

OPERATION, INSTALLATION, & MAINTENANCE MANUAL

for

Aircon Paper-Scrap Rotary Valves

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OPERATING PRINCIPLE FOR AIRCON PAPER SCRAP VALVES

- A. A paper scrap rotary valve is a device that allows paper trim to fall into underground conveying ductwork. It may use the same line to tie into several die-cutters, or it may use reversible-direction rotors to feed two parallel lines for grade separation.
- B. A tremendous advantage of this system is that only a small amount of plant conditioned air is lost, since trim is gravity fed into the valves, not suction fed like a conventional overhead duct system. Conveying air can be completely taken from outside and returned outside, resulting in noticeable energy savings.
- C. Turning at approximately 10 rpm, this rotary valve allows material to fall vertically through the device while maintaining a pressure seal between inlet and outlet.
- D. For “dual” paper scrap valves, two duct lines run parallel horizontally in the underground trench. The direction of rotor rotation changes in order to drop the scrap in the proper line. At the same time the motor reverses rotor direction, an actuator on the other end of the valve must be activated to toggle between and rotor cavity and the correct duct line.

OPERATING INSTRUCTIONS

RECEIVING

Since the rotary valve is shipped as a complete unit, any loose unconnected parts would be those on connecting trench ductwork. Any missing or damaged parts (such as the motor or gear reducer) should be noted with the shipper before accepting the shipment. Aircon is not responsible for any damage that occurs during shipping. **The purchaser should bring all damage claims against the carrier.**

INSTALLATION

The following procedures are recommended to facilitate installation.

Trench Connection: The pair of holes in both of the top flange of the rotary valve may be used to bear the weight of the valve while lowering into the trench. Take care not to damage the end of the motor extending past the motor mount. After the unit is lowered in place connect to the ductwork in the trench.

Electrical: The gearbox and the 1 horsepower (1 ½ horsepower on the larger units) on the rotary valve should be wired with 230/460 VAC, 3 phase, 60 Hz. Customer is responsible for installation of the motor heaters. The way the motor leads are wired determine the direction of rotor rotation. For dual valves, the motor requires some type of switch for reversing direction. For single valves, the rotor direction is not as essential; however, it is usually wired so that the top of the rotor may turn in the direction of the machine supplying the paper scrap.

CHECKLIST FOR INITIAL START-UP

- A. Motor, gearbox, chain drive, and guard on rotary valve properly secured with oil level in gearbox checked.
- B. After wiring the electrical components of the rotary valve, proper directional rotation to be checked to correspond correctly with any directional arrows affixed to the equipment.
- C. For dual paper scrap valves, check to see if the actuator is set to either extend or retract immediately upon the reversal of the rotor motor. Check to see if the actuator is wired to alternate between extending and retracting for each motor reversal.

ROUTINE MAINTENANCE

Daily

Look at top of valve for any excessive scrap buildup

Monthly

Lubricate shaft bearings

Inspect rubber wipers on rotary valve.

Unlock the rotor shaft from the drive and spin freehand in both directions

SAFETY

Before operating the rotary valve, please note and observe the following safety precautions:

1. Turn off the system main blower and lock out electrical disconnects for the rotary valve motor before attempting any maintenance on the rotary valve.
2. To prevent burns, do not touch the motor on the rotary valve until at least after 10 minutes after disconnecting power.
3. Do not attempt operation of the rotary valve without the chain drive hand guard.
4. Do not attempt to remove an obstruction in the rotary valve until power is locked out from both units.
5. Do not attempt to lift both the rotary valve and a secondary piece of equipment as a complete assembled unit. Use any lifting lugs provided on the secondary piece of equipment for handling only that unit.

STANDARD FEATURES

1. Mild steel bolted construction.
2. TEFC motor and guards on chain/sprocket drive assembly on rotary valve.
3. Rotary valve with flex-tip blades.

OPTIONAL FEATURES

1. Stainless steel construction.
2. Baler chute, scrap conveyor, and outlet and discharge fittings.

SPARE PARTS LIST

<u>Label #</u>	<u>Part #</u>	<u>Description</u>	<u>Cost each</u>
1	PSRV-01	Rotary valve motor (1 HP)	\$ 300.00
1	PSRV-015	Rotary valve motor (1 ½ HP)	\$ 360.00
2	PSRV-02	Rotary valve gearbox	\$ 1200.00
3	PSRV-03	Rotary valve rivet chain section	\$ 74.00
4	PSRV-04	Rotary valve gear reducer sprocket	\$ 25.00
5	PSRV-05	Rotary valve flange bearing	\$ 100.00
6	PSRV-06	Rotary valve shaft sprocket	\$ 90.00
7	PSRV-07	Rotary valve shaft bushing	\$ 30.00

Prices are subject to change without notice.

Freight: by customer, F.O.B. - P.O.M. (Memphis, TN)
Taxes: by customer
Delivery: Four (4) weeks A.R.O. for items not currently in stock
Terms: net 10 days after shipment

To place an order or check stock please call Aircon at (901) 452-0230 or fax (901) 452-0264.



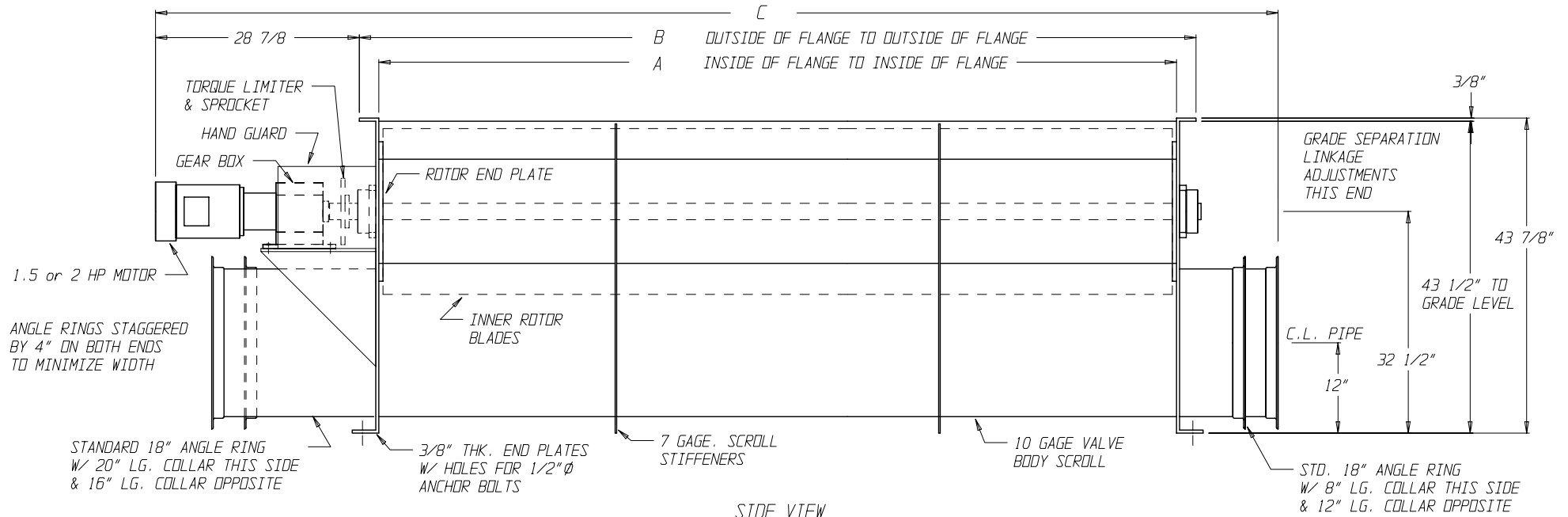
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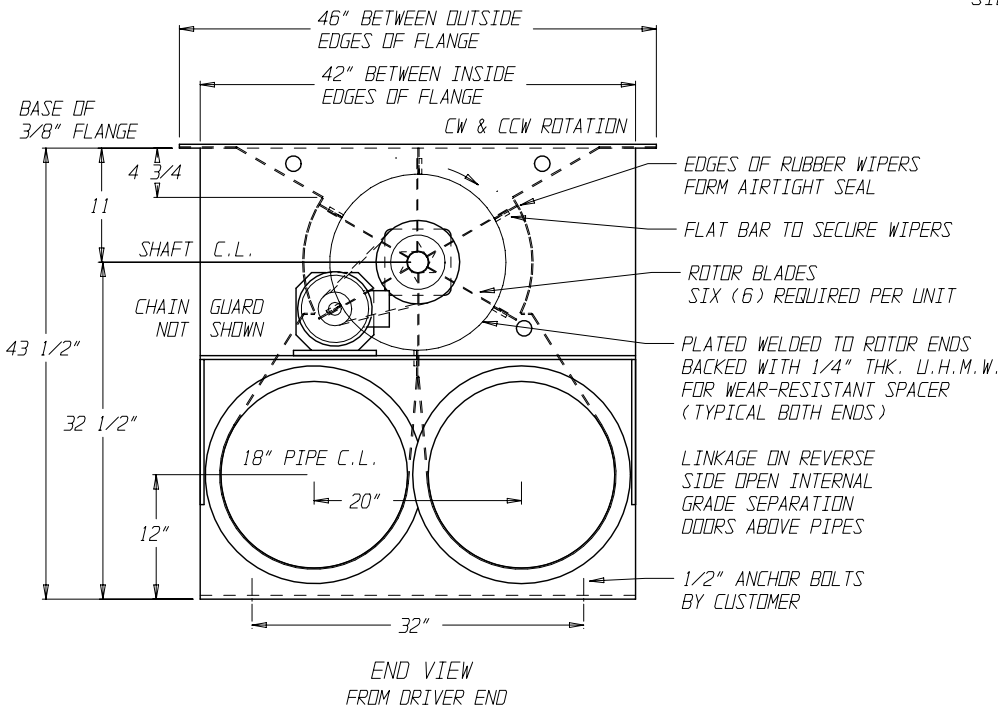
DUAL PAPER SCRAP ROTARY VALVE

for grade separation between 18" diameter lines

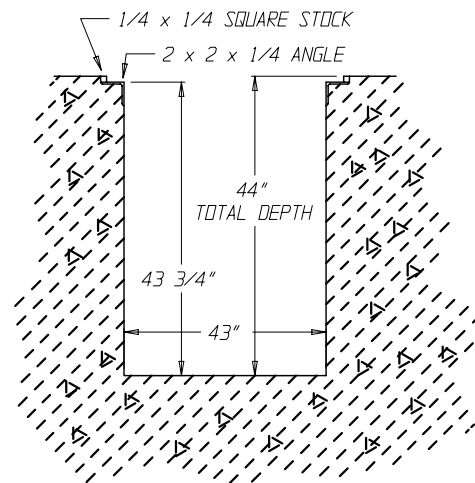
EFFECTIVE JAN 2003



SIDE VIEW



END VIEW
FROM DRIVER END



CONCRETE TRENCH DETAIL
 BUILT BY CUSTOMER
 recommended dimensions

ROTOR LENGTH	A	B	C
36"	36 1/4"	41"	6'-7 3/4"
60"	60 1/4"	65"	8'-7 3/4"
72"	72 1/4"	77"	9'-7 3/4"
84"	84 1/4"	89"	10'-7 3/4"
96"	96 1/4"	101"	11'-7 3/4"
108"	108 1/4"	113"	12'-3 3/4"
115"	115 1/4"	120"	12'-10 3/4"

NOTE: Overall & centerline dimensions also true for non-standard 16" dia. lines



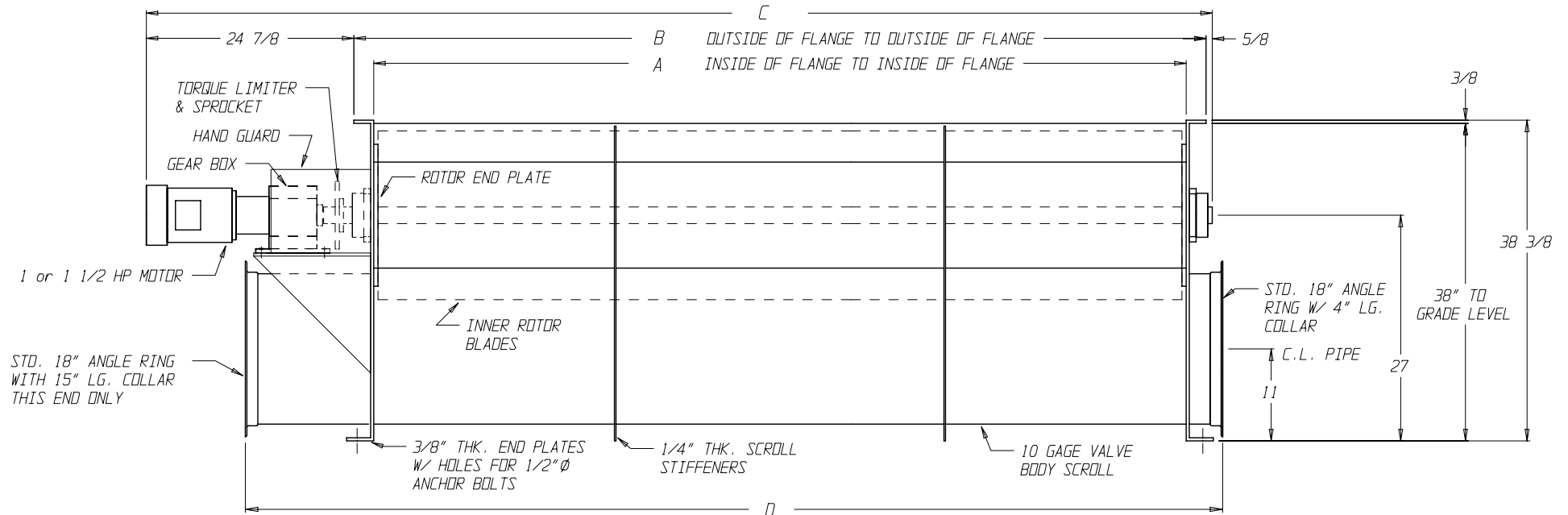
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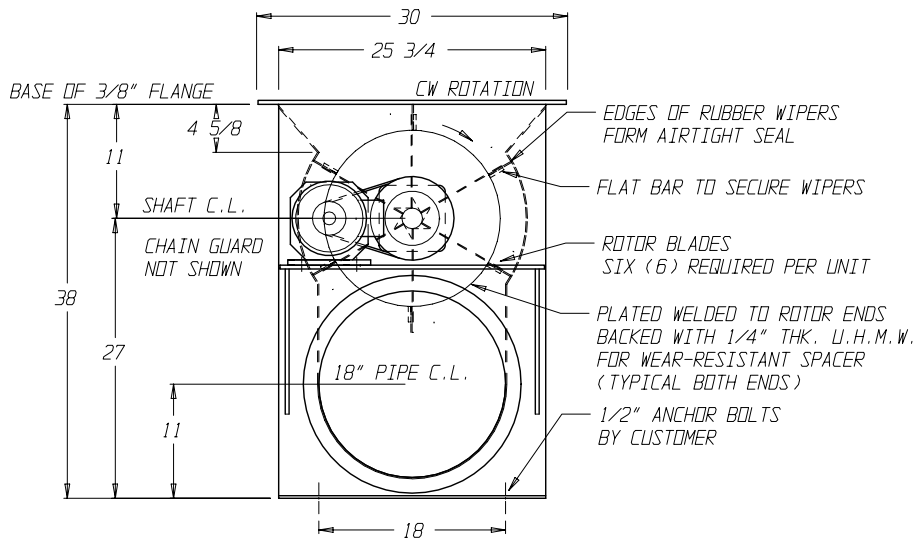
PAPER SCRAP ROTARY VALVE

for single 18" diameter line

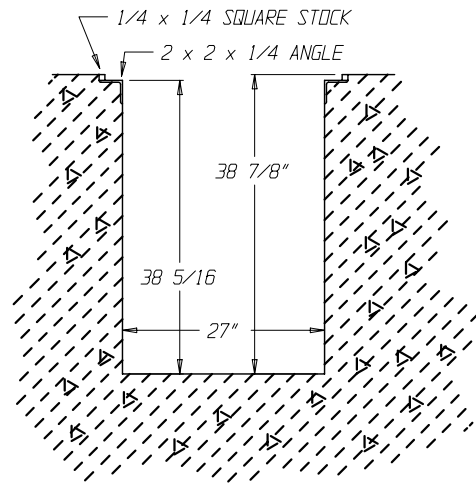
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SIDE VIEW



END VIEW FROM DRIVER END



CONCRETE TRENCH DETAIL BUILT BY CUSTOMER RECOMMENDED DIMENSIONS

ROTOR LENGTH	A	B	C	D
36"	36 1/4"	41"	5'-6 1/2"	56"
60"	60 1/4"	65"	7'-6 1/2"	6'-8"
72"	72 1/4"	77"	8'-6 1/2"	7'-8"
84"	84 1/4"	89"	9'-6 1/2"	8'-8"
97"	97 1/4"	102"	10'-7 1/2"	9'-9"
102"	102 1/4"	107"	11'-0 1/2"	10'-2"
108"	108 1/4"	113"	11'-6 1/2"	10'-8"
115"	115 1/4"	120"	12'-1 1/2"	11'-3"

NOTE: Overall & centerline dimensions also true for non-standard 16" dia. lines