

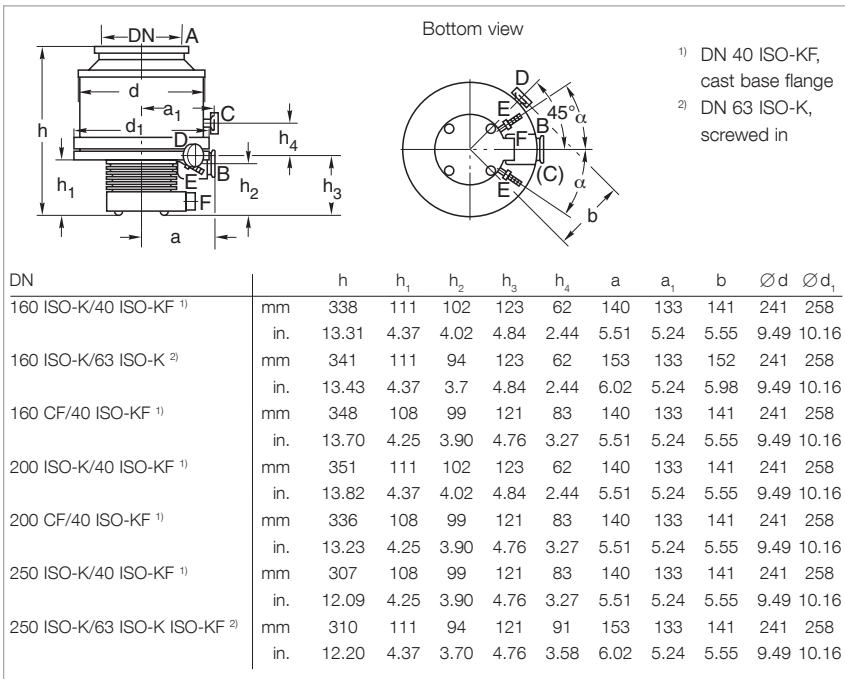
# Mechanical Rotor Suspension without Compound Stage

## TURBOVAC 1000 C ClassicLine



### Typical Applications

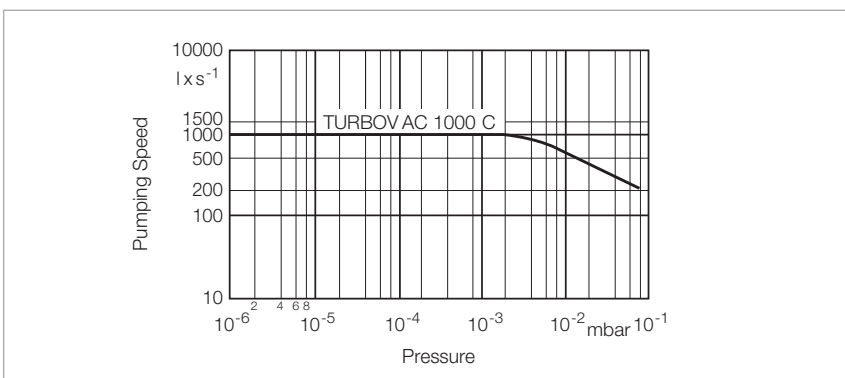
- Research systems



Dimensional drawing for the TURBOVAC 1000 C

### Technical Features

- Robust rotor design
- Installation in any orientation
- Highest pumping speed and highest throughput
- Bearing temperature measurement through the TURBO.DRIVE TD 20 *classic*
- Seal gas connection
- Venting connection



Pumping speed for air as a function of intake pressure (TURBOVAC 1000 C with DN 250 flange)

### Advantages to the User

- Installation in any orientation
- Highly reliable due to hybrid ceramic ball bearings
- Standard model: water cooling
- Purge gas facility

## Technical Data

## TURBOVAC 1000 C

Connection				
Inlet	DN	160 ISO-K • 160 CF	200 ISO-K • 200 CF	250 ISO-K
Outlet	DN	40 ISO-KF • 63 ISO-K	40 ISO-KF	40 ISO-KF • 63 ISO-K
Pumping speed				
N <sub>2</sub>	l x s <sup>-1</sup>	850	1100	1150
Ar	l x s <sup>-1</sup>	810	1050	1100
He	l x s <sup>-1</sup>	880	975	1000
H <sub>2</sub>	l x s <sup>-1</sup>	900	970	1000
Gas throughput				
N <sub>2</sub>	mbar · l x s <sup>-1</sup>	6.5	6.5	6.5
Ar	mbar · l x s <sup>-1</sup>	4.0	4.0	4.0
He	mbar · l x s <sup>-1</sup>	7.0	7.0	7.0
H <sub>2</sub>	mbar · l x s <sup>-1</sup>	8.0	8.0	8.0
Compression ratio				
N <sub>2</sub>		> 1 x 10 <sup>9</sup>	> 1 x 10 <sup>9</sup>	> 1 x 10 <sup>9</sup>
Ar		> 1 x 10 <sup>9</sup>	> 1 x 10 <sup>9</sup>	> 1 x 10 <sup>9</sup>
He		5 x 10 <sup>4</sup>	5 x 10 <sup>4</sup>	5 x 10 <sup>4</sup>
H <sub>2</sub>		1 x 10 <sup>4</sup>	1 x 10 <sup>4</sup>	1 x 10 <sup>4</sup>
Ultimate pressure	mbar (Torr)	< 1 x 10 <sup>-10</sup> (< 7.5 x 10 <sup>-11</sup> )	< 1 x 10 <sup>-10</sup> (< 7.5 x 10 <sup>-11</sup> )	< 1 x 10 <sup>-10</sup> (< 7.5 x 10 <sup>-11</sup> )
Max. foreline pressure for N <sub>2</sub>	mbar (Torr)	5 x 10 <sup>-2</sup> (3.8 x 10 <sup>-2</sup> )	5 x 10 <sup>-2</sup> (3.8 x 10 <sup>-2</sup> )	5 x 10 <sup>-2</sup> (3.8 x 10 <sup>-2</sup> )
Recommended forevacuum pump for standard operation		TRIVAC D 25 B / D 40 B	TRIVAC D 25 B / D 40 B	TRIVAC D 25 B / D 40 B
for purge gas operation		TRIVAC D 40 B / D 65 B	TRIVAC D 40 B / D 65 B	TRIVAC D 40 B / D 65 B
Nominal rotation speed	min <sup>-1</sup> (rpm)	36 000	36 000	36 000
Run-up time, approx.	min	9	9	9
Max. power consumption	W	300	300	300
Power consumption at ultimate pressure	W	200	200	200
Admissible ambient temperature	°C (°F)	10 to 55 (50 to 131)	10 to 55 (50 to 131)	10 to 55 (50 to 131)
Cooling standard		Water	Water	Water
optional		Air	Air	Air
Cooling water connection		10 mm hose nozzle	10 mm hose nozzle	10 mm hose nozzle
Cooling water consumption	l x h <sup>-1</sup>	20 to 80	20 to 80	20 to 80
Permissible cooling water pressure	bar	3 to 7	3 to 7	3 to 7
Permissible cooling water temperature	°C (°F)	10 to 30 (50 to 86)	10 to 30 (50 to 86)	10 to 30 (50 to 86)
Weight	kg (lbs)	25.0 (55.1)	25.0 (55.1)	25 (55.1)



## Technical Data

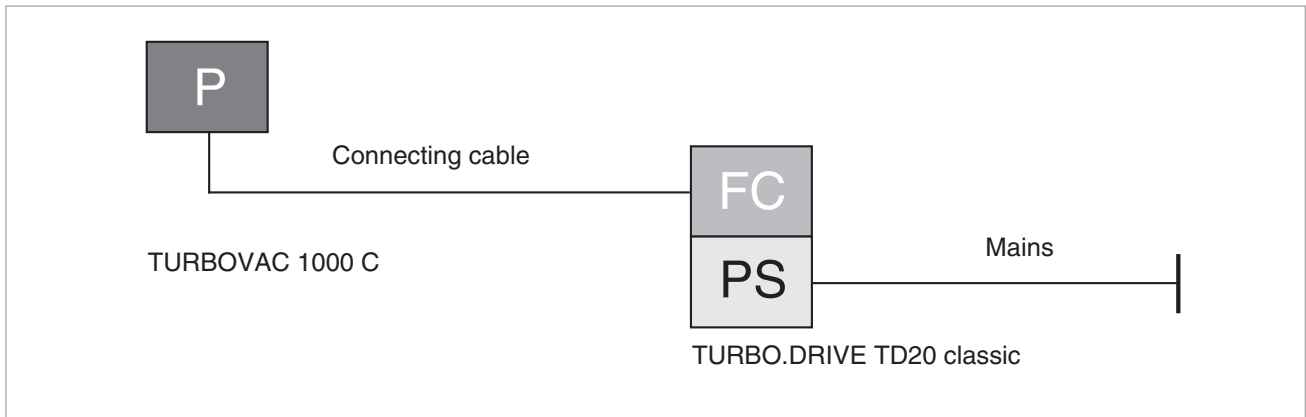
## TURBO.DRIVE TD 20 classic

Mains connection	50/60 Hz	100 to 240 V (+15 % / -10 %)
Max. power consumption	W	500
Max. output voltage	V	3 x 47
Max. output current	A	5
Interface		Without, RS 232 C, RS 485 C, Profibus or 25-way terminal strip
Protection rating	IP	20
Admissible ambient temperature	°C (°F)	0 to +45 (+32 to +113)
Dimensions (W x H x D)	mm (in.)	213 x 128 x 315 (8.39 x 5.04 x 12.40)
Weight, approx.	kg (lbs)	4.0 (8.8)

## Ordering Information

## TURBOVAC 1000 C

TURBOVAC 1000 C without Compound Stage <span style="float: right;">P</span>	Part No.	
DN 160 ISO-K / DN 40 ISO-KF, water-cooled DN 160 ISO-K / DN 63 ISO-K, water-cooled DN 160 CF / DN 40 ISO-KF, water-cooled DN 200 ISO-K / DN 40 ISO-KF, water-cooled DN 200 CF / DN 40 ISO-KF, water-cooled DN 250 ISO-K / DN 40 ISO-KF, water-cooled DN 250 ISO-K / DN 63 ISO-K, water-cooled	<b>855 35</b> <b>855 38</b> <b>854 91</b> <b>153 00</b> <b>117 64</b> <b>855 36</b> <b>855 39</b>	
Mandatory Accessories <span style="float: right;">FC PS</span>		
TURBO.DRIVE TD 20 <small>classic</small> without interface with RS 232 C interface with RS 485 C interface with Profibus with 25-pol I/O	<b>800075V0001</b> <b>800075V0002</b> <b>800075V0004</b> <b>800075V0003</b> <b>800075V0005</b>	
Connecting cable TURBOVAC - frequency converter 3 m (10.5 ft) 5 m (17.5 ft) 10 m (35.0 ft) 20 m (70.0 ft) 50 m (175.0 ft) 60 m (210.0 ft) 80 m (280.0 ft) 140 m (490.0 ft)	<b>857 65</b> <b>857 66</b> <b>857 67</b> <b>857 68</b> <b>800152V0008</b> <b>800152V0007</b> <b>800152V0080</b> <b>800152V0140</b>	
Mains cable 3 m (10.5 ft) EURO plug UK plug US plug 5-15 P 2 m (7.5 ft) US plug 115 V AC	<b>800102V0002</b> <b>800102V0003</b> <b>800102V1002</b>  <b>992 76 513</b>	
Forevacuum pump TRIVAC D 25 B 1 phase motor; 230 V, 50 Hz 1 phase motor; 230 V, 50/60 Hz 3 phase motor; 230/400 V, 50 Hz / 250/440 V, 60 Hz	<b>112 75</b> <b>113 35</b> <b>112 76</b>	
TRIVAC D 40 B 3 phase motor; 230/400 V, 50 Hz / 250/440 V, 60 Hz 3 phase motor; 200/346 V, 50 Hz / 208/360 V, 60 Hz	<b>112 86</b> <b>113 47</b>	
TRIVAC D 65 B 3 phase motor; 230/400 V, 50 Hz / 250/440 V, 60 Hz 3 phase motor; 230/346 V, 50 Hz / 208/360 V, 60 Hz	<b>112 96</b> <b>113 57</b>	
SCROLLVAC SC 30 D 1 phase motor; 200-230 V, 50/60 Hz 1 phase motor; 100-115 V, 50/60 Hz 3 phase motor; 380-415 V, 50 Hz / 200-230 V, 460 V, 60 Hz	<b>133 002</b> <b>133 102</b> <b>133 004</b>	
For further types, see Catalog Parts "Oil Sealed Vacuum Pumps" and "Dry Compressing Vacuum Pumps"		



## Ordering Information

## TURBOVAC 1000 C

Accessories, optional	Part No.
Air cooling unit 230 V AC 100 - 115 V AC	<b>855 41</b> <b>800152V0017</b>
Flange heater DN 160 CF, 230 V, 50 Hz DN 100 CF, 115 V, 60 Hz	<b>854 37</b> <b>854 38</b>
Vibration absorber DN 160 ISO-K DN 160 CF	<b>500 073</b> <b>500 072</b>
Solenoid venting valve, with gas admission filter, normally closed 24 V DC, DN 16 ISO-KF	<b>800120V0011</b>
Power failure venting valve, with gas admission filter, normally open 24 V DC, DN 16 ISO-KF	<b>800120V0021</b>
Purge gas and venting valve gas flow at 1 bar 0.6 mbar x l x s <sup>-1</sup> (36 sccm), pump connection DN 10 ISO-KF / gas connection G 1/4" 230 V AC 100-115 V AC 24 V DC	<b>800152V0040</b> <b>800152V0043</b> <b>800152V0012</b>
Gas filter to G 1/4" for purge gas and venting valve	<b>800110V0012</b>
Replacement filter	<b>E 200 18 515</b>
<b>Included in the Delivery of the Pump</b>	<b>P</b>
Inlet screen, centering ring with FPM sealing ring, outer ring	<b>ISO-K</b>
Inlet screen	<b>CF</b>
Centering ring with O-ring, clamping ring	<b>Foreline Flange</b>
Pivoted threaded fittings to replace the included hose nipples	<b>Water Cooling</b>