

# EDK Rotary Feeder/Delumper

For precise volumetric feeding of polypropylene and polyethylene resin under high pressures and temperatures.



EDK Rotary Feeder/Delumper (25 x 30) with Optional Stainless Steel Transition

## Features/Advantages

The Jeffrey Rader EDK Rotary Feeder/Delumper is engineered for heavy-duty service and highly accurate, controlled rotational speed for precise volumetric feeding of polypropylene and polyethylene resin under high pressures and temperatures.

## Design

The EDK (*E Series Double Knife*) feeder has dual top knives to provide for shearing of oversized materials in either direction of rotation. It has a special double-helical, eight-blade, closed-end rotor that maintains a two-blade labyrinth seal to minimize gas leakage. Shaft seal purge is provided to keep hydrocarbons contained, and pocket purge ports are provided to assist in the removal of sticky materials. Rotor blades are ground to an RMS 16-22 finish to prevent material build-up and the tips have 410 stainless steel overlay machined to match the rotor bore. Additionally, the end seals are spring loaded to maintain a high degree of sealing.

Top knives and end seals are easily adjustable without removing the machine from its operating position or removing interconnecting piping. The EDK utilizes heavy-duty outboard bearings and is designed to operate at a differential pressure of

15 psi (1 bar) and at temperatures up to 230°F (110°C). The maximum static differential pressure is 50 psi (3.4 bar).

## Delumping

When the EDK encounters a large lump of polyolefin material, it attempts to shear it in the forward direction. If it is not able to perform the task, the anti-jamming feature automatically reverses the direction of rotation to attempt to shear the lump in the opposite direction. This process is repeated up to three times. At the end, if the lump has not been sheared and the jam eliminated, a stall condition is created and an alarm will sound, alerting the operator of the situation. Once the jam is cleared, the EDK automatically returns to the forward direction.

## Standard Features

- Round inlet/outlet connections
- Carbon steel or stainless steel construction
- Special hard facing on rotor tips
- Outboard bearings
- Knives and end seals adjustable
- Shaft packing seals with nitrogen purge
- Polished rotor surfaces prevent material build-up



EDK Inlet



# EDK Rotary Feeder/Delumper

## Features/Advantages (continued from other side)

### Optional Features

#### Rotor

- Pocket dividers to limit piece size
- Reduced displacement
- Carbon steel or stainless steel

#### Drives

- Variable speed hydraulic
- Variable speed electromechanical
- OSHA protective guarding

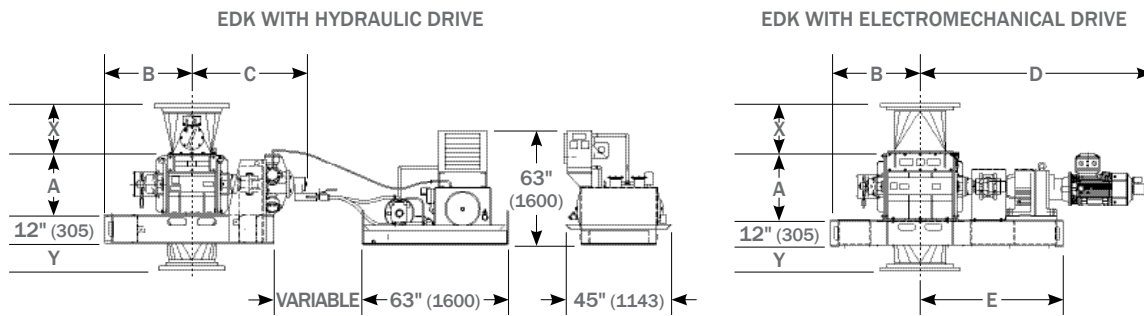
### Housing

- Chrome bore can be provided
- Carbon steel or stainless steel (housing and rotor to be the same materials of construction)
- Self-regulating heat tracing
- Insulating blanket

### Accessories

- Custom transitions
- Sight glasses
- Shaft seal purge regulator
- Pocket purge with regulator and timer

## Dimensions and Weights



SIZE	APPROXIMATE LAYOUT DIMENSIONS* AND SHIPPING WEIGHTS					IN (MM)		LBS (KG)
	A	B	C	D	E	X**	Y**	
20 X 20	34" (864)	34" (864)	50" (1270)	104" (2642)	62" (1575)	24" (610)	12" (305)	See Chart Below
20 X 30	34" (864)	39" (991)	55" (1397)	108" (2713)	62" (1575)	24" (610)	12" (305)	See Chart Below
25 X 30	39" (991)	39" (991)	55" (1397)	108" (2713)	67" (1702)	24" (610)	12" (305)	See Chart Below
30 X 30	45" (1143)	39" (991)	55" (1397)	108" (2713)	67" (1702)	24" (610)	12" (305)	See Chart Below

\* Certified drawings will be furnished for installation. Installation supervision is available.

\*\* The X and Y dimensions are considered standard but may change depending on requirements for installation site.

### MODEL SPECIFICATIONS

MODEL DESIGNATION	MEASURE	20 X 20	20 X 30	25 X 30	30 X 30
Displacement (100% Full)	ft <sup>3</sup> /rev (m <sup>3</sup> /rev)	1.97 (0.056)	3.29 (0.093)	5.66 (0.160)	8.61 (0.240)
Speed Range	rpm	2-30	2-30	2-30	2-25
Maximum Torque Available	lbf•in (N•m)	86,980 (9,800)	86,980 (9,800)	86,980 (9,800)	86,980 (9,800)
Base Weight	lbs (kg)	1,647 (736)	2,130 (956)	2,800 (1,270)	3,760 (1,705)
Unit Weight w/ Hydraulic Motor & Base	lbs (kg)	3,042 (1,380)	3,575 (1,622)	4,160 (1,890)	5,220 (2,370)
Unit Weight w/ Electromechanical Drive	lbs (kg)	2,750 (1,250)	3,230 (1,470)	3,900 (1,770)	4,860 (2,210)

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+1-855-483-7721 ■ www.terrasource.com ■ info@terrasource.com