unit Per Pc.

CODE	For	Type	Size
61 71 47 48	One-wheel	Air inflated Puncture-less	13" x 3"
61 71 49	Two-wheels	Solid	26" x 2-1/2"

Platform Trucks

Carros-Plataformas 手動運搬車 手推车

With One Handle

For moving and handling all sorts of goods easily from on deck to storage facilities or accommodations. The cart has a steel platform and handle with solid cushion wheels. There are two swivel wheels located at the front and two straight wheels at the rear.



Unit Per Pc.

CODE	Platform mm	Loading kg	CODE	Platform mm	Loading kg
61 71 51	500 x 750	200	61 71 54	750 x 1,200	500
52	600 x 900	300	55	900 x 1,500	750
53	710 x 1,000	320			

With Two Handles

Steel plate platform and handles. Has two swivel solid cushion wheels on one side and two rigid on the other. Platform sizes larger than those listed below can be supplied but require some delivery time.



Unit Per Pc.

CODE	Platform mm	Loading kg	CODE	Platform mm	Loading kg
61 71 58	500 x 750	200	61 71 61	750 x 1,200	500
59	600 x 900	300	62	900 x 1,500	750
60	710 x 1,000	400			

Light Duty with Detachable Handle

For handling general merchandise. Has a steel platform and a pipe handle. The two front tires are swivel air cushion tires and the tires at the rear are straight set tires. Platform sizes smaller or larger than the size listed below are available but may require some delivery time.



61 71 64	Truck (lorry), detachable handle with 4 tires, light duty 800 x 1,200 mm	Pc.
----------	--	-----

Spare Wheels for Platform Truck

Solid rubber cushion wheel, available in free swivel and fixed types.



Unit Per Pc.

Free Swivel		Fixed	
CODE	Diam. mm	CODE	Diam. mm
61 71 66	100	61 71 74	100
67	130	75	130
68	150	76	150
69	180	77	180
70	200	78	200
61 71 71	250	61 71 79	250
72	300	80	300

Folding Handy Trucks

Carritos Prácticos Plegables

折りたたみ運搬車 折叠式平板手推车



Folding type handy truck. Lightweight and compact but sturdy.

CODE	Table Size	Weight kg	CODE	Table Size	Weight kg
61 71 82	450 x 710	11	61 71 83	600 x 900	24
81	515 x 815	17.5			

Shovel Nose Hand Trucks

Carretillas para Uso-general 丁稚車 普通型推车

Wood

For use in handling cartons, boxes, bags or crates of stores. Made of wood and iron reinforced. Has two solid cushion tires. Platform size is 450 mm in width and 1,750 mm overall length.



CODE	Wheel	Load Capacity
61 71 84 85	Rubber cushion solid tires Steel wheels	500 kg

Steel

For use in handling cartons, bags, etc. Has a steel frame and rubber solid cushion tires.



CODE	Size H x W x L mm	Load Capacity kg
61 71 86	1,180 x 500 x 500	120
87	1,180 x 480 x 480	180
88	1,780 x 630 x 530	500

Foldable Type

Foldable type aluminium alloy made hand truck for compact storage. It is surrounded on all four sides by boards, so even small items will not be dropped during transport.



CODE	Size LxWxH mm		Load Capacity (kg)	Unit Per Pc.
	In use	Folded		
61 71 89	1,860 × 870 × 630	1,020 × 370 × 750	150	
98	2,110 × 1,090 × 810	1,340 × 370 × 810	150	

Carriers

Carretillas Portabotellas 運搬車 搬运车

Gas Cylinder Carriers

For carrying acetylene oxygen and other gas cylinders. Made from strong steel frames with rubber solid cushion tires. One or two cylinder carriers are available.



CODE	For Gas Cylinder	Size H × W × L mm			Unit Per Pc.
		W	L	H	
61 71 90	Oxygen x 1	1,300	460	670	
91	Oxygen x 1 / Acetylene x 1	1,200	830	600	
92	Propane x 1	1,600	400	400	

Drum Carriers

Made of sturdy steel frames and designed for the easy lifting and carrying of drums. Available with air cushioned tires or solid rubber tires. The width is 450 mm and the overall length including the handle is 1,550 mm.



CODE	Description	Dimensions mm.			Unit Per Pc.
		W	L	H	
61 71 93	With two solid rubber tires				
94	With two air cushion rubber tires				

Hydraulic Hand Pallet Trucks

Transpaletas manuales hidráulicas

油压手動パレットトラック 液压手动托盘搬运车



Hydraulic powered, hand fork-lift truck. Recommended for handling heavy materials and crates in warehouses and freight terminals. When ordering, please specify the capacity required.

CODE	Capacity	Fork Length	Weight	Unit Per Set	
				Type A	Type B
61 71 96	1.5 ton	1,070 mm	77 kg		
97	2.5 ton	1,070 "	99 "		

48. Roller Conveyors / Mesh Box Pallets

Aluminium Roller Conveyor Units

Transportador a Rodillos de Aluminio
アルミ製ローラーコンベヤ 铝制滚轮传送带

Lightweight aluminium conveyor belts which are easy to maneuver and convenient for moving or loading large amounts of stores or moving frozen and fresh provisions to refrigerated storage lockers. Any package with a smooth surface will roll easily on this conveyor. Please specify the length of the conveyor required when ordering.



61 72 01 ~ 03



61 72 04

Unit Per Pc.

CODE	Unit Length	Roller Width	Number of Rollers	Weight
61 72 01	1.5 Mtr	300 mm	15	9.8 kg
02	2.0 "	300 "	20	13.2 "
03	3.0 "	300 "	30	15.5 "
04	Corner 90°	300 "	19	13.2 "

Mesh Box Pallets

Pallets de Malla Metálica Plegable ボックスパレット 搬运篮

A foldable container made of strong, galvanized iron wire mesh with steel pallets at the bottom. Useful for the loading, unloading, and transporting of stores. They can be piled one upon the other and handled by slings using suspenders, pallet jacks, or forklifts.



Unit Per Pc.

CODE	Dimensions mm.			Mesh mm.	Wire Diam. mm.	Weight Capacity kg
	W	L	H			
61 72 10	800	1,000	850	50 × 50	6.5	1,500
11	1,000	1,000	850	50 × 50	6.5	1,500
12	1,000	1,200	850	50 × 50	6.5	2,000

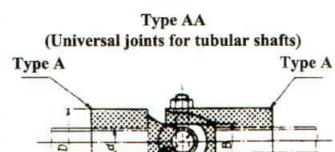
49. Universal Joints

Marine Universal Joints

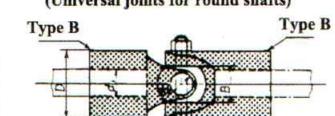
Unines Universales Marinos 船用自在継手 船用万向接头

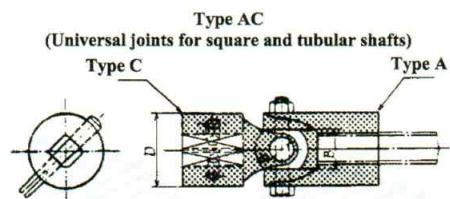
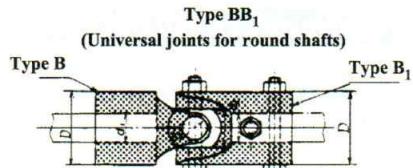
(Ref. JIS F-7452-1978)

These universal joints are used for such operating gears as water sliding doors, sky lights, valves for ventilation, valves for piping, main engine revolution indicators, or transmission gears in ships. They are classified into 4 main types according to the shape of the coupling applicable to the transmission shaft and fixing method of the shaft as shown below.



Type BB
(Universal joints for round shafts)





Type of Yoke	Shape of Coupling	Applicable Transmission Shaft	Fixing Method
A	Round Hole	Tubular Shaft	Welding
B	"	Round	"
B ₁	"	"	Bolt
C	Square Hole	"	Pin

And also classified into four types, AA, BB, BB₁ and AC by combining the above types. See illustrations above.

Shaft Size Table Unit: mm

Nominal Size	Dia. of Applicable Trans. Shaft		Type A	Type B, B ₁	Type C
	Tubular Shaft O.D.	Round Shaft	Tube Shaft Hole Dia.	Round Shaft Side Hole Dia.	Square Shaft Side Length
20	21.2	20	27.7	20.5	17
25	34	25	34.5	25.5	19
32	-	32	-	32.5	22
38	-	38	-	38.5	27
40	48.6	-	49.1	-	-
42	-	42	-	42.5	32
48	-	48	-	48.5	36

Dimensions of steel pipes for transmission shaft for Type A

Nominal Size of Universal Joint	Carbon Steel Pipe for Ordinary Piping		
	Outside Dia.	Thickness	Inner Dia.
20	27.2	2.8	21.6
25	34.0	3.2	27.6
40	48.6	3.5	41.6

Materials are usually steel or, stainless steel. Specify when ordering.

How to order: CODE

Universal joint, TYPE of COMBINATION, NOMINAL SIZE, MATERIAL

Nominal Size	Material	Type				Unit Per Pcs.
		AA CODE	BB CODE	BB ₁ CODE	AC CODE	
20	Steel	61 72 40	61 72 47	61 72 54	61 72 61	
25		41	48	55	62	
32		42	49	56	63	
38		43	50	57	64	
40		44	51	58	65	
42	Stainless Steel	61 72 45	61 72 52	61 72 59	61 72 66	
48		46	53	60	67	
20		61 72 70	61 72 77	61 72 84	61 72 91	
25		71	78	85	92	
32		72	79	86	93	
38	Stainless Steel	73	80	87	94	
40		74	81	88	95	
42		61 72 75	61 72 82	61 72 89	61 72 96	
48		76	83	90	97	

50. Lubricators / Grease Pumps

A pump unit for all types of lubricants which is easy to handle and maneuver making it suitable for work on ships as well as industrial plants or repair shops. The lubricant container is easy to open and refill. When ordering, please specify whether the lubricator you require is for oil or grease use.

Grease Pumps

Air Operated

Engrasadora/Neumática エアグリース給油機 气动给油机

Air operated grease pump for use with 16 kg to 220 kg pail can. A set consists of a pump, drum cover, follow plate, and grease hose. Air inlet size is 1/4" G (PF).



How to order: CODE

Grease pump, air operated, for DRUM CAPACITY kg, PUMP RATIO

Unit Per Set

CODE	For Drum kg	Pump Ratio	Grease Feed Delivery	Shank mm	
				Diam	Length
61 74 01	16/ 20	44 : 1	500 grm/min.	30	410
02	20/ 30	44 : 1	500	30	470
03	50/ 60	44 : 1	500	30	730
04	180/ 220	44 : 1	500	30	940
05	50/ 60	54 : 1	900	30	730
61 74 06	180/ 220	54 : 1	900 grm/min.	30	940

Accessories for Air Operated Grease Pump

Accesorios para Engrasadora Neumática

エアグリース給油機用アクセサリー 气动给油泵配件

For use with above air operated grease pumps.



CODE	Description			Unit
61 74 11	Grease gun w/bent flexible pipe			Set
12	" w/flexible pipe & swivel joint			"
13	" w/straight flex pipe			"
14	" w/rigid pipe			"
15	Triple swivel joint			Pc.
61 74 16	90° swivel joint			Pc.
17	Single swivel joint			"
18	Steel connection 1/4" x 1/4" - 3/8" x 1/4"			"
19	4 jaw grease fitting			"

Lubrication Piston Pumps

Bomba de Pistón de Aceite
ルブリケーションピストンポンプ 活塞泵

This pump is the ideal solution for pumping motor oil, gear oil and transmission fluid. For the purpose of making ordering easier, we have provided the following ordering table composed of the most practical specifications for marine use. For any further detailed information please contact your local supplier.



Performance Specifications

Model	LM2203A Series	LM2305A Series
Ratio	3:1	5:1
Air Motor Diameter	2"	3"
Stroke	3"	
Air Inlet Pressure	150 psi max.	

CODE	Model	Thread	Unit Per Set			
			Max. GPM Max. Flow	Max. GPM Free Flow	Air Inlet NPT (F)	Fluid Inlet / Outlet NPT (F)

2" Diameter Air Motor

61 74 21	LM2203A-11-C	NPT	6	9	1/4"	3/4 / 1/2	Stub
22	LM2203A-12-C	BSP					
23	LM2203A-31-C	NPT	6	9	1/4"	3/4 / 1/2	16 Gallon
24	LM2203A-32-C	BSP					
25	LM2203A-41-C	NPT	6	9	1/4"	3/4 / 1/2	55 Gallon
26	LM2203A-42-C	BSP					
27	LM2203A-51-C	NPT	6	9	1/4"	3/4 / 1/2	275 Gallon
28	LM2203A-52-C	BSP					

3" Diameter Air Motor

61 74 31	LM2305A-11-B	NPT	6	9	1/4"	1-1/2 / 1/2	Stub
32	LM2305A-12-B	BSP					
33	LM2305A-31-B	NPT	6	9	1/4"	1-1/2 / 1/2	16 Gallon
34	LM2305A-32-B	BSP					
35	LM2305A-41-B	NPT	6	9	1/4"	1-1/2 / 1/2	55 Gallon
36	LM2305A-42-B	BSP					
37	LM2305A-51-B	NPT	6	9	1/4"	1-1/2 / 1/2	275 Gallon
38	LM2305A-52-B	BSP					

Name of Mfr.: Ingersoll-Rand

Grease Piston Pumps

Bomba de Pistón Grasa グリースピストンポンプ 活塞泵

These Pumps deliver unmatched performance for pumping grease with sizes to fit 35 to 400 lb. containers and working flow rates from two to four gallons per minute. For the purpose of making ordering easier, we have provided the following ordering table composed of the most practical specifications for marine use. For any further detailed information please contact your local supplier.



LM2250E Series

LM2350E Series

Performance Specifications

Model	LM2250E Series	LM2350E Series
Ratio	50:1	
Air Motor Diameter	2"	3"
Stroke	3"	
Air Inlet Pressure	150 psi max.	

Unit Per Set

CODE	Model	Thread	Flow Lbs. per Min.		Air Inlet NPT (F)	Fluid Outlet NPT (F)	Container Size
			Working	Free			

2" Diameter Air Motor

61 74 41	LM2250E-21-B	NPT	2 lbs	9.0 lbs	1/4"	3/8	35 lbs
42	LM2250E-22-B	BSP					
43	LM2250E-31-B	NPT	2 lbs	9.0 lbs	1/4"	3/8	120 lbs
44	LM2250E-32-B	BSP					
45	LM2250E-41-B	NPT	2 lbs	9.0 lbs	1/4"	3/8	40 lbs
46	LM2250E-42-B	BSP					
47	LM2250E-61-B	NPT	2 lbs	9.0 lbs	1/4"	3/8	60 lbs
48	LM2250E-62-B	BSP					

3" Diameter Air Motor

61 74 51	LM2350E-21-B	NPT	4 lbs	7.5 lbs	1/4"	3/8	35 lbs
52	LM2350E-22-B	BSP					
53	LM2350E-61-B	NPT	4 lbs	7.5 lbs	1/4"	3/8	60 lbs
54	LM2350E-31-B	NPT					
55	LM2350E-32-B	BSP	4 lbs	7.5 lbs	1/4"	3/8	120 lbs
56	LM2350E-41-B	NPT	4 lbs	7.5 lbs	1/4"	3/8	400 lbs
57	LM2350E-42-B	BSP					

Name of Mfr.: Ingersoll-Rand

Oil and Grease Pumps

Bombas de aceite y grasa オイル & グリースポンプ 油和油脂泵

Oil Pumps



Fast-Ball® Mini Fire-Ball® 225 Fire-Ball® 300 Fire-Ball® 425

Model	Features
Fast-Ball®	Ideal for onboard lower volume and short-run transfers of petroleum and synthetic based oils. The in-line design features fewer parts for minimal pump wear.
Mini Fire-Ball® 225	Great for low to medium volume applications. Available in 3:1 and 50:1 packages.
Fire-Ball® 300	Ideal for medium volume applications, the Fire-Ball 300 set the industry standard for years of reliable service. Available in ratios of 5:1, 15:1 and 50:1.
Fire-Ball® 425	With a robust design, the Fire-Ball is the pump of choice for your most demanding high volume applications. Available in ratios of 3:1, 6:1, 10:1, 50:1 and 75:1.

CODE	61 74 61	61 74 62	61 74 63	61 74 64	Unit Per Pcs.
Model	Fast-Ball	Fast-Flo	Fast-Flo SST	Mini Fire-Ball 225	
Pump Ratio		1 : 1		3 : 1	
Max. Fluid Output Pressure		12.4 bar		31 bar	
Fluid Flow @ 80 cpm	18-22.7 lpm	19-22.7 lpm	20-22.7 lpm	7 lpm	
Universal Pump Only	222051	226944	226945	246775	
60 Ltr Cover Mount Package		N/A		24M262	
200 Ltr Bung Mounted Package	222103	N/A	N/A	24M264	
200 Ltr Cover Mounted Package		N/A		24M263	
1,040 Ltr Bung Mounted Package	222104	N/A		24M264	

Name of Mfr.: Graco

CODE	61 74 65	61 74 66	61 74 67	61 74 68	Unit Per Pcs.
Model	Fire-Ball 300		Fire-Ball 425		
Pump Ratio	5 : 1	3 : 1	6 : 1	10 : 1	
Max. Fluid Output Pressure	62 bar	37 bar	76 bar	124 bar	
Fluid Flow @ 80 cpm	9.3 lpm	50.6 lpm	25.3 lpm	15.4 lpm	
Universal Pump Only	203876	237526	238108	205626	
60 Ltr Cover Mount Package	241046		N/A		
200 Ltr Bung Mounted Package	201048	N/A		222095	
200 Ltr Cover Mounted Package	241047	N/A		222065	
1,040 Ltr Bung Mounted Package	241049		N/A		

Name of Mfr.: Graco

Grease Pump

Unit Per Pcs.

CODE	61 74 69	61 74 70	61 74 80
Model	Mini Fire-Ball 225	Fire-Ball 300	
Pump Ratio	50:1	15:1	50:1
Application	High-pressure grease dispense	Medium-pressure grease dispense	High-pressure grease dispense
Max. Fluid Output Pressure	578 bar	186 bar	580 bar
Continuous Duty Flow Rate	0.15 kg/min	2.7 lpm	1.52 kg/min
16 kg Drum-Pump only	246909	206405	239877
16 kg Drum-Package	253384	241043	240885
31 kg Drum-Pump only	N/A	N/A	239877
31 kg Drum-Package	N/A	N/A	N/A
55 kg Drum-Pump only	246780	206699	239887
55 kg Drum-Package	253387	241044	240880
180 kg Drum-Pump only	246781	206700	239888
180 kg Drum-Package	253390	241045	N/A
Name of Mfr. : Graco			

Unit Per Pcs.

CODE	61 74 87	61 74 88	61 74 89
Model		Fire-Ball 425	
Pump Ratio	10:1	50:1	75:1
Application	High-pressure grease dispense	High-pressure grease dispense	High-pressure grease dispense
Max. Fluid Output Pressure	124 bar	517 bar	517 bar
Continuous Duty Flow Rate	13.3 lpm	1.52 kg/min	1.3 kg/min
16 kg Drum-Pump only	N/A	N/A	239731
16 kg Drum-Package	N/A	N/A	N/A
31 kg Drum-Pump only	N/A	N/A	239731
31 kg Drum-Package	N/A	N/A	N/A
55 kg Drum-Pump only	N/A	205394	239729
55 kg Drum-Package	N/A	241039	24M271
180 kg Drum-Pump only	965124	205395	239730
180 kg Drum-Package	965129	N/A	N/A
Name of Mfr. : Graco			

Grease Lubricators

Air Operated

Lubricadores de grasa accionados por aire
ポータブルエアグリース給油機
润滑脂润滑器空气动力



Standard Accessories

	H.P. Grease Gun HPG-G Grease Hose 2.5 Mtr. Follower Plate 300 mmΦ Check Valve Air Regulator SKR-AR	1 Pc. 1 Pc. 1 Pc. 1 Pc. 1 Pc.
SKR-66	H.P. Grease Gun HPG-G Grease Hose 2.5Mtr Air Chuck PS-20PM Flow plate 300 mmΦ Carrier Flex. Ext. Hose for Pin Type Flex. Ext. Hose for Buttonhead Type Flex. Ext. Hose for Hydraulic Type	1 Pc. 1 Pc. 1 Pc. 1 Pc. 1 Pc. 1 Pc. 1 Pc. 1 Pc.
DSR-80	Pump PD110A50 Grease Hose 2.5 Mtr. Follower Plate 300 mmΦ Check Valve Air Regulator	1 Pc. 1 Pc. 1 Pc. 1 Pc. 1 Pc.
SKR-110A50	Pump PD110A50 Grease Hose 2.5 Mtr. Follower Plate 300 mmΦ Check Valve Air Regulator	1 Pc. 1 Pc. 1 Pc. 1 Pc. 1 Pc.

Note: Additional Hose is available on request to extend the reach of the lubricator.

Unit Per Set

CODE	61 75 02	61 75 03	61 75 04
Model	SKR-66	DSR-80	SKR-110A50
Feature	For rather hard grease use. Follower plate equipped.	For rather hard grease use. Follow plate equipped.	High efficiency with large output capacity. Follower plate equipped.
Range of Applicable Grease	NLGI No.1	NLGI No.2	NLGI No.1
Pump Ratio	65 : 1	65 : 1	50 : 1
Max. Output Pressure	40.0 MPa	40.0 MPa	35.0 MPa
Max. Outlet Quantity	320 grm/min	320 grm/min	1,200 grm/min
Max. Air Consumption	212 ltr/min	212 ltr/min	320 ltr/min
Grease Capacity	16 - 18 kg	16 kg	16 - 18 kg

Name of Mfr.: Yamada Corporation

Grease Lubricators

Macnaught Air Operated

Bomba Engrase Manual Macnaught
マクノートエアグリース給油機

手动高压牛油泵



PLC



P3L

CODE	61 75 11	61 75 12	Unit Per Set
Model	PLC	P3L	
Feature	Common type, simple construction, long life. Follow-Plate equipped.	Anti corrosive air motor and Follow Plate equipped. Very useful for choked nipples, because can increase output pressure up to 850 kgf/cm ² by booster gun if necessary.	
Range of Applicable Grease	NLGI #2	NLGI #2	
Pump Ration Max.	50 : 1	50 : 1	
Output Pressure	350 kgf/cm ²	350 kgf/cm ²	
Max. Outlet Quantity	660 grm/min	540 grm/min	
Standard Accessories			
PLC	Grease Gun Grease Hose Carrier	1 Pc. 2.5 Mtr. Equipped	
P3L	Booster Gun Grease Hose Carrier	1 Pc. 2.5 Mtr. Equipped	

High Pressure Grease Bucket Pumps

Hand Operated

Bomba Engrase Manual con Bidón de Alta Presión

高压ハンドバケットグリースポンプ 手动活塞式高压牛油泵

Specially designed plunger easily builds lube pressure up to 25 MPa even under low loading pressure. The same extension hoses as from hand grease guns are available for various applications.



SK-55 SK-77

CODE	61 75 16	61 75 17	Unit Per Set
Model	SK-55	SK-77	
Output Pressure	25.0 MPa		
Output / Stroke	3.2 grm / stroke		
Stroke	38 - 43 mm		
Container Capacity	20 Ltr.		
Dimensions mm	281Ø x 499H	281Ø x 795H	
Name of Mfr	Yamada Corporation		
Standard Accessories			
SK-55	Grease Gun SK-G Grease Hose 2Mtr. Follower Plate	1 Pc. 1 Pc. 1 Pc.	
SK-77	HP. Grease Gun Grease Hose 2Mtr. Follower Plate Dolly S-20	1 Pc. 1 Pc. 1 Pc. 1 Pc.	

Grease Lubricators

Macnaught Hand Operated

Bombas de Engrase Neumáticas, Macnaught

マクノート手動グリース給油機

气体式牛油泵

A very useful outfit. Compact, lightweight, and applicable for a variety of lubricating jobs with a pressure capacity of up to 700 kgf/cm².



K-6
Super K-3
Unit Per Set

CODE	61 75 21	61 75 22
Model	Mini K-6	Super K-3
Feature	Can be fitted with standard 2.5 kg small grease can. Capable of feeding 30 grease nipples at one time pump charge	Can be fitted with standard 16 kg grease pail can. Capable of feeding 80 grease nipples at one time pump charge
Max. Output Pressure	700 kgf/cm ²	700 kgf/cm ²
Pump Charge	50 cc	130 cc
Output/Stroke	3 cc/stroke	3 cc/stroke
Demensions mm	200ø × 450H	300ø × 890H
Grease Hose	1.5 mtrs.	3 mtrs.

Oil Lubricators

Air Operated

Dispensador Neumático de Aceite

ポータブルエアオイル給油機

气动注油器



Unit Per Set

CODE	61 75 31	61 75 32
Model	SGR-55	SGR-110A5
Pump Ratio	1.8 : 1	5 : 1
Max. Output Pressure	1.2 MPa	3.5 MPa
Max. Output Capacity	7 ltr / min.	11 ltr / min.
Max. Air Consumption	200 ltr / min.	390 ltr / min.
Container Capacity	20 Ltr	50 Ltr
Height mm	784	953

Name of Mfr.: Yamada Corporation.

Standard Accessories

SGR-55	Digital Oil Gun ODV-30D	1 Pcs.
	Oil Hose 1.5Mtr.	1 Pcs.
	Oil Tank	1 Pcs.
	Air Chuck PS-20M	1 Pcs.
SGR-110A5	Digital Oil Gun ODV-30D	1 Pcs.
	Oil Hose 3Mtr.	1 Pcs.
	Air Regulator	1 Pcs.

Oil Bucket Pumps

Hand Operated

Dispensador Neumático de Aceite con Pistola, Manual

ハンドバケットオイルポンプ

手动式润滑油加注泵

Dispenses all types of fluid lubricant such as gear oil, motor oil, A.T.F. (Automatic Transfer Fluid) and others with easy operation. A limited movement of the lever provides high volume lubricant delivery.



STB-60



STB-70

Unit Per Set

CODE	61 75 36	61 75 37
Model	STB-60	STB-70
Pump Output	40 cc / stroke	
Container Capacity	20 Ltr.	
Height	795 mm	
Standard Accessories	Oil Hose 2 Mtr. Hose 2 Mtr. w/ Nozzle Dolly S-20 Digital Flowmeter with Filter	1 Pcs. 1 Pcs. 1 Pcs. 1 Pcs. 1 Pcs.

Name of Mfr.: Yamada Corporation.

Oil Volume Bucket Pumps

Hand Operated

Dispensador Neumático de Aceite, Manual a Palanca

ハンドバケットボリュームポンプ 大容量手动式润滑油加注泵

Handles either mobile grease or oil especially to serve button head fittings on earth-moving equipment, farm equipment, industrial machines, etc. Volume lubricant delivery gives fast and positive lubrication under maximum lube pressure of 5 MPa on the VO-50 and 2 MPa on the VO-8.



VO-8



VO-50

Unit Per Set

CODE	61 75 41	61 75 42
Model	VO-8	VO-50
Output/Stroke	20 cc/stroke	24 cc/stroke
Container Capacity	8 Ltr	15 Ltr
Dimensions mm	200Φ × 477H	300Φ × 530H
Standard Accessories	Oil Hose 1 Mtr. 1 Pcs.	Oil Hose 1.5 Mtr. 1 Pcs.
	Button Head Coupler 1 Pcs.	Button Head Coupler 1 Pcs.

Name of Mfr.: Yamada Corporation.

Lubricating Hose for Model SKR and SGR Series

Manguera lubricante/para Modelo de Series
SKR y SGR

給油機用ホース 油管

Max. Working Pressure

SKR Grease Hose	34.5 MPa	H.P.
SGR Oil Hose	7 MPa	L.P.



How to order: CODE

GREASE or OIL hose, DIAM x LENGTH, with fitting, PART/NO.

CODE	P/N	Size		Fitting at Both Ends	Unit Per Lgh
		Diam.	Length		
SKR Grease Hose					
61 75 51	695062	1/4	1.5 Mtrs.	PF1/4 Male Thread (G)	
52	695050		2 "		
53	695034		2.5 "		
54	695049		3 "		
55	695098		5 "		
56	695099		10 "		
SGR Oil Hose					
61 75 57	695052	3/8	1.5 Mtrs.	PT3/8 Male Thread (R)	
58	695051		2 "		
59	695103		3 "		
60	695700	1/2	3 "	PT1/2 Male Thread (R)	

Accessories

for Model SKR and SGR Series and GLC

Accesorios/para Modelo de Series SKR y SGR y GLC
給油機用アクセサリー 注油机 SKR & SGR 用配件

Control Valves

Válvulas de Control コントロールバルブ 控制阀

	61 75 65 H.P. Grease-Gun HPG-G P/N 851985 Standard for Model SKR-55/66/110A50 Containing Nozzle CNP-2 P/N 804911 Swivel Joint ass'y P/N 802910 Inlet PS 1/4 Female (G)
	61 75 68 Oil Gun ODV-30 P/N 686857 Max. Working Pressure 7 MPa Inlet PT 3/8 Female (Rc)
	61 75 69 Digital Oil Gun ODV-30D P/N 686858 Max. Working Pressure 7 MPa Inlet PT 3/8 Female (Rc)

CODE	P/N	Description	Unit Per Pcs.
61 75 65	851985	H.P. Grease Gun w/Swivel Joint	
61 75 68	686857	Oil Gun ODV-30	
69	686858	Digital Oil Gun ODV-30D	

Specifications for Extension Couplers & Adaptors

Especificaciones de Extensiones y Adaptadores

エクステンションカップラー/アダプター 油杯

	61 75 75 Straight Adaptor HSP-1 P/N 804903, L=120 mm, PT 1/8" Male (R)
	61 75 76 Straight Long Adaptor HSP-2 P/N 804904, L=240 mm, PT 1/8" Male (R)
	61 75 77 Needle Adaptor HSP-3 P/N 800701 for concealed hinges or tight spots, L=135 mm, PT 1/8" Male (R)
	61 75 79 Straight Extra Long Adaptor HSP-10 P/N 804907, L=450mm, PT 1/8" Male (R)
	61 75 80 Standard Hydraulic Adaptor CNP-1, P/N 804910, L=185 mm, PT 1/8" Male (R)
	61 75 81 Small Dia. Hydraulic Adaptor CNP-2 P/N 804911 for use with hand grease gun, L=185 mm, PT 1/8" Male (R)
	61 75 82 Long Hydraulic Adaptor CNP-13 P/N 804912, L=335 mm PT 1/8" Male (R)
	61 75 83 Standard Hydraulic Coupler CNP-1H, P/N 686445, L=38.5 mm PT 1/8" Female (Rc)
	61 75 84 Small Dia. Hydraulic Coupler CNP-2H P/N 686446, L=39 mm, PT 1/8" Female (Rc)
	61 75 85 Hydraulic Coupler Extension Hose SPK-5 P/N 850392, L=420 mm

CODE	Model	P/N	Name	Unit Per Pcs.
61 75 75	HSP-	1	Straight Adaptor	
	76	2	Straight Long Adaptor	
	77	3	Needle Adaptor	
	79	10	Straight Extra Long Adaptor	
61 75 80	CNP-	1	Straight Hydraulic Adaptor	
	81	2	Small Dia. Hydraulic Adaptor	
	82	13	Long Hydraulic Adaptor	
	83	1H	Straight Hydraulic Coupler	
61 75 84	2H	686446	Small Dia. Hydraulic Coupler	
	84	5	Hydraulic Coupler Ext. Hose	
61 75 85	SPK-	5	Hydraulic Coupler Ext. Hose	

Grease Lock Couplers

Engrasadores グリースロックカブラー 油脂锁定耦合器

GLC-70

Easy coupling - leak proof greasing
- easy release. Easy connect and disconnect to/from grease fitting, by operating the lever.



Unit Per Pcs.

CODE	61 75 87
Model	GLC-70
Operating Pressure	69 MPa (703 kgf/cm ²)
Connection	Rc 1/8"
Dimensions mm	L : 89.6 x Ø16
Weight grm	100

Microhose Type Grease Lock Couplers



Unit Per Pcs.

CODE	Model	Specification
61 75 88	SPK-500S	500 mm (Micro hose connection R 1/8")
89	SPK-1000S	1,000 mm (Micro hose connection R 1/8")
90	SPK-1500S	1,500 mm (Micro hose connection R 1/8")

Grease Pump Packages

Equipo de Engrase
グリースポンプパッケージ 气动给油泵

These Grease Pump Packages are available in two models. For the purpose of making ordering easier, we have provided the following ordering table composed of the most practical specifications for marine use. For any further detailed information please contact your local supplier.



Unit Per Set

CODE	61 75 45	61 75 46
Model	LP2009-2-B	LP2010-2-B
Follower Plate	286 mm	332 mm
Ratio	50 : 1	
Air Motor Diameter	2"	
Air Inlet (Female)	Rp 1/4	
Air Inlet Pressure Range Psi (bar)	0-150 (0-10.3)	
Fluid Pressure Range Psi (bar)	0-7,500 (0-517.2)	
Volume/Cycle oz (ml)	0.17 (4.91)	
Maximum Delivery/Minute Kg (lbs)	4.1 (9)	
Cycles/Minutes Rec'd @ Working Flow	80	
Displacement in ³ per cycle	0.300	
Pump Construction	Carbon Steel	

Name of Mfr.: Ingersoll-Rand

51. Grease Nipples / Grease Guns

Grease Nipples

for Hydraulic Fittings

Engrasadores para accesorios hidráulicos

グリースニップル 油嘴液压配件

Chrome or brass plated steel material.

How to order: CODE

Grease nipple, TYPE, NOMINAL SIZE

Illustration	CODE	Type	Nominal Size (Thread)	Unit Per Pcs.
	61 76 05	A Straight	M6x0.5	
	06		M6x1.0	
	07		PT 1/8	
	08		PT 1/4	
	09		PT 3/8	
	10		NPT 1/8	
	11		NPT 1/4	
	61 76 13	B 67.5°	PT 1/8	
	14		PT 1/4	
	15		NPT 1/8	
	61 76 16	C 90°	PT 1/8	JIS B 1575
	17		PT 1/4	
	61 76 18	Straight	6 mm	
	61 76 21	Pin Type	PF 1/8	
	22		PF 1/4	
	23		PF 3/8	
	24		PT 1/8	
	25		PT 1/4	
	26		PT 3/8	
	27		PT 1/2	
	61 76 30	Button Head	PF 1/8x15	Thread x Across Flat
	31		PF 1/4x15	
	32		PF 1/8x17	
	33		PF 1/4x17	
	34		PF 3/8x17	
	35		PF 1/2x22	
	36		M12x1.5	
	37		PT 1/8x17	
	38		PT 1/4x17	

Grease Nipples

for MacGregor Cargo Hatches

Engrasadores para Escotilla de Carga Maegregor

マックグレゴーカハッチ用グリースニップル

马克革雷干舱盖偏心轮牛油嘴

Specially designed to fit MacGregor type cargo hatches which can not accept other types of grease nipples. Available only in one type and size. Thread : 12 mmØ x 1.5 Pitch.



23 32 83 Grease nipple for MacGregor hatch cover Item No. 20.00.09 Pcs.

Grease Cups

Engrasadores Stauffer

グリースカップ 牛油杯



Brass made plain type cups for grease.

Unit Per Pcs.

CODE	Cup Diam. mm	Male Thread	CODE	Cup Diam. mm	Male Thread
61 76 51	20	PF1/8	61 76 55	38	PF1/4
52	25	PF1/8	56	50	PF3/8
53	32	PF1/8	57	65	PF3/8
54	32	PF1/4	58	75	PF1/2

Oil Cups

Engrasadores Stauffer

オイルカップ 油杯



Brass made oil cups. Caps close automatically for dust proofing. Two types, either straight or elbow type are available.

Unit Per Pcs.

Straight Type			Elbow Type		
CODE	Cup Diam. mm	Male Thread	CODE	Cup Diam. mm	Male Thread
61 76 61	18	PF 1/8	61 76 71	20	PF 1/8
62	" 1/8		72	25	" 1/8
63	" 1/4		73	25	" 1/4
64	28	" 1/4	74	32	" 1/4
65	34	" 1/4	75	32	" 3/8
61 76 66	34	" 3/8			

Flexible Extension Hose

Latigüillo Engrase マイクロホース 软伸长管

Used for hand lever grease guns only for hydraulic grease lubrication. All are 4.75 mm I.D. one-wire nylon braided, 210 kgf/cm² working and 420 kgf/cm² burst pressure.

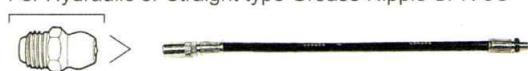
For Pin type Grease Nipple SPK-1C



For Button Head type Grease Nipple SPK-2C



For Hydraulic or Straight type Grease Nipple SPK-3C



Unit Per Pcs.			
CODE	Grease Nipple Type	Male Thread	Length mm
61 76 80	Pin Type SPK-1C	PT 1/8	355
81	Button Head Type SPK-2C	"	375
82	Hydraulic or Straight Type SPK-3C	"	330

Air Powered Grease Lubricators

Pistolas Neumáticas de Engrase

エアーパワーグリースガン 气动式黄油枪



Works with compressed air for easy speed greasing by just pulling the trigger. Pressure is maintained constantly and the lubrication level is consistent. Works with a replaceable grease cartridge which is easy to attach and keeps dust and dirt out of the grease.

Grease level inside the cartridge can be checked at a glance so the grease will not run out unexpectedly.

Unit Per Set

CODE	61 76 91
Model	AMG-400N
Max Discharge Pressure	28 MPa
Output	280 g/min.
Capacity	420 ml with use of the cartridge
Standard Accessory	Hydraulic Adaptor CNP-2 Quick Coupler PS-20PM Air Regulator
Size	365 × 411 × 68 mm
Weight	1.8 kg

Lever Type Hand Grease Guns

Bomba de Engrase a Planca

レバー式グリースガン 手动式黄油枪

These spring primed grease guns are designed for maximum efficiency and easy operation. These rugged lubricators are available in high pressure, medium pressure and volume delivery models to cover the complete range of pressure gun applications.



Standard Type



Suction Filling Type

Unit Per Pcs.						
CODE	Model	Capacity grm	Max. Working Pressure MPa	Wt. kg	Cyl. Diam.	Length
Standard Type Grease Gun						
61 77 01	KH-120	130	20	0.51	38.0	232
02	KH-35	380	25	1.11	59.6	290
03	KH-500S	500	50	1.30	59.6	368
04	GC-57K	500	50	1.55	57	371

Suction Filling Type Grease Gun

61 77 07	KH-32	200	25	1.27	59.6	412
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52. Oilers/Oil Containers

Oil Syringes

Inyectores de Valvolina y Aceite オイルシリンジ 注油器

Provide fast, clean servicing for rapid transfer of any fluid or lubricant. Pulling or pushing the handle intakes or discharges the lubricant.



Unit Per Pc.

CODE	Capacity cc	Length mm	Weight kg
61 77 16	200	490	0.57
17	600	696	1.28
18	1,000	886	1.77

Oilers

Aceiteras 油差し 油壺

Plastic Oilers

Made of oil resistant hard plastic. A thin pump nozzle forces the oil out in a strong stream.



Straight Type



Angle Type



Pistol Pump Type

Unit Per Pc.

CODE	Type	Capacity cc
61 77 21	Straight	180
22		300
61 77 24	Angle	130
25		200
26		300
61 77 28	Pistol Pump	500

Metallic Oilers



Unit Per Pc.

CODE	Type	Capacity	Material
61 77 33	Pistol Pump	250 "	Cast Iron
34	"	330 "	"

Heavy Duty Pump Oilers

Heavy duty industrial type angled pump oiler. Two types of spout, flexible and solid are available.



Flexible Spout Type



Solid Spout Type

CODE	Spout Type	Capacity cc	Wt. gms.
61 77 36	Flexible	175	145
37	"	350	290
38	Solid	125	135
39	"	250	250

Oil Jugs

Medidores de Aceite オイルジョッキ

油壺

Made of plastic or copperrite (tin copper plated). So called Engineer's filler.



Unit Per Pc.

Copperrite		Plastic	
CODE	Capacity	CODE	Capacity
61 77 41	1 ltr	61 77 45	1 ltr
42	2 "	46	2 "
		47	3 "
		48	4 "
		49	5 "

Galvanized Oil Funnels

Embudos de aceite galvanizados 亜鉛めっき油漏斗

镀锌油漏斗

Made from heavy galvanized tin plate with a brass strainer.



Unit Per Pc.

CODE	Diam. mm	CODE	Diam. mm
23 26 01	100	23 26 05	225
02	125	06	250
03	150	07	280
04	200	08	350

Oil Containers/Jerry Cans

Jerry Cans o Petacas オイルコンテナー

油箱 / 加油壺

Available in plastic or tin. This plastic container is suitable for almost all liquid while the tin container (so called Jerry Can) is ideal for gasoline.



Unit Per Pc.

CODE	Material	Capacity Ltr.	CODE	Material	Capacity Ltr.
61 77 61	Plastic	5	61 77 66	Tin	10
62	"	10	67	"	20
63	"	20			

Nozzle & Cock for Tin/Plastic Containers

Boquilla y grifo para envases de hojalata/plástico

ブリキ / プラスチック容器用ノズルとコック

用于锡 / 塑料容器的喷嘴和插座



Nozzle



Cock

Unit Per Pcs.			
CODE	Nozzle	CODE	Nozzle
61 77 68	Plastic	61 77 69 70	Plastic Brass

Oil Pans

Bandejas de aceite オイルパン 油底壳

Designed to make it easy to transfer oil for proper disposal or recycling. Available in steel type, and also available in rugged high-density polypropylene or polyethylene type (oil drain pan) with resistant to chemicals and solvents.



Oil Pans



Oil Drain Pans

Steel Type

Unit Per Pcs.

CODE	W x L x H mm	Volume ltr	CODE	W x L x H mm	Volume ltr
61 77 71	510 x 320 x 45	5	61 77 74	595 x 360 x 115	18
72	465 x 265 x 96	8	75	604 x 452 x 149	30
73	470 x 320 x 120	12	76	908 x 616 x 148	60

Plastic Type

Unit Per Pcs.

CODE	W x L x H mm	Volume ltr	CODE	W x L x H mm	Volume ltr
Oil Pan (Polypropylene)			Oil Drain Pan (Polyethylene)		
61 77 77	345 x 265 x 82	5	61 77 80	520 x 145 x 390	8
78	390 x 296 x 104	8	81	600 x 170 x 450	16
79	460 x 340 x 110	10			

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