

ZJBE Injector

Junction Mounting, Positive Displacement Injector, Oil



General

ZJBE Injectors deliver a fixed pre-measured quantity of oil at the outlet connection during each discharge cycle. ZJBE Injectors are available in seven discharge rates and are supplied in two body sizes. System distribution connections utilizing Bijur Delimon standard junctions, 4mm (5/32") secondary tubing and compression fittings can be used with these units.

Application

ZJBE Injectors can only be used in cyclic operation oil systems and feed in one direction only. ZJBE Injectors are mounted in single or double outlet junctions with 5/16-24 threads (see *Datasheet #35469: Junctions, Junction Bars and Junction Headers*). The assembly is located close to application points and connected to bearings by tail tubes, normally 4mm (5/32") diameter tubing.



System Requirements

The lubricating pump in a PDI oil system must build up line pressure to 200 psi (14 bar) minimum to actuate injector discharge. Recommended operating pressure is 300 psi (21 bar). A pressure relief device must be used in the system to permit pressure to drop quickly to approximately 5-10 psi (0.3-0.7 bar) between lubrication cycles to allow injectors to fully reset, ready for next lubrication cycle.

Technical Data

Oil Viscosity	100-6500 SSU (20-1500 Cst) at operating temperature
Mounting	Mounted in junction
Discharge	Preset (non-adjustable) in seven various rates
Maximum Operating Pressure	500 psi (34 bar)
Minimum Operating Pressure	200 psi (14 bar)
Maximum Relieving Pressure	10 psi (0.7 bar)
Seals	Viton
Leaktight Junction Connection	4.5 Newton-Meter (40 pound inch maximum)

Typical Tubing Connections

Injector inlet male configuration is suitable for establishing oil-tight connections in Bijur Delimon standard junctions (see *Brochure #151: Specialty Fluid Fittings*). To close junction outlet use closure plug, part #B3784.

Secondary Line Outlets

4mm (5/32") tubing connections at ZJBE outlet utilize: compression sleeve, part #B1061 (for metal tubing); part #B8272 (for nylon tubing) and compression bushing, part #B1371.

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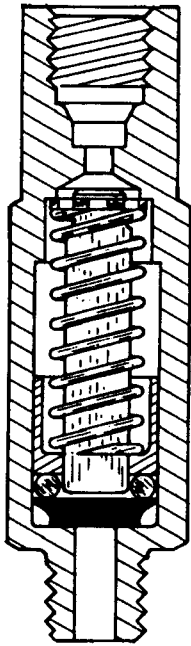
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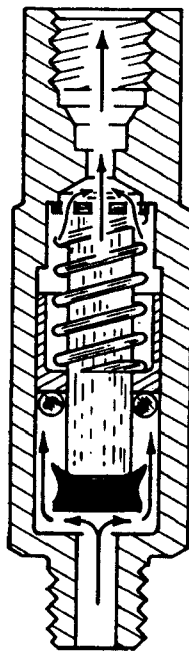
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Operation

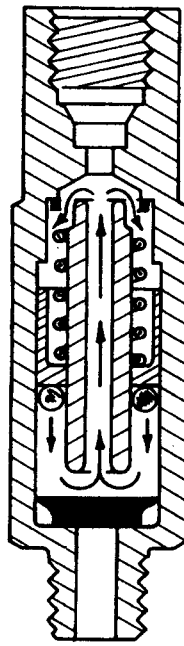
Rest Position



Discharge Cycle



Return Cycle



Illustrations and specifications are not binding in detail.

Designs are subject to modification and improvement without notice.

Rest Position

1. Relief system pressure is attained at inlet.
2. Oil from previous cycle fills discharge chamber.
3. Disc seal covers inlet.

Discharge Cycle

1. System pressure builds up and forces oil into inlet.
2. Disc "collapses," oil is forced into inlet chamber around disc seal.
3. Disc transfers seal to hollow piston rod.
4. Piston moves forward and compresses spring.
5. Oil in discharge chamber is displaced "positively" to the lube point by the advancing piston.
6. Piston assembly continues travel towards outlet until piston reaches shoulder of discharge chamber.

Return Cycle

1. Pressure is quickly relieved from injector inlet.
2. Disc seal relaxes and seals injector inlet as piston is forced downward by spring.
3. Piston forces oil in intake chamber up through hollow transfer tube into discharge chamber.
4. Injector is ready for the next cycle.

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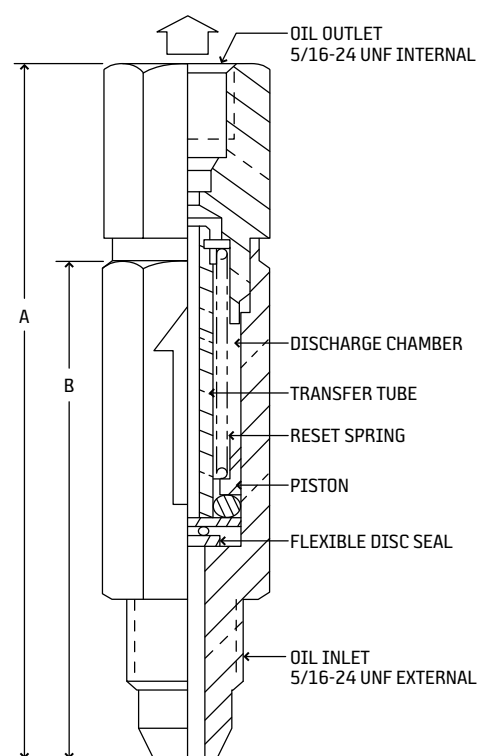
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How to Order

Model	Discharge	Part #
ZJBE-01	0.01cc	18300-01
ZJBE-025	0.025cc	18300-025
ZJBE-06	0.06cc	18300-06
ZJBE-10	0.10cc	18300-10
ZJBE-20	0.20cc	18300-20
ZJBE-30	0.30cc	18300-30
ZJBE-40	0.40cc	18300-40

When ordering, specify by model, discharge and part number, e.g. ZJBE-10 Injector, 0.10cc Discharge, Part #18300-10.

Dimensional Schematics



Model	A	B	Hex Width (across flats)
ZJBE-01	45mm (1.75")	31mm (1.21")	10mm (0.39")
ZJBE-025	45mm (1.75")	31mm (1.21")	10mm (0.39")
ZJBE-06	45mm (1.75")	31mm (1.21")	10mm (0.39")
ZJBE-10	50mm (1.97")	31mm (1.21")	10mm (0.39")
ZJBE-20	55mm (2.17")	40mm (1.58")	12mm (0.47")
ZJBE-30	60mm (2.36")	40mm (1.58")	12mm (0.47")
ZJBE-40	60mm (2.36")	40mm (1.58")	12mm (0.47")

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