Shown model in B5 console configuration with flanged motor

MAPNER TSC20 GTB

TURBO BLOWER compressors latest generation with an impeller and different endings and control systems that allow adapt to every need of work and application.

Compressor Type

Medium	Air
Compressor type	Integrally geared Single Stage Turbo Blower
Frame family	**TSC20 GTB**
Regulation systems available	M1 – Variable Discharge Diffuser (1-point) M2 – Variable Discharge Diffuser & IGV (2-point) M3 – Variable Discharge Diffuser & VFD (2-point)
Motor power range	Up to 160 kW
Mounting versions available	For B5 flanged motor type with common console For B3 motor type with common basement
Weight (approximate)	Compressor Core Unit 850 kg Compressor B5 with 110 kW motor 1.450 kg Compressor B3 with 110 kW motor 1.550 kg *Specific weight depends on motor size and starter auxiliaries selected*
Compressor floor mounting	Machine mounts, glued or bolted

Performance data

Design flow range	2.500 to 6.000 Nm^3/h defined at 0° C, 1.013 bar 0% rH
Flow regulation range	From 40 – 100% design flow
Design pressure range	0,3 to 0,95 bar(a) defined at 0° C, 1.013 bar 0% rH
Vibration level	below 2.8 mm/s according to ISO 10816-1
Sound emission (1m distance)	Without noise enclosure: 85 dB(A) With noise enclosure: 75+/-3 dB(A) *Conditions: Well isolated main discharge pipe; Measured according sound pressure ISO3746*
Discharge velocity	Below 25 m/s after discharge diffuser

Ambient conditions

Inlet temperature range	-20º to +40ºC
Ambient temperature range	0º to +40ºC
H_2S Content in inlet air	Up to 10 ppm

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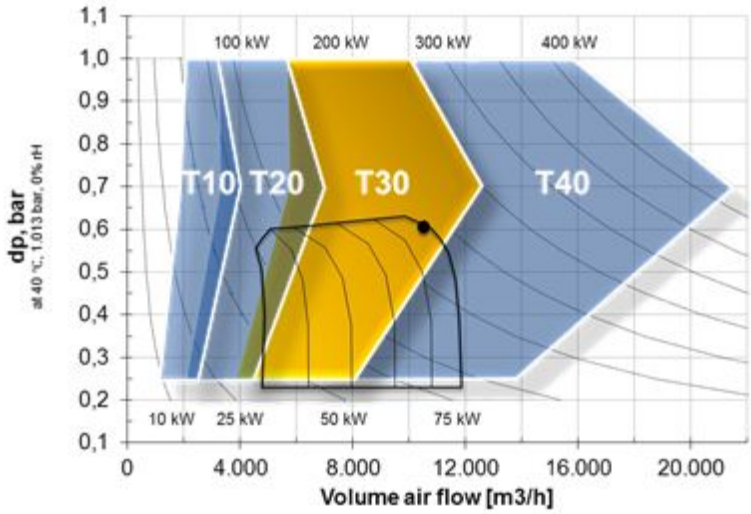
Range



Design point envelope boundaries of product family GTB

Boundaries displayed under condition: 1,013 bar(a), 40℃,0% rH

Black dot, indicates design point of an example compressor with 100 kW shaft power and 40% flow turndown.

Materials

Main castings	Nodular cast iron EN GJS-400/15 EN1563, design: 6,5 bar, 200ºC
Impeller	Aluminum DIN3.1924 AlCu2MgNi - milled from solid
Labyrinth seals	Aluminum alloy
Mechanical components	Steel 34CrNimo6
Vanes	Bronze, aluminum alloy
Gearwheels	High tensile steel 16NiCrS4, hardened and ground
Bearing fast shaft	High precision ceramic angular contact ball bearings
Bearing slow shaft	Deep groove ball bearings
Lubrication	Forced oil lubrication with integrated positive displacement and electrical oil pumps, oil/air cooler, oil filter 10 µm

Component Description

Compressor drive	
Motor type	E-motor, AC squirrel cage, B3 or B5, IE2/IE3
Protection / insulation class	IP55 / F/B o F/F
Motor voltage, frequency	Low voltage, medium voltage, 50/60 Hz
Coupling	B5 configuration: Flexible compact type B3 configuration: Flexible disc coupling with spacer
Inlet systems	
Inlet filter	First coarse stage; main stage with G4 bag type filters
Inlet silencer	Labyrinth type with no foam
Discharge systems	
Flexible joint	DN150, bellow of stainless steel AISI 321, flanges aluminum DIN2501 PN10
Discharge diffuser	DN150-DN200/300, carbon steel, silenced, flanged DIN2501 PN10
Blow-off-valve	DN65/80, electrically actuated, butterfly valve in nodular cast iron EN GJS-400, silenced
Check valve	DN200-300, dual flap wafer type, nodular cast iron EN GJS-400
Panels and Instrumentation	
Local Control Panel	Siemens S7-ET200SP PLC; 7” color HMI, or others
Instrumentation	Oil/Air temperature, Oil/Air Pressure, PSL Oil, LSL-LI Oil, PDT, PDT at air inlet
Surge switch device	At compressor inlet