

Mechanical Rotor Suspension without Compound Stage

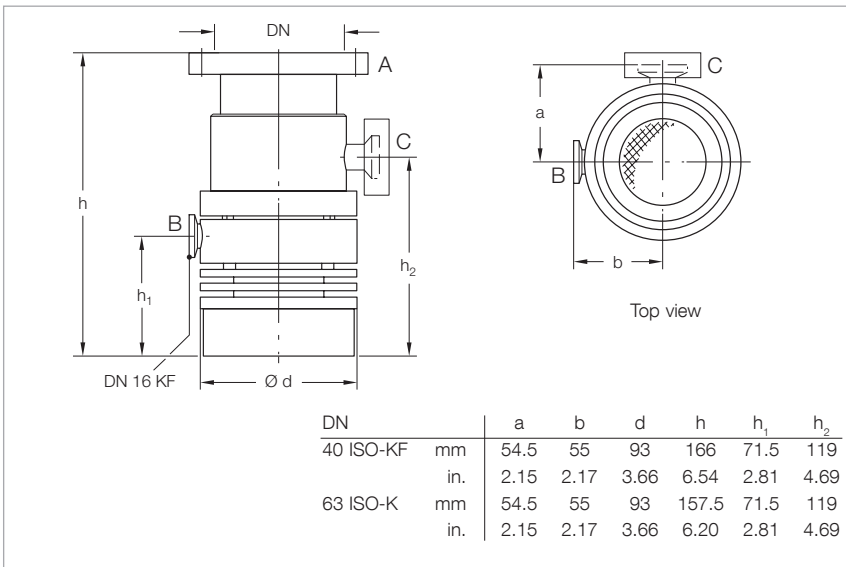
TURBOVAC 50

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Typical Applications

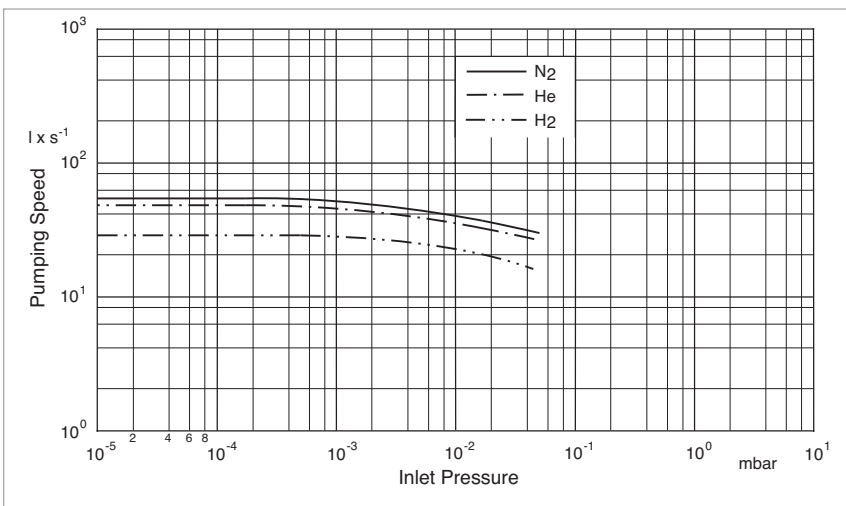
- Leak detectors
- Mass spectrometers
- Electron beam microscopy
- TV tube manufacturing
- Load locks and transfer chambers
- High vacuum chambers



Dimensional drawing for the TURBOVAC 50

Technical Features

- Small footprint
- Installation in any orientation
- Cooling by convection is sufficient for most applications
- Air and water cooling can be added easily
- Oil-free pump for generating clean high and ultra-high vacuum conditions



Pumping speed as a function of the inlet pressure (TURBOVAC 50 with flange DN 63 ISO-K)

Advantages to the User

- Space-saving
- Easy to integrate into complex vacuum systems
- Low operating costs
- Highly reliable operation also in processes loaded with particles

Technical Data

TURBOVAC 50

Connection			
Inlet	DN	40 ISO-KF • 40 CF	63 ISO-K • 63 ICF
Outlet	DN	16 ISO-KF	16 ISO-KF
Pumping speed			
N ₂	l x s ⁻¹	33	55
Ar	l x s ⁻¹	30	50
He	l x s ⁻¹	36	48
H ₂	l x s ⁻¹	28	30
Gas throughput			
N ₂	mbar · l x s ⁻¹	0.90	1.00
Ar	mbar · l x s ⁻¹	0.70	0.80
He	mbar · l x s ⁻¹	0.30	0.40
H ₂	mbar · l x s ⁻¹	0.25	0.30
Compression ratio			
N ₂		2 x 10 ⁶	2 x 10 ⁶
Ar		2 x 10 ⁶	2 x 10 ⁶
He		5 x 10 ²	5 x 10 ²
H ₂		2 x 10 ²	2 x 10 ²
Ultimate pressure	mbar (Torr)	< 5 x 10 ⁻⁸ (< 3.8 x 10 ⁻⁶)	< 5 x 10 ⁻⁸ (< 3.8 x 10 ⁻⁶)
Max. foreline pressure for N ₂	mbar (Torr)	1 x 10 ⁻¹ (7.5 x 10 ⁻²)	1 x 10 ⁻¹ (7.5 x 10 ⁻²)
Recommended forevacuum pump		TRIVAC D 2,5 E	TRIVAC D 2,5 E
Nominal rotation speed	min ⁻¹ (rpm)	72 000	72 000
Run-up time, approx.	min	2	2
Max. power consumption	W	45	45
Power consumption at ultimate pressure	W	15	15
Admissible ambient temperature	°C (°F)	+10 to +55 (+50 to +131)	+10 to +55 (+50 to +131)
Cooling			
standard		Convection	Convection
optional		Air / Water	Air / Water
Cooling water connection		10 mm hose nozzle	10 mm hose nozzle
Cooling water consumption	l x h ⁻¹	15 to 25	15 to 25
Permissible cooling water pressure	bar	3 to 7	3 to 7
Permissible cooling water temperature	°C (°F)	+10 to +35 (+50 to +95)	+10 to +35 (+50 to +95)
Weight	kg (lbs)	2.0 (4.4)	2.0 (4.4)



Technical Data

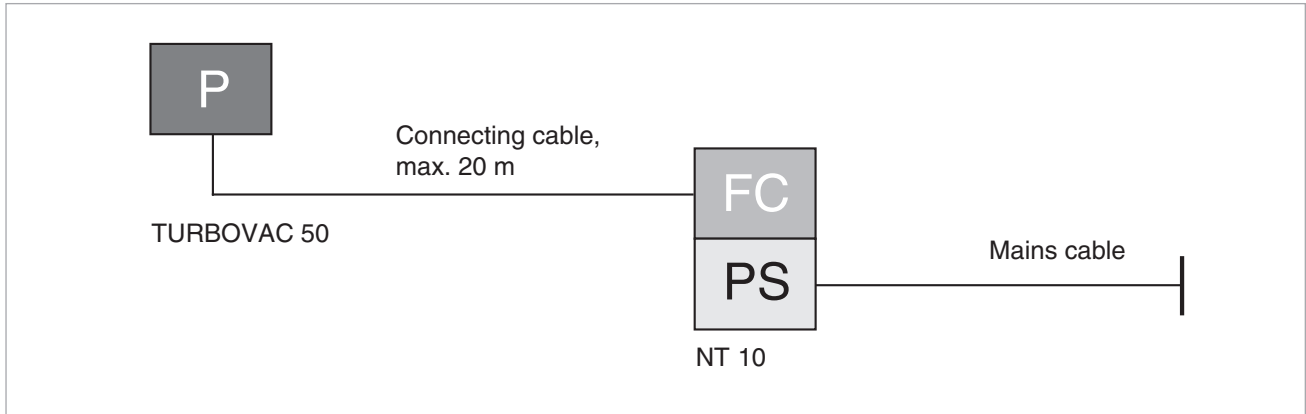
TURBOTRONIK NT 10

Mains connection	50/60 Hz	100-120 or 200-240 V
Max. power consumption	W	45
Max. output voltage	V	3 x 150
Max. output current	A	6
Protection rating	IP	20
Admissible ambient temperature	°C (°F)	0 to +40 (+32 to +104)
Dimensions (W x H x D)	mm (in.)	106 x 128 x 233 (4.17 x 5.04 x 9.17)
Weight, approx.	kg (lbs)	1.5 (3.3)

Ordering Information

TURBOVAC 50

TURBOVAC 50 without Compound Stage P	Part No.	
DN 40 ISO-KF, convection DN 40 CF, convection DN 63 ISO-K, convection DN 63 CF, convection	854 00 853 99 854 01 854 02	
Mandatory Accessories FC PS		
Electronic frequency converter TURBOTRONIK NT 10 with EURO plug, 180-240 V with US plug, 90-140 V	859 00 859 01	
Connecting cable converter – TURBOVAC 1.0 m (3.5 ft) 3.0 m (10.5 ft) 5.0 m (17.5 ft) 10.0 m (35.0 ft) 20.0 m (70.0 ft)	200 11 609 121 08 121 09 161 10 800150V2000	
Forevacuum pump TRIVAC D 2,5 E 220-240 V, 50 Hz; 230 V, 60 Hz; Schuko plug, EURO version 110-120 V, 200-240 V, 50/60 Hz; without plug, world version 110-120 V, 50/60 Hz; NEMA plug, US version 100 V, 50/60 Hz; NEMA plug, Japan version	140 000 140 001 140 002 140 003	
For further types, see Catalog Part “Oil sealed Vacuum Pumps”		



Ordering Information

TURBOVAC 50

Accessories, optional	Part No.
Air cooling unit 230 V AC 100 - 115 V AC	854 05 800152V0015
Water cooling kit (hose nozzles \varnothing 10 mm (0.4 in.))	800135V0003
Vibration absorber DN 63 ISO-K	800131V0063
Solenoid venting valve, normally closed 24 V DC, DN 16 ISO-KF	800120V0011
Power failure venting valve, normally open 24 V DC, DN 16 ISO-KF	800120V0021
Included in the Delivery of the Pump	P
Inlet screen, centering ring with FPM sealing ring, outer ring	ISO-K
Inlet screen, centering ring with FPM O-ring, clamping ring	ISO-KF
Centering ring with O-ring, clamping ring	Foreline Flange
Included in the Delivery of the Frequency Converter	FC PS
Mains cable	