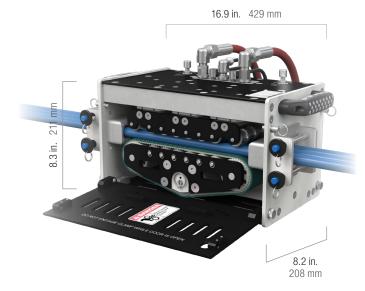
AUTOBOX ABX-3L

Automated Heat Exchanger Tube Cleaning



OVERVIEW

The StoneAge AutoBox ABX-3L is an automated system for hands-free tube bundle and Fin Fan heat exchanger cleaning applications. It is designed to **run triple**, **dual**, **or single** flex lance setups with an emphasis on portability, ease of setup, and safety. The ABX-3L can be used with any pressure rated hose ranging in size from 3/2 to 8/4.

Paired with StoneAge Banshee rotary tube cleaning nozzles and our Lightweight Positioner, the ABX-3L offers safe and efficient tube cleaning in the harshest exchanger environments.

COMPETITIVE ADVANTAGES

- Run hoses from 3/2 to 8/4 without component changes
- Cost of ownership is greatly reduced as compared to competitive equipment through simple maintenance and affordable replacement parts
- All parts are stocked and ready to ship same day to minimize work interruption
- Hose clamp pressure and feed rates can be quickly adjusted for repeatable, consistent cleaning
- Modular compact design is easy to transport and quick to set up — all components under 50 lbs
- Proven to operate reliably in corrosive environments
- High visibility guide tube assembly for easy indexing no tools or adapters required for guide tube adjustment
- Full line of accessories available to help you make the most of your investment

| FEATURES | BENEFITS |
|--|--|
| Handles hose sizes from 3/2 to 8/4 without component changes | Minimize downtime when switching between hose sizes |
| Steel-reinforced drive belt with durable polyurethane cover | Reliable for hundreds of hours of operation Replacement takes minutes and costs a fraction of competing drive systems |
| Triple, dual, or single lance operation | Easily adapt to specific application requirements |
| Independent forward/reverse speed control from 0.3–3.0 ft/sec | Consistent cleaning in both directions produces better results in less time |
| Remotely adjustable hose clamp | Adjust to changing conditions on the fly and minimize hose wear without interrupting workflow |
| Modular, lightweight positioner | System is easy to set up on different exchanger sizes and mounting options with no additional tools |

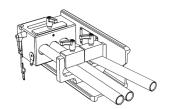


AUTOBOX ABX-3L OVERVIEW



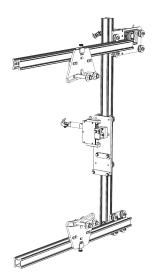
ABX-3L HOSE TRACTOR

- Accommodates full hose range from 3/2–8/4 no modifications or additional components required
- Features long-life, low-cost belt drive system
- Maintains traction in difficult operating conditions
- Can be used in single, dual or triple lance applications
- Quick pin attachment to guide assembly
- Hinged side doors for easy access to belt and air motors
- Lightweight and compact design



GUIDE ASSEMBLY

- High visibility design for efficient indexing
- Quick clamps for easy pitch adjustment with no additional tools
- Quick-change guide tubes are common material no adapters required
- 17-4 SS hose stop collets for anti-withdrawal protection



LIGHTWEIGHT POSITIONER

- Modular and expandable
- Quick-install drive carriages enable assembly without air supply
- Utilizes lightweight 2.5" box rail
- Durable stainless steel air motors
- Variety of clamp and bolt-on attachment options are available
- Compatible with full line of AutoBox systems (ABX-3L, ABX-2L, ABX-PRO)

CONTROL BOX

- Small, lightweight, ergonomic design that includes a portable stand and filter-regulator-lubricator assembly
- Controls forward/reverse hose feed, clamp pressure
- Positioner controls: left/right and up/down
- Pneumatic dump control switch



TOOL SPECIFICATIONS

| MODEL | ABX-3L | |
|-------------------|--|--|
| Hose Feed Rate | 0.3-3.0 ft/sec 0.09-0.90 m/sec | |
| Hose Size | 3/2-8/4 | |
| Max. Hose Crimp Ø | 0.74 in. 19 mm | |
| Push/Pull Force | 5-150 lb 2.3-68 kg | |
| Pitch Adjustment | Dual: 0.6–3.0 in. 16–76 mm Triple: 0.6–1.5 in. 16–38 mm | |
| Max. Air Pressure | 100 psi 0.70 MPa | |
| Dimensions | 8.3 in. H x 16.9 in. L x 8.2 in. W 211 mm x 429 mm x 208 mm | |
| Tractor Weight | 49 lbs 22 kg | |

ADDITIONAL INFORMATION

The ABX-3L is fitted with 2 motors

Having 2 motors allows the ABX-3L to be optimized for feeding 1, 2 or 3 lances. The ABX-3L is designed to limit unnecessary wear and tear on the hoses and/or the drive belt. Two motors also translate to higher machine operational reliability, as the ABX-3L can function well with a single motor drive, although push/pull forces will be reduced.

The motors are plumbed in parallel so both motors are always operating. The overall force the motors can deliver is regulated (via motor exhaust) using the CB. Rental and Production versions of the CB will be annotated to show "optimal settings" for 1, 2 or 3 lance work. The early field test/demo units out now have a dial-type regulator (just like the clamp) that allows operators to adjust the motor torque by turning the regulator knob.

• Compatible Banshee Models

The ABX-3L system was designed to accommodate up to three simultaneous flex lances ranging in size from 3/2 to 8/4 matched with the appropriate size Banshee model tool. Compatible models are BN 9.5, BN13, BN15, and BN18.

Material type variances

We offer two types of belts for use based on the material being removed – a "standard" belt for most applications, and an "oily" belt for applications where more traction is required.

Maintenance requirements

Belt and roller life can vary significantly as a function of application and machine setup. The ABX-3L is designed to exceed 300 hours of maintenance-free operation with proper use.

Belt replacement is quick (appx. 2 minutes) and requires only a pair of needle nose pliers.

Tool manuals and training videos are available on our website:

WWW.STONEAGETOOLS.COM

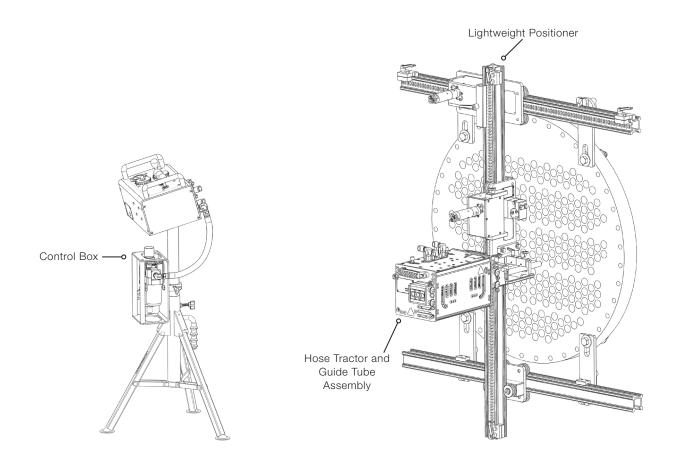
IMPORTANT!

The maximum crimp diameter that will fit through the ABX-3L is 0.74".

No adjustments or component changes are required to use hoses sized between \varnothing 0.27" OD and 0.61"OD (3/2 to 8/4). However, **hose ends must be Blast Pro or Pro Lance** (reduced diameter sleeves for heat exchanger tube cleaning) to ensure hoses will fit through the machine.



AUTOBOX ABX-3L CONFIGURATION



To configure an AutoBox ABX-3L, the following information should be obtained:

- Size of rotary tool
- Size of hose
- Diameter of tube bundle (positioner window size)
- Length of guide tubes required standard 12.5" and 36" lengths, custom lengths also available
- Preferred mounting clamp(s) for positioner

ORDERING THE AUTOPACK

StoneAge offers a complete package for the AutoBox ABX-3L that includes **all the available sizes of all component parts in a portable job box**. The ABX-3L AutoPack configuration is shown below:

| PACKA | AGE PART ID AUTO-3L-LWP-PKG | |
|-------|---|---------------|
| QTY | DESCRIPTION | PART ID |
| 1 | Kit, 12in Guide Tubes (3 ea ABX 115, 116, 117, 119) | ABX 631-12 |
| 1 | Guide Assembly, 3L, High-Visibility | ABX-301 |
| 1 | AutoBox, Belt Track Drive Assy 3 Lance | ABX-2L-V2 |
| 1 | Placeholder Kit, Y Manifold with Plugs and Glands | ABX 369-???-K |
| 1 | Control Box, Stand, FRL Assy, for ABX | CB-ABX |
| 1 | Job Box, Set up for 3L, AE and LWP | GPT 067-3L |
| 1 | Kit, Hose Stop and Collet 3L | GPT 108 |
| 2 | Tool Bag, 18in | GPT 310 |
| 1 | Kit, Quick Clamp Assy (Clamp to flange, 4 Pcs.) | LWP 621 |
| 1 | Kit, Plate Clamp Assy (Bolted to flange, 2 Pcs.) | LWP 622 |
| 1 | Lightweight Positioner, 6ft, 48in/1220mm Flange | LWP-500-6-V2 |

^{??? -} Specify manifold options

ORDERING THE COMPLETE PACKAGE

StoneAge offers a complete package for the AutoBox ABX-3L that includes **all the available sizes of all component parts**. The ABX-3L complete package configuration is shown below:

| PACKA | GE PART ID ABX-3L-1-PKG | |
|-------|--|---------------|
| QTY | DESCRIPTION | PART ID |
| 1 | AutoBox, Belt Track Drive Assy 3 Lance | ABX-3L |
| 1 | Control Panel Assy, CBX | CBX-ABX |
| 1 | Guide Assembly, 3L, High-Visibility | ABX-301 |
| 1 | Kit, Hose Stop Collets, 3L, (1ea size range ABX 171 .297625) | ABX 671 |
| 1 | Kit, Hose Stops, (3ea size range HS 121-27-61) | HS 622 |
| 1 | Kit, 12in Long Guide Tubes, (3 ea ABX 115, 116, 117, 119) | ABX 631-12 |
| 1 | Lightweight Positioner, 6ft, 48in/1220mm Flange | LWP-500-6-V2 |
| 1 | Kit, Quick Clamp Assy (Clamp to flange, 4 Pcs.) | LWP 621 |
| 1 | Kit, Plate Clamp Assy (Bolted to flange, 2 Pcs.) | LWP 622 |
| 1 | Placeholder Kit, Y Manifold with Plugs and Glands | ABX 369-???-K |

^{??? -} Specify manifold options

Manifold Options

| QTY | PRESSURE | DESCRIPTION | PART ID |
|-----|-------------------------|--|----------------|
| 1 | 22k psi 1500 bar | Y Manifold Kit with Plugs and Glands, 22k psi/1500 bar | ABX 369-MP12-K |
| 1 | 40k psi 2800 bar | Y Manifold Kit with Plugs and Glands, 40k psi/2800 bar | ABX 369-H9-K |



AUTOBOX ABX-3L CONFIGURATION

ORDERING THE BASE PACKAGE

StoneAge offers a base package for the AutoBox ABX-3L hose tractor. The ABX-3L base package is preconfigured for the most common applications to include: 1. AutoBox ABX-3L hose tractor with three sizes of rollers and two guide tube adapters, 2. Guide assembly, 3. Control box, 4. Backout collet, 5. Hose feed stops for specified hose size.

The base ABX-3L package can be configured to the specifications of your job with the addition of customized options. Fully custom solutions are possible by contacting StoneAge Customer Service.

The ABX-3L base package and standard options are shown below:

| PACKA | AGE PART ID | ABX-3L-PKG | |
|-------|-------------|--|--------------|
| QTY | | DESCRIPTION | PART ID |
| 1 | | AutoBox, Belt Track Drive Assy 3 Lance | ABX-3L |
| 1 | | Control Panel Assy, CBX | CBX-ABX |
| 1 | | Guide Assembly, 3L, High-Visibility | ABX-301 |
| 1 | | Hose Stop Collet, .297, 3L | ABX 171-297 |
| 1 | | Hose Stop, Clamp Style, .3442", 8.6-10.7mm | HS 121-34-42 |

Base Package Options

| QTY | DESCRIPTION | PART ID |
|-----|--|---------------|
| 3 | Guide Tube, .546 ID, 12.5"/315.7 mm L (BN13) | ABX 116-12 |
| 1 | Lightweight Positioner, 6' 48"/1220 mm Flange | LWP-500-6-V2 |
| 1 | Kit, Plate Clamp Assembly (Bolted to flange, 2 Pcs.) | LWP 622 |
| 1 | Placeholder Kit, Y Manifold with Plugs and Glands | ABX 369-???-K |

HOSE STOP OPTIONS

Hose stops are required safety mechanisms and come in collet and clamp styles. A working ABX-3L configuration requires one (1) backout collet and three (3) clamp-style hose stops.

| HOSE OD | SPIR STAR | PARKER | COLLET SIZE | COLLET Part ID | CLAMP Size | CLAMP PART ID |
|---------------------------|---------------|---------------------|-----------------|-------------------|---------------|------------------|
| | 3/2 | 2240D-02 | 0.297 in. 8 mm | ABX 171-297 | 0.27-0.34 in. | HS 121-27-34 |
| 0.27–0.41 in. 7–10 mm | 3/4, 4/2 | 2240D-025, 2440D-02 | 0.328 in. 8 mm | ABX 171-328 | 7–9 mm | по 121-21-34 |
| | 3/6, 5/2 | 2240D-03 | 0.406 in. 10 mm | ABX 171-406 | 0.34-0.42 in. | HS 121-34-42 |
| | 4/4 | 2448D-025 | 0.438 in. 11 mm | ABX 171-438 | 9–11 mm | по 121-34-42 |
| 0.44-0.50 in. | 4/6, 5/4, 6/2 | 2240D-04 | 0.460 in. 12 mm | ABX 171-460 | 0.42-0.50 in. | HS 121-42-50 |
| 11–13 mm | | 2640D-025 2740D-025 | 0.484 in. 12 mm | ABX 171-484 | 11–13 mm | NS 121-42-50 |
| | 6/4 | 2440D-04 | 0.516 in. 13 mm | ABX 171-516 | 0.50-0.56 in. | HS 121-50-56 |
| | 5/6, 8/2 | 2240D-05, 2740D-03 | 0.547 in. 14 mm | ABX 171-547 | 13–14 mm | NS 121-50-50 |
| 0.52-0.61 in. 13-16 mm | 8/4 | | 0.594 in. 14 mm | ABX 171-594 | 0.56-0.61 in. | HS 121-56-61 |
| | | 2440D-05 | 0.625 in. 15 mm | ABX 171-625 | 14–16 mm | по 121-30-01 |

The complete range of collet sizes can be purchased in a single kit:

| DESCRIPTION | PART ID |
|--|---------|
| Kit, Hose Stop Collets, ABX-3L, (1ea size range ABX 171 .297625) | ABX 671 |

GUIDE TUBE OPTIONS

| TUBE ID | TUBE LENGTH | DESCRIPTION | PART ID |
|----------------------|-----------------|--|------------|
| 0.46 in. 12 mm | 12.5 in. 316 mm | Guide Tube, .459ID, L (BN9.5) | ABX 115-12 |
| 0.46 1. 2 1 | 36.0 in. 914 mm | Guide Tube, .459ID, 36"/914.4mm L (BN9.5) | ABX 115-36 |
| 0.55 in. 14 mm | 12.5 in. 316 mm | Guide Tube, .546ID, 12.5"/315.7mm L (BN13) | ABX 116-12 |
| 0.55 1. 14 1 1 | 36.0 in. 914 mm | Guide Tube, .546ID, 36"/914.4mmL (BN13) | ABX 116-36 |
| 0.67 in. 17 mm | 12.5 in. 316 mm | Guide Tube, .674ID, 12.5"/315.7mm L (BN15) | ABX 117-12 |
| 0.07 . 17 | 36.0 in. 914 mm | Guide Tube, .674ID, 36"/914.4mm L (BN15) | ABX 117-36 |
| 0.75 in. 19 mm | 12.5 in. 316 mm | Guide Tube, .745 ID, 12.5"/317.5mm L (BN18) | ABX 119-12 |
| 0.75 1. 19 | 36.0 in. 914 mm | Guide Tube, .745 ID, 36"/914.4mm L (BN18) | ABX 119-36 |
| Multiple | 12.5 in. 316 mm | Kit, 12in Guide Tubes, (3 ea ABX 115, 116, 117, 119) | ABX 631-12 |



LIGHTWEIGHT POSITIONER OPTIONS

| RAIL LENGTH | DESCRIPTION | PART ID |
|----------------|---|---------------|
| 48 in. 1219 mm | Lightweight Positioner, 4' 24"/610mm Flange | LWP-500-4-V2 |
| 72 in. 1829 mm | Lightweight Positioner, 6ft, 48in/1220mm Flange | LWP-500-6-V2 |
| | RAIL EXTENSIONS | |
| | Box Rail, Slotted, Extension Kit, 2.5", 2' | LWP 580-2-001 |
| 24 in. 610 mm | Box Rail Extension Kit, 2.5", 2' | LWP 581-2-001 |
| | LWP Rail Extension Kit, 2' (2 Slotted Rail, 1 Box Rail) | LWP 582-2-V2 |
| | Box Rail, Slotted, Extension Kit, 2.5", 4' | LWP 580-4-001 |
| 48 in. 1219 mm | Box Rail Extension Kit, 2.5", 4' | LWP 581-4-001 |
| | LWP Rail Extension Kit, 4' (2 Slotted Rail, 1 Box Rail) | LWP 582-4-V2 |
| | Box Rail, Slotted, Extension Kit, 2.5", 6' | LWP 580-6-001 |
| 72 in. 1829 mm | Box Rail Extension Kit, 2.5", 6' | LWP 581-6-001 |
| | LWP Rail Extension Kit, 6' | LWP 582-6-V2 |

Please Note: Extension kits, maximum total rail length is 120" with standard clamps. Custom solutions available.

POSITIONER CLAMP OPTIONS

| DESCRIPTION | PART ID |
|---|-----------|
| Kit, Quick Clamp Assy, Slotted (Bolted to flange, 4 Pcs.) | LWP 620 |
| Kit, Quick Clamp Assy (Clamp to flange, 4 Pcs.) | LWP 621 |
| Kit, Plate Clamp Assy (Bolted to flange, 2 Pcs.) | LWP 622 |
| Kit, Positioner Clamp (3 sets of clamps) | LWP 625 |
| Scaffold Quick Clamp Assy | LWP 554 |
| Set of 4, Scaffold Quick Clamp Assy | LWP 554-K |

MANIFOLD OPTIONS

| QTY | PRESSURE | DESCRIPTION | PART ID |
|-----|------------------|--|----------------|
| 1 | 22k psi 1500 bar | Y Manifold kit with Plugs and Glands, 22k psi/1500 bar | ABX 369-MP12-K |
| 1 | 40k psi 2800 bar | Y Manifold kit with Plugs and Glands, 40k psi/2800 bar | ABX 369-H9-K |

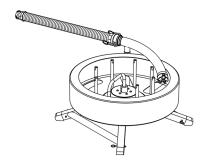
BELT OPTIONS

| BELT TYPE | DESCRIPTION | PART ID |
|-----------|------------------------------|------------|
| Standard | Belt, 25mm, 80A, SIPE, black | ABX 305-80 |
| Oily | Belt, 10mm, 70A, SIPE, green | ABX 305-70 |

ACCESSORIES

The following accessory systems are available for the AutoBox ABX-3L:







HCS-3L Hose Containment System

AST-200 AutoStroke

| DESCRIPTION | PART ID |
|---|---------------------|
| Fin Fan Accessory Adapts system for fin fan exchanger cleaning – Direct mount dual lance cleaning | FF-280-2LR3L-10-PKG |
| Fin Fan Accessory Adapts system for fin fan exchanger cleaning – Snout mount dual lance cleaning | FF-280-2LS3L-10-PKG |
| Fin Fan Accessory Adapts system for fin fan exchanger cleaning – Snout mount triple lance cleaning | FF-380-3LS3L-10-PKG |
| Hose Containment System increases job site safety and prolongs hose life | HCS-3L |
| AutoStroke Extends nozzle life and increases productivity when cleaning plugged tubes | AST-200 |

MAINTENANCE RESOURCES

| DESCRIPTION | PART ID |
|--|---------|
| ABX-3L Repair Kit, Belt Track Drive Assembly, Bottom | ABX 650 |
| ABX-3L Repair Kit, Belt Track Drive Assembly, Top | ABX 660 |

Tool manuals and training videos are available on our website:

WWW.STONEAGETOOLS.COM

For questions or help with a specific application, configuration or tool repairs, please contact StoneAge Customer Service.