



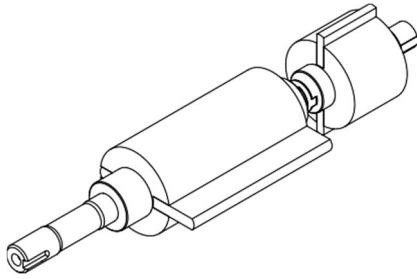
FD SERIES

ENGINEERED FOR PERFORMANCE

Ingeniously designed, new generation double stage oil sealed, rotary vane vacuum pumps to global standards



FD6
FD12
FD20
FD60



HHV Pumps, a pioneer in rotary vane vacuum pump technology armed with decades of industrial experts, presents FD series, rotary vane pumps.

FD series pumps are an outcome of excessive design program based on first principles and in-detailed analysis of each component thereby making it a world-class product.

These pumps are designed to provide consistent vacuum even at continual operations. The oil used will act as a sealant and as a lubricant. We offer a range of four pumps starting from 6m³/h to 60m³/h capacity delivering an ultimate vacuum of 2 microns.

Features

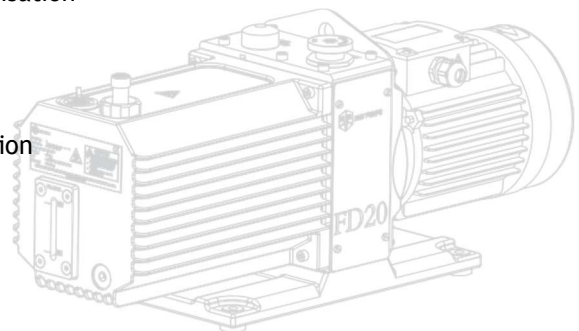
- Robust and compact
- Improved vapor handling performance
- Forced oil lubrication system with built-in oil vane pump enabling high performance down to 10⁻³ mbar
- Lower noise level at 58 dBA
- Minimal vibration
- Increased inlet port path to give maximum flow
- Lower oil consumption
- All fluoroelastomer (FKM/Viton) seals
- Performance testing in accordance with Pneurop 6602.

Industry/Markets

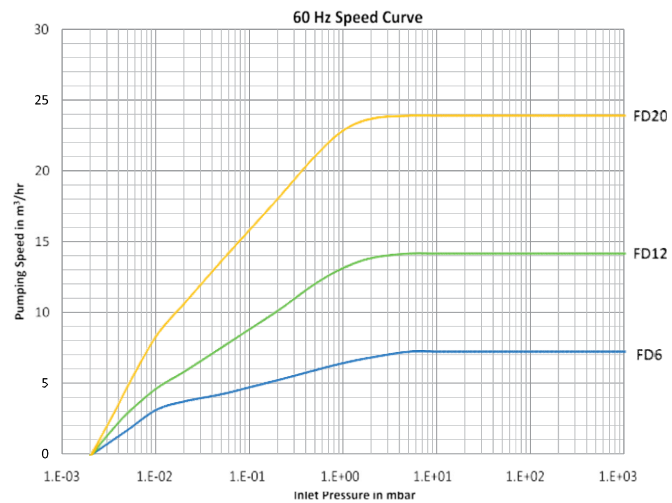
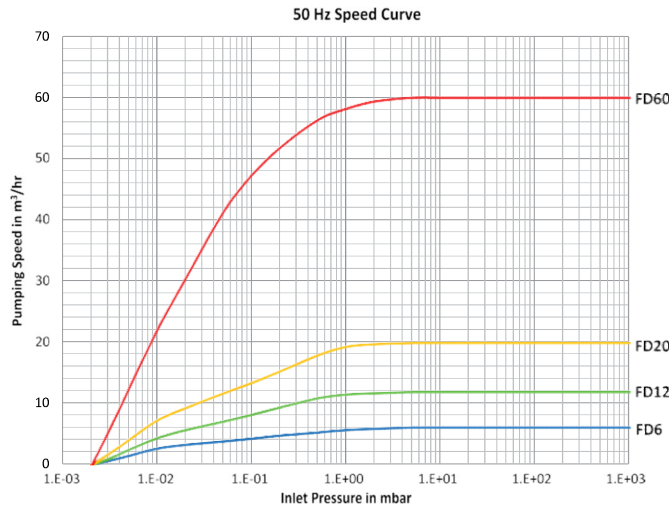
- Air conditioning & refrigeration
- Chemical and Process Industries
- Cryogenics
- Solar
- Lighting
- Research & development
- Evacuation
 - AC & refrigeration pipe
 - Cryogenic storage tank
 - Light bulbs
 - R&D

Typical Applications

- Coating
- Jewelry casting
- High vacuum distillation
- Freeze drying & lyophilisation
- Furnace
- Leak testing
- Filtration
 - Transformer oil filtration
 - Chemical filtration



Performance Curves



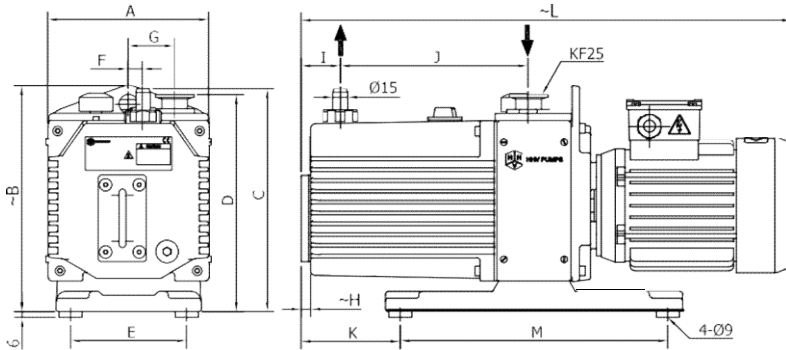
Specifications

Particulars	Unit	FD6	FD12	FD20	FD60
Nominal pumping speed at 50Hz	m ³ /h (L/min)	6.2 (103)	12 (200)	20 (333)	60 (1000)
Nominal pumping speed at 60Hz		7.4 (123)	14.3 (238)	24 (400)	NA
Ultimate vacuum (Total pressure)	Gas ballast closed in mbar (Torr)	2 x 10 ⁻³ (1.5 x 10 ⁻³)			
	Gas ballast open in mbar (Torr)	5 x 10 ⁻² (3.75 x 10 ⁻²)			
Water vapour pumping capacity	kg/h	0.20	0.29	0.4	NA
Water vapour tolerance	mbar	45	33	27	NA
Nominal power rating at 50Hz	kW (HP)	0.37 (0.5)	0.37 (0.5)	0.55 (0.75)	2.2 (3)
Nominal power rating at 60Hz		0.37 (0.5)	0.55 (0.75)	0.75 (1)	NA
Motor rotational speed at 50Hz	rpm	1440			
Motor rotational speed at 60Hz		1720			NA
Weight	kg (lb)	25.5 (56.2)	27.5 (60.6)	35.5 (78.1)	115 (253)
Inlet connection	KF flanges	KF25			KF40
Outlet connection	KF flanges/Nozzle	15mm Dia Nozzle/KF25*			KF40
Oil capacity	Lts	0.7	0.9	1.2	6
Recommended oil	Standard	MD504			
Electrical	Single Phase 220V, 50Hz	✓	✓	✓	✗
	Three Phase 415V, 50Hz	✓	✓	✓	✓
	Single Phase 110V, 60Hz	✓	✓	✓	✗
	Three Phase 220V, 60Hz	✓	✓	✓	✗

* Optional KF25 exhaust port available.

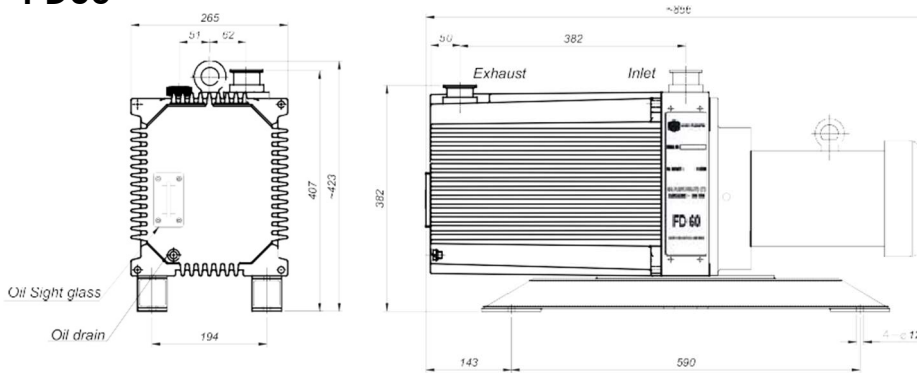
Dimensions

FD6, FD12 & FD20



Model	FD6	FD12	FD20
A	168	168	176
B	235	235	258
C	232	232	252
D	226	226	244
E	121	121	139
F	15	15	28
G	48	48	51
H	10	10	7
I	41	41	38
J	164	196	259
K	104	104	151
M	279	279	305
L (230V, 50Hz)	461	493	593
L (415V, 50Hz)	480	512	603
L (115V, 60Hz)	461	533	593
L (208V, 60Hz)	498	564	618
L-IP23 (230V, 50Hz)	492	524	613

FD60



01FD-XXX	X	XXX
<p>Pump Capacity</p> <ul style="list-style-type: none"> 006 : FD6 012 : FD12 ← 020 : FD20 060 : FD60 	<p>Motor Description</p> <ul style="list-style-type: none"> 216 : 230V (1 Phase, 50Hz) 222 : 115V (1 Phase, 60Hz) → 237 : 415V (3 Phase, 50Hz) 245 : 208V (3 Phase, 60Hz) 	

Motor

- : IP44, Standard motor

* Different motor combinations are available on request



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