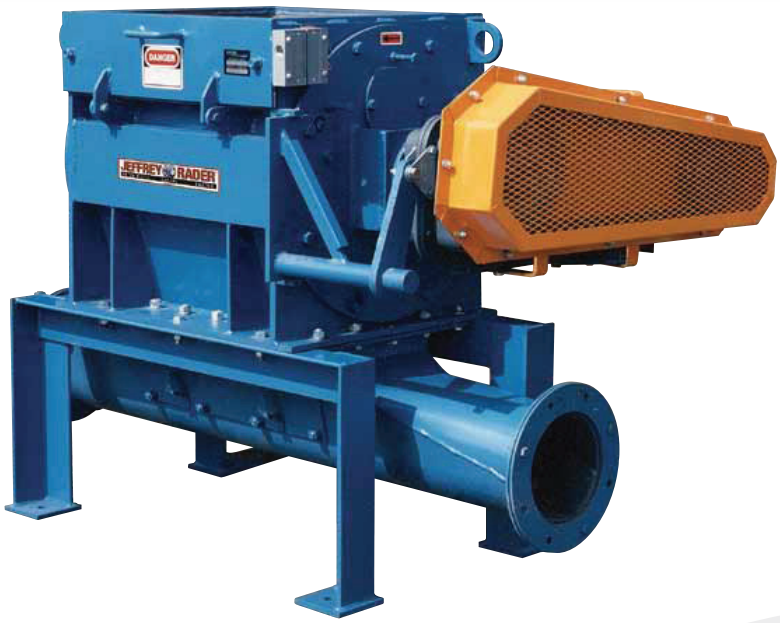
Rotary Airlock Feeders

Rotary Airlock Feeders

For feeding material into high/low pressure pneumatic conveying systems and boiler feed systems.



Features/Advantages

Jeffrey Rader rotary airlock feeders allow entry of material into high-pressure conveying lines with a minimum of air and pressure loss. They can also serve as infeed and outfeed airlocks in low-pressure systems.

Jeffrey Rader has built thousands of rotary airlock feeders for worldwide applications and is considered to be the best in the industry.

We offer a complete line of high-quality new and OEM-rebuilt rotary airlock feeders. Our rebuilt feeders, reconditioned to our stringent design standards, offer significant cost savings.

Functional Description

All Jeffrey Rader rotary airlock feeders are designed for continuous duty service. The feeder consists of a heavy-duty, box-type housing that is reinforced to avoid distortion due to feed materials shearing during operation. The industrial housing is chrome-plated internally to extend its wear life and provide corrosion resistance. Turning inside the housing bore, a rotor assembly moves material from the infeed of the feeder to the bottom discharge.

The rotor consists of heavy helical paddles with two end plates to increase rigidity. The rotor is mounted to a large diameter drive shaft with removable self-centering locking assemblies; rotor tips are hard faced for extended wear and corrosion resistance. The internal rotor assembly and shaft run on high-quality roller bearings.

As material enters the feeder through the upper flange, material falls into the rotor pockets formed by the paddles. As the rotor assembly rotates, a top knife will shear any material that has not fallen completely into the pocket. The rotor, containing material, continues to turn. When the material reaches the bottom of the feeder, it falls out of the rotor pockets and lower flange of the feeder by gravity. An optional bottom wear bar is available to shear any material that does not fall completely out of the pocket. The rotor pocket then rotates back up into the starting position and the cycle repeats.

www.terrasource.com ■ info@terrasource.com

The brands comprising TerraSource Global are wholly-owned subsidiaries of Hillenbrand, Inc. (NYSE: HI), which is based in Indiana. © 2014 TerraSource Global. All Rights Reserved.

Rotary Airlock Feeders

Features/Advantages (continued from other side)

Standard Model Information

All Jeffrey Rader rotary airlock feeders are manufactured of high-quality components, and are machined, fabricated and assembled with great care. All units are carefully checked by hand at the manufacturing shop for proper operation before shipment.

The following features are standard on all models:

- Housing stress relieved after fabrication, before machining.
- Top knife for shearing material at infeed.
- Stainless steel adjustment screws for top knife clearance adjustment.
- Top knife cover to prevent material build-up on the top knife.
- A large, hinged top knife access door for inspection, adjustment, and replacement of top knife. A safety switch is supplied to interlock to system as a back-up safety device.
- Packing glands provide positive sealing on rotor shafts which are hard chromed in packing area for long life.
- Access door provided in end cover for easy inspection.
- Shaft-mount reducers and torque arm mount are standard.
- Heavy-duty rotor and shaft assembly, with rotor mounted onto shaft with self-centering locking assemblies.
- Adjustable brass seal rings on each end of rotor to maintain close tolerances and minimize air leakage.

Standard on Feeders for Boiler Feed Systems

- Extra heavy-duty rotor and shaft assembly, with rotor mounted onto shaft with shrink-type locking assemblies.

Optional Features

Below is a partial listing of optional features that may be selected at the time of order. In many cases, features may be added to existing units. Contact a Jeffrey Rader representative for more information on in-field modifications.

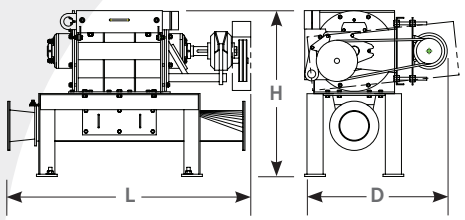
- Electric motor(s) by Jeffrey Rader.
- Torque arm brackets.
- Optional drive arrangements.
- Speed sensing to detect loss of RPM.
- Anti-dusting baffle for infeed area of feeder.
- Infeed impact plate to prevent excess wear on the feeder housing.
- Sub-knife wear bar for protecting chrome or duplex stainless bore at infeed.
- Bottom wear bar for protecting chrome bore at discharge. Wear bar can be rotated four times to extend wear life.
- Tee injector and mounting base for material infeed into a high pressure pneumatic line.
- Various special materials and/or coatings to meet specific operating conditions.
- Special preparation, primer and paint as required.

Dimensions and Weights

IN. (MM) MODEL**	APPROXIMATE LAYOUT DIMENSIONS* AND SHIPPING WEIGHTS HP	L	H	D	LBS (KG)
14 x 18	2 or 3	58" (1473)	39" (991)	36" (914)	789 (358)
20 x 20	3 or 5	67" (1702)	55" (1397)	40" (1016)	1,628 (738)
20 x 25	3 or 5	71" (1803)	55" (1397)	40" (1016)	1,872 (849)
20 x 30	3 or 5	76" (1930)	55" (1397)	40" (1016)	2,093 (949)
25 x 30	5 or 7.5	82" (2083)	63" (1600)	44" (1118)	2,980 (1,352)
25 x 35	5 or 7.5	89" (2261)	63" (1600)	44" (1118)	3,495 (1,585)
30 x 30	7.5 or 10	90" (2286)	77" (1956)	47" (1194)	4,478 (2,031)
30 x 35	7.5 or 10	94" (2388)	77" (1956)	47" (1194)	4,825 (2,189)
30 x 40	10 or 15	101" (2565)	77" (1956)	54" (1372)	5,398 (2,449)
30 x 45	10 or 15	106"" (2692)	77" (1956)	54" (1372)	5,882 (2,668)

** Dimensions and weights shown are maximum for range within model size indicated. Certified drawings will be furnished for installation. Installation supervision is available.*

*** Larger models available on a custom basis — consult factory.*



CRUSH. FEED. PROCESS. CONVEY. STORE.

TERRASOURCE GLOBAL

www.terrasource.com ■ info@terrasource.com

The brands comprising TerraSource Global are wholly-owned subsidiaries of Hillenbrand, Inc. (NYSE: HI), which is based in Indiana. © 2014 TerraSource Global. All Rights Reserved.