

RS RETRACTABLE SOOT BLOWER DESCRIPTION

canopy to provide support to the blower carriage, provide a mounting surface for the rails, and maintain good pinion clearance.

A removable top cover at the rest position allows replacement of the gear-motor through the top of the canopy while leaving the lance hub housing, lance and feed tube, as well as the poppet valve in place.

The blower carriage consists of three separate components: the lance hub assembly, the gearbox and the electric motor. The lance hub housing contains the lance hub, which is supported by two special roller bearings and sealed by two double lip Viton oil seals. Because the lance hub housing is a separate component from the gearbox, heat transfer from the cleaning medium to the blower gears is avoided. The electric motor is directly mounted to the fully enclosed spur and worm gear that has two output drive shafts. The axial drive shaft for the lance tube insertion and the rotary drive shaft for the lance tube rotation. The self-locking characteristic of the worm gear ensures that the carriage will not travel in case the motor loses power. Two different travel speeds are available for proper cleaning coverage.

The blower carriage is well guided in the canopy rails by a set of vertically and horizontally arranged rollers. The lance tube is flanged to the rotating lance hub, which also takes up the stuffing box packing.

The lance tube of the RS is designed to meet the specific requirements of each application. The standard lance material is a 3 1/2" O.D. with 4" O.D. also available in high tensile quenched and tempered alloy steel with full penetration butt-welded collar for a safe connection to the lance hub. The lance nozzle is made of a high temperature, heavy wall (.219"), 310 stainless steel investment

casting. Two venturii are used as required for proper cleaning. The lance tube support is designed to keep the lance tube close to

the center of gravity for deflection compensation.

The fixed feed tube ensures proper packing sealing while the lance tube is inserting or retracting. The feed tube is connected to the poppet valve via an easy removable split ring and a clamp plate. The standard feed tube is 304 stainless steel, 2 3/4" O.D. All feed tubes are ground finished to ensure a long packing life.

The blowing medium is supplied through an automated poppet valve, which has a standard ANSI 600 R.F. flange connected to the blowing medium piping. The valve seat is threaded for easy replacement without the necessity of removal and machining of the poppet valve. Three different seat/cone sizes are available to match the line pressure. The valve stem is sealed off by means of the pure graphite valve stem packing. The switching travel is adjustable to suit the actual requirements by relocating the trip pin in the trip bar. The valve control location is easily accessible for adjustments and maintenance work.

The pressure from the supply line can be independently adjusted with respect to the valve opening via the pressure control disc. Two threaded plugs are supplied in the poppet valve casting to monitor downstream blowing pressure and to connect a steam purge line for cleaning of the lance in the wallbox.

A positive pressure wallbox is supplied with a sealing air connection. It is recommended seal air piping be installed to the sootblower to avoid gas leaks from the sootblower wall openings and purge the poppet valve and

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feed tube of harmful gases that can cause corrosion.

The front plate of the RS is connected to the boiler wall via the pivoting front suspension, supplied together with the wallbox to be mounted to the boiler wall sleeve. At the rear end of the sootblower a second support provides suspension from the structural steel of the boiler. The suspension allows the front end to follow the horizontal and vertical expansion of the boiler. Generally, for steam blowing, the sootblower is declined towards the boiler in operating condition to ensure proper drainage of the lance and feed tube.

Two limit switches at the rest and reverse position contain the RS traversing operation. These limit switches are activated by a trip

pin or flag located on the lance hub housing. Limit switch adjustment is

accomplished by the slotted limit switch bracket located on the canopy. The electric motor power for the blower carriage drive is supplied through a four wire SO cord which is carried by the E-Chain system. The limit switches and motor cables are wired to terminal strips in an electrical box for field connection. Generally, a NEMA 4 enclosure is provided with push buttons is provided for manual control the sootblower during maintenance work.

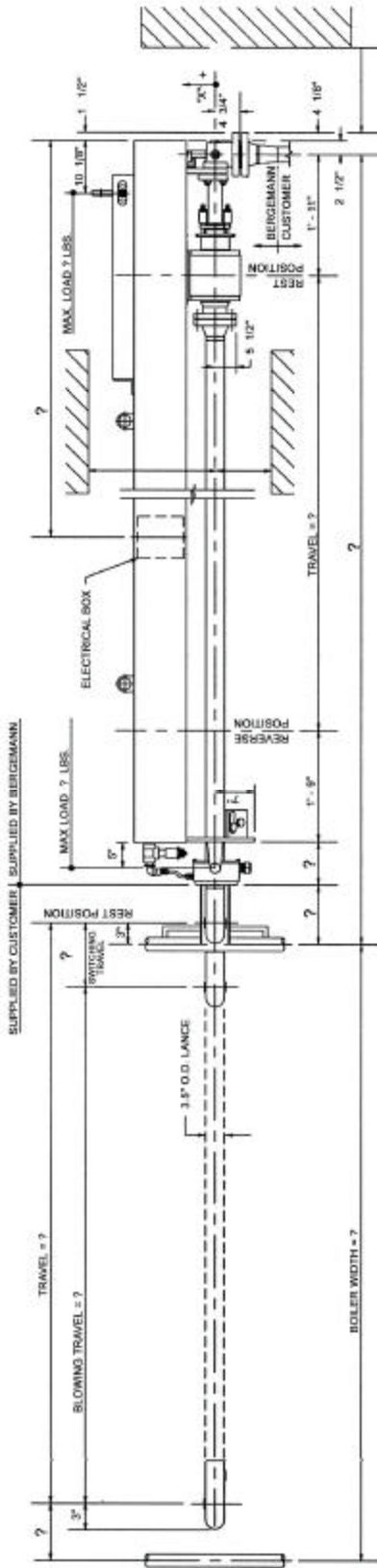
The motor starter, with overload protection required for sootblower operation, can be individually mounted in a NEMA 4 enclosure or in a common central starter cabinet.

RS RETRACTABLE SOOT BLOWER SPECIFICATIONS

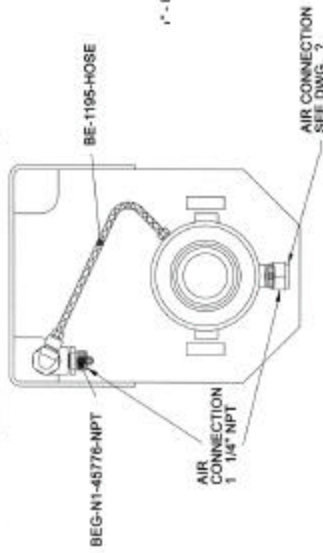
Housing	-	5/16" Thick Cold Rolled Steel
Motor	-	2 H.P. (230/460V, 3 phase, 60 Hz, 1800 RPM), TEFC
Lance	-	3.5"/4"/5" O.D. Alloy – T11 Standard 4130, 17-22sa or Stainless for higher Temp. Applications
Nozzle Indexing	-	Through Timer in PLC or Local Enclosure.
Feed Tube	-	Type 304 Stainless Steel
Nozzle Head	-	Type 310 Stainless Steel
Valve		
Body	-	Carbon Steel, ASTM A216 Grade WCB or Alloy, ASTM A217 Grade WC6
Plug	-	Type 440 Stainless Steel
Seat	-	Type 416 Stainless Steel
Lance Rotation Chain	-	RC-60H 3/4" Pitch
Side Bars	-	Straight Bar, Nickel Plated
Bushings	-	Type 410 Stainless Steel
Rollers	-	Nickel Plated
Pins	-	Type 420 Stainless Steel
Limit Switches	-	Heavy Duty, NEMA 4 – Other Options Available
Electrical Box	-	NEMA 4 Standard – Other Options Available
Components	-	Terminal Strips and Insert/Retract Pushbuttons
Options Include	-	Integrally Mounted Motor Starter Cabinets
Wiring – Box		
Conductor	-	16 AWG for Power 16 or 18 AWG for Control
Insulation	-	(THHN) or (MTW) 90°C Rated
Sheath	-	Stranded Copper
Wiring – Cable		
Cable Sheath	-	Stranded Copper
Wiring	-	3 & 5 Conductor NEC type MC, 14 AWG Stranded (Class B) annealed copper, 90°C, 600V, flame-retardant.

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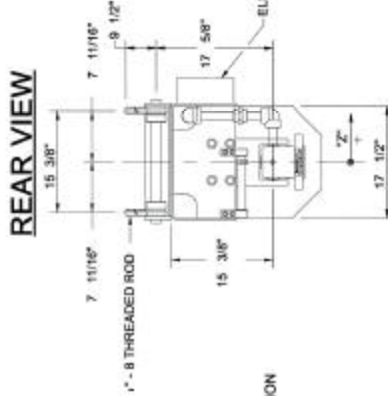
- Lubrication
 - Spindle Bearings – CBI Grease
 - Gearbox – CBI Oil - Chain/Rack – CBI Spray
- Coating
 - Galvanized as Standard
 - Primer Base with Acrylic or Enamel Paint as Option
 - Color: Standard Blue (Any Color Available as Option)



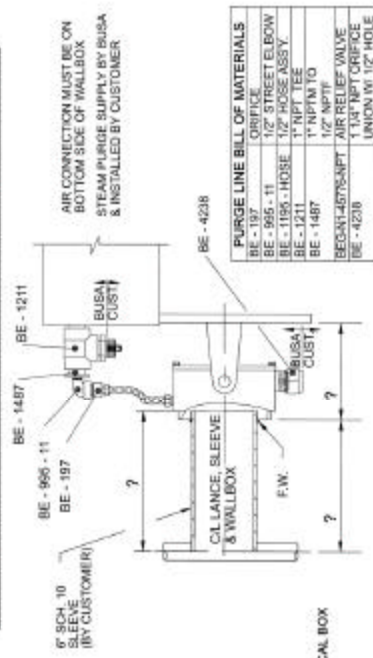
PURGE LINE / SEAL AIR CONNECTION DETAIL



REAR VIEW



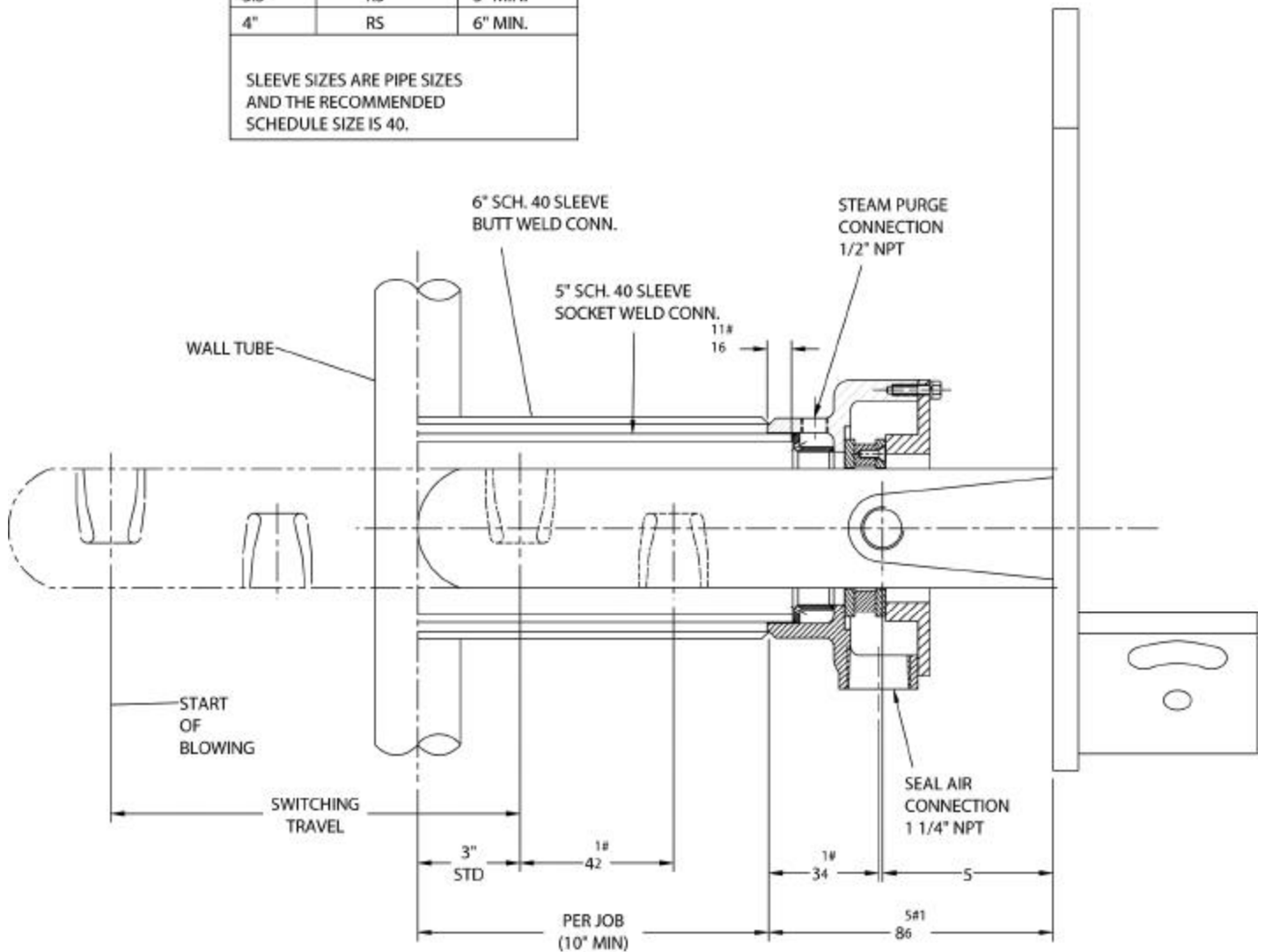
WALLBOX & SLEEVE / PURGE LINE DETAIL



**RS BLOWER WITH
POSITIVE PRESSURE
WALLBOX**

LANCE OD	BLOWER TYPE	SLEEVE SIZE
3"	RS	4" MIN.
3.5"	RS	5" MIN.
4"	RS	6" MIN.

SLEEVE SIZES ARE PIPE SIZES AND THE RECOMMENDED SCHEDULE SIZE IS 40.



TYPICAL RS WALLBOX