




Airnesco

Industrial Cleaning - Air Driven
Tools For a Variety of Uses.

Ferret

Especially suitable for cleaning gas surfaces of all Fire Tube Boilers, Air Heaters, Feed Lines and Vertical Coolers, the Ferret range of tools have been designed to clean any internal tubes with the minimum of operator effort. The range of tube sizes that the tools will clean is extensive, from 25.4mm (1.00") up to 475mm (18.00") and if required brushes can be made for larger tubes.

Especially useful when space is limited, the Ferret requires only 18 inches (45cm) clearance in front of the boiler and cleans 13 metres (45') feet per minute and up to 60 tubes per hour, without spinning and without flexible shafts or rotating rods. When attached to a standard boiler tube cleaning brush, the Ferret's exclusive two-way vibratory action pushes the ferret and the brush through the tube without the need for long extension rods or manual pushing or pulling and is controlled by a foot valve. At the end of the tube the action of the tool is reversed automatically and it returns to the operator.

Requirements

Compressed Air Pressure required is Min 4.2 kg/cm² (60 lbs,psi), Max 10.5 kg/cm² (150 lbs,psi)
Volume required is 25 cfm (7m³)

There are five ferret sizes, which Ferret you require will depend on the size of the tubes.

F90	26mm (1") ID and upwards
F125/R	38mm (1.5") ID and upwards
F150/R	45mm (1.75") ID and upwards
F2000	45mm (2") exhausting via tube (for use in food industry)
F2080	76mm (3") to 457mm (18"), used with stabilisers

A complete Ferret Kit consists of the following:

F_	Ferret
A5	10m Wire Braided Oil Resistant Air Hose with Swivel Connectors
L5	Lubricator/Filter/Pressure Gauge Unit with valve (V8)
Y2	Foot Valve
A1	5m Oil Resistant Air Hose

Accessories

Y5/Y10

Vacuum Attachment (Y Piece) - this unit is invaluable to the cleanliness of the boiler or the area being cleaned as it is the link between the tool and the vacuum unit. As the tool is removed on it's return to the operator, all the debris that has collected in the tube is sucked in to the vacuum via this unit.



Snuffer Lances

These tools are especially designed for use in the oil industry to rapidly extinguish any small fire, but can also be used for other applications including chemical clearing, sterilisation and vehicle/plant clearing. The snuffer lance has been designed for ease of use and storage.



Brushes and Bullets

Brushes for all sizes of tubes are held in stock up to 114mm (4.50") and all types of bullet brushes for the Air Water Tool are available from stock in sizes 1/2" to 29/32" in 1mm steps. All other sizes of brushes and bullets are available but are ordered to suit.

The unique coil design of the Airnesco Venturi brushes ensure that no damage can occur during the cleaning cycle. The Venturi brush consists of two sections. The first part is nylon bristle, and the second part is continuously looped wire. This method ensures that no sharp wires are in contact with the bore of the tube. No matter how sensitive the tube these venture brushes will not cause damage.

Types of brush bullets;

- Standard – the ideal choice for clearing sludge or soft deposits. Crimped coiled brass wire body
- Plastic – an alternative to the brass-wire type with excellent wearing qualities
- Keza – for dealing with light scale, frequent use minimises hard scale formation.

Ensure the correct size brush is fitted – as a general guide brushes should be size for size up to 2" (51mm diameter) and 1/8 (3mm) larger than the internal diameter of the tube above 2" (51mm). If the brush fitted is too small the bristles will not connect with the sides of the tube and if too big, the movement through the tube will be slowed down due to the excessive force required to lay back the bristles.



Bunker Lances

This highly versatile, lightweight range of tools have been designed for the safe clearing of choked or blocked Bunkers, Hoppers and Silos without the operator having to enter the bunker. Immensely powerful in operation the lances work on the same principle as the Percussion Lances by enhancing the air supply to remove Rat Holing and suspension of products in loading and dispatch. The tools can be hand held and operated from above or below the silo with the option of mounting and remotely firing from the production unit.

Requirements

Compressed Air Pressure required is Min 4.2 kg/cm² (60 lbs,psi), Max 14 kg/cm² (200 lbs,psi)
Volume required is Min 100 cfm (2.8m³)

There are three different Bunker Lances;

- BL1013 N2 Bunker Lance
- BL1014 N3 Bunker Lance
- BL1011 N4 Bunker Lance

All lances are supplied complete with safety rope

Accessories

- V9 On/Off Valve
- O1 5 litres special oil
- A3 10m 25mm Oil Resistant Hose, complete with fittings
- E7 1829mm (6') extensions complete with sockets (smaller extensions available)
- L3 Filter Lubricator Unit



Percussion Lances

Using kinetic energy the Percussion Lance enhances the air supply to give 4500 high velocity blasts per minute at 1,600 psi. This tool has many applications in Plant and Maintenance and production areas, whether mounted on to machines and operated by a solenoid or one man operated and cleans a 300 tube boiler or bundle in 30 minutes.

A few of hundreds of uses for the Percussion Lance;
Removal of soot, ash, clinker and all kinds of combustion deposits in waste-heat and water-tube boilers, air heaters and economisers. Dust on turbine blades, fans and electric motors, cleans and trims bunker, hoppers and silo, swarf in blind holes and awkward castings.

Requirements

Compressed Air Pressure required is Min 4.2 kg/cm² (60 lbs,psi), Max 14 kg/cm² (200 lbs,psi)
Volume required is 100 cfm (2.8m³)

There are three different Percussion Lances;
PL1000 N1 Percussion Lance (Aluminium Body – 2.5kg)
PL1000/S N1 Percussion Lance (Steel Body – 3.5kg)

A complete Percussion Lance Kit consists of the following:
PL1000 () N1 Percussion Lance
A3 10m Oil Resistant Air Hose complete with Quick Release Couplings
L3 Portable Filter/Lubricator Unit

Accessories

There are a number of different extensions available (straight/two-way sideways/ one-way sideways)
– all 22mm OD, and flattened - 51 x 9mm)

Air Water Lance

This hand tool is mainly used for the cleaning of condenser tubes, heat exchangers and tubes with a 12mm (1/2") ID up to 25.4mm (1") ID either with a mixture of air and water or scrubber bullets for sticky deposits. Depending on the method used it can clean condenser tubes in 1-3 seconds, that's 500 tubes per hour on a routine maintenance clean. For sticky deposits it is recommended that two people operate the tool, one loading the bullets and the other firing, purely for speed.

The Air/Water Lance has shown versatility in the cleaning of the tubes made from sensitive or easily damaged materials, or where the tubes are curved, making the use of conventional brushes impracticable. There is provision for both nozzle attachment that enables the lance to be locked into position in the tube during the cleaning cycle and positive visual indication of pressure in the tube at all times plus a safety pressure release valve when required.

Requirements

Compressed Air Pressure required is Min 4.2 kg/cm² (60 lbs,psi), Max 7 kg/cm² (100 lbs,psi)
Water Pressure required is Min 7kg/cm² (10 lbs,psi), Max 7kg/cm² (100 lbs,psi)

The pressure of water used is normally that of the local supply, no boosting is necessary. Water pressure should always be less than compressed air.

A complete Air/Water Lance Set consists of the following:

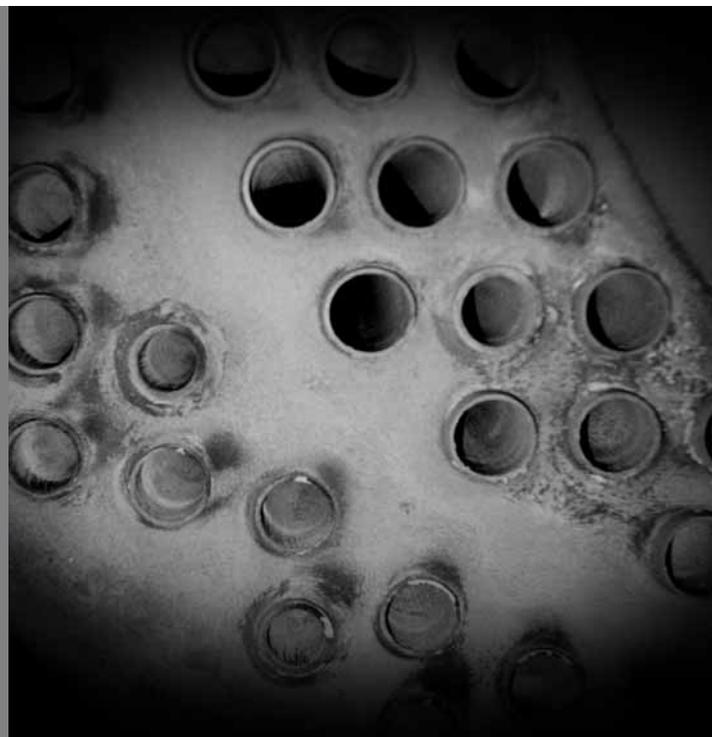
AW1027A Air/Water Lance
A2 10m x 3/8" Air Hose fitted with 2 end fittings and 1 x 3/8" BSP nipple
A4 10m x 3/8" Water Hose fitted with 2 end fittings and 1 x 3/8" BSP nipple

Accessories

A range of bullets available to suit individual requirements.



At Airnesco we design and manufacture a complete range of unique products and accessories to cover most industrial tube and plant cleaning applications.



WHAT TOOL DO I NEED?

FOR USE ON:		ON OR OFF LOAD CLEANING	APPLICATION	TYPE OF TOOL REQUIRED	POWER REQUIRED	
					PRESSURE	QUANTITY OF AIR REQUIRED
CLEANING BY VIBRATING BRUSH ACTION NO REVOLVING SHAFTS OR BRUSHES						
Shell Boilers Fire Tube	Vertical Economical Waste Heat Loco	OFF	Cleans gas surfaces of tubes by vibrating brush	Ferret. Internal Diameter of tube. Min 1 1/4 (32mm) Max: 16+” (40.6cm)	60-150p.s.i (4.2-10.5 kg/cm ²)	Air 25cfm (.7m ³)
CLEANING BY PERCUSSION AIR BLAST ALONE						
Shell Boilers Fire Tube	Vertical Economical Waste Heat Loco	BOTH	Cleans gas surfaces of tubes by air blast alone	N1 Lance with back blast cone attachment	60-200p.s.i (4.2-14 kg/cm ²)	Air 20cfm (.56m ³)
Water Tube Boilers		BOTH	Removes soot, clinker and 'bird nesting' by blasting alone from main tubes and superheaters	N.1./W.T.Lance	60-200p.s.i (4.2-14.0 kg/cm ²)	Air 100cfm (2.8m ³)
Air Heaters Superheaters		BOTH BOTH	Cleans Gas Surfaces by air blast alone	N.1./W.T.Lance	60-200p.s.i (4.2-7 kg/cm ²)	Air 100cfm (2.8m ³)
Condensers		OFF	Tube cleaning using air and water blast with or without brush bullets	Air/Water gun N1/C Lance Ferret F900	60-100p.s.i (4.2-7 kg/cm ²)	Water: 10-100p.s.i (7-7 kg/cm ²)
Coal Bunkers		ON OR OFF	Clearing stoppages without it being necessary for anyone to enter the bunker	N2/N3/N4 Lances with bunker extension	60-200p.s.i (4.2-14 kg/cm ²)	Air 100cfm (2.8m ³)
Feed Hoppers		ON OR OFF	Clearing stoppages without it being necessary for anyone to enter the hopper	N2/N3/N4 Lances with bunker extension	60-200p.s.i (4.2-14 kg/cm ²)	Air 100cfm (2.8m ³)
Gas Turbines		OFF	Heat exchanges tube cleaning by air blast alone	N1 Lance	60-200p.s.i (4.2-14 kg/cm ²)	Air 40cfm (1.1m ³)
Castings Cylinder Block etc			Removal of core sand and swarf from awkward places and from delicate castings where tumbling or brushing is difficult, impossible or not fully effective	N1 Lance-hand application N4 Lance-automatic application	60-200p.s.i (4.2-14 kg/cm ²)	Air 40cfm (1.1m ³)
Blast furnace Cupulas		OFF	Surfaces cleaning by air blast alone	N1 Lance	60-200p.s.i (4.2-14 kg/cm ²)	Air 40cfm (1.1m ³)
Shipping		OFF	Soot and ash cleaning from all boiler surfaces	N1 Lance	60-200p.s.i (4.2-14 kg/cm ²)	Air 40cfm (1.1m ³)
Tar Distillers		BOTH	Cleaning the gas surfaces of tube stills	N1 Lance	60-200p.s.i (4.2-14 kg/cm ²)	Air 40cfm (1.1m ³)
Gilled Economisers		BOTH	Cleaning between fins without rods, etc	N1 Lance	60-200p.s.i (4.2-14 kg/cm ²)	Air 40cfm (1.1m ³)



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