

# KVPDF

## High Flow Vacuum Pumps for Material Transfer



### Features

- ◆ Parallel bore design eliminates blocking
- ◆ Application versatility
- ◆ High efficiency
- ◆ Low initial and operating cost
- ◆ Maintenance free operation
- ◆ Custom units available

### Description

The KVPDF series of high flow vacuum pumps provides a reliable and cost effective method of in-line transfer of complex shapes and bulk materials such as; small components (up to 75mm in diameter), continuous strips and powders.

Vacuum flow rates can be infinitely controlled over the pumps entire range by regulating the input pressure at the air input port.

The pumps unique capability to create instantaneous vacuum flow and high air velocity combined with its straight through, smooth bore design allows material to pass directly through the unit at high speeds without interference or clogging.

The compact design facilitates placement close to the work area for maximum efficiency and ease of installation.

The pumps are available in 15 standard models with inside diameters from 3mm to 75mm. Modified and custom engineered units in a variety of materials are available to special order.

**Ordering Information:**  
By part number

### Materials

Vacuum Pump body:	Anodised aluminium (standard) Stainless steel and PVC (optional, on request)
Seals:	None

### Technical Specifications

Medium:	Filtered (50 $\mu$ ) non lubricated air
Operating pressure:	5.5 bar
Operating temperature:	-10°C to + 50°C
Operating noise level:	72 dBA

### Principles of operation

Compressed air is fed into an exterior annular ring that has a number of orifices leading into the main tube. As the compressed air exits from the orifices, its velocity increases to supersonic speed. The air is forced into the centre of the tube and rotates with a spiral motion similar to a corkscrew. This cyclonic flow creates a powerful vacuum flow capable of drawing materials into, through, and out of the pump under force.

As a vacuum source the units are capable of rapid evacuation of large volumes of air to moderate levels of vacuum.

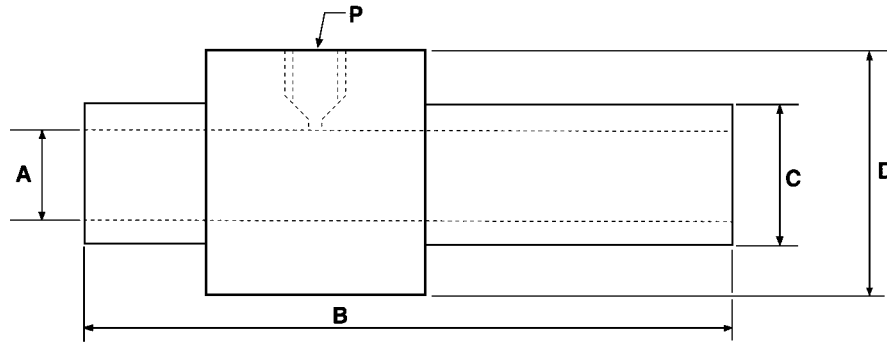
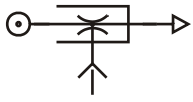
### Typical Applications

- ◆ Unloading vibrator feeders
- ◆ Transferring of engine valves in grinding operation
- ◆ Chip removal in machining operations
- ◆ Transfer powder detergent and caustic chemicals

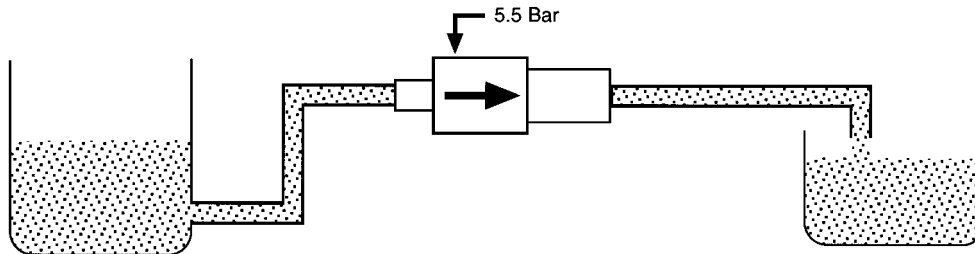


## Dimensions and Performance Data

units mm



Part number	ØA	B	ØC	ØD	P
KVPDF1-3	3.7	88.9	18.8	31.5	G1/8
KVPDF2-3	6.4	88.9	18.8	31.5	G1/8
KVPDF3-3	9.5	88.9	18.8	31.5	G1/8
KVPDF3-6	9.5	88.9	18.8	31.5	G1/8
KVPDF5-3	12.7	139.7	25.2	37.6	G1/4
KVPDF5-6	12.7	139.7	25.2	37.6	G1/4
KVPDF7-3	19.1	190.5	31.5	50.3	G3/8
KVPDF7-6	19.1	190.5	31.5	50.3	G3/8
KVPDF10-3	25.4	190.5	37.6	56.7	G3/8
KVPDF10-6	25.4	190.5	37.6	56.7	G3/8
KVPDF15-3	38.1	190.5	50.3	69.4	G3/8
KVPDF15-6	38.1	190.5	50.3	69.4	G3/8
KVPDF20-3	50.8	190.5	63.0	82.0	G3/8
KVPDF20-6	50.8	190.5	63.0	82.0	G3/8



Part Number	Vacuum level (-mbar)	Vacuum flow nl/min	Compressed air consumption (nl/min) @ input pressure of 5.5 bar
KVPDF1-3	271	85	57
KVPDF2-3	271	283	170
KVPDF3-3	152	425	170
KVPDF3-6	203	510	283
KVPDF5-3	102	708	255
KVPDF5-6	339	850	680
KVPDF7-3	146	1416	680
KVPDF7-6	271	1699	1360
KVPDF10-3	102	2124	680
KVPDF10-6	196	2690	1350
KVPDF15-3	44	4672	680
KVPDF15-6	85	5663	1350
KVPDF20-3	27	6796	680
KVPDF20-6	51	8495	1350

Units with -6 suffix create higher vacuum levels than -3, but use the same internal diameters

