



Shown model in basement configuration with B3 foot mounted motor and X control

# GT-H-T50

Integrally geared single stage turbocompressor

## Compressor Type

Medium	Air
Compressor type	Integrally geared Single Stage Turbocompressor
Frame family	GT-H-T50
Regulation systems available	X – Variable Discharge Diffuser (1 -point) XY – Variable Discharge Diffuser & IGV (2-point)
Motor power range	Up to 1.300 kW
Mounting versions available	For B3 motor type with common basement
Weight (approximate)	Compressor Core Unit 2.800 kg Compressor B3 with 600 kW motor 5.000 kg <i>Specific weight depends on motor size and starter auxiliaries selected</i>
Compressor floor mounting	Machine mounts, glued or bolted

## Performance data

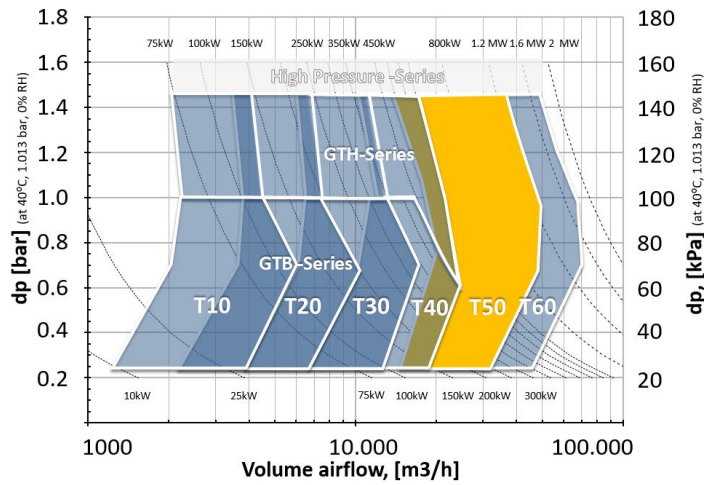
Design flow range	18.000 to 45.000 Nm <sup>3</sup> /h defined at 0° C, 1.013 bar 0% rH
Flow regulation range	From 40 – 100% design flow
Design pressure range	0,3 to 1,5 bar(a) defined at 0° C, 1.013 bar 0% rH
Vibration level	below 2.8 mm/s according to ISO 10816-1
Sound emission (1m distance)	Without noise enclosure: 91 dB(A) With noise enclosure: 78+/-2 dB(A) <i>Conditions: Well isolated main discharge pipe; Measured according sound pressure ISO3746</i>
Discharge velocity	Below 25 m/s after discharge diffuser

## Ambient conditions

Inlet temperature range	-20° to +40° C
Ambient temperature range	0° to +40° C
H <sub>2</sub> S Content in inlet air	Up to 10 ppm

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Design point envelope boundaries of product family

## Materials

Main castings	Nodular cast iron EN GJS-400/15 EN1563, design: 6,5 bar, 250°C
Impeller	Aluminum DIN3.1924 AlCu2MgNi – milled from solid
Labyrinth seals	Aluminum alloy
Mechanical components	Steel 34CrNiMo6
Vanes	Brass of copper alloy (CuZnPb/ VDV) and Ergal (IGV)
Gearwheels	High tensile steel 16NiCrS4, hardened and ground
Bearing fast shaft	Hydrodynamic bearing (multi-pad type)
Bearing slow shaft	Deep groove ball bearings
Lubrication	Forced oil lubrication with integrated mechanical and electrical positive displacement oil pumps, oil/air cooler, oil filter 10 µm

## Component Description

### Compressor drive

Motor type	E-motor, AC squirrel cage, B3
Protection / insulation class	IP55 / F/B or F/F
Motor voltage, frequency	Low voltage, medium voltage, 50/60 Hz
Coupling	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	DN300, bellow of stainless steel AISI 321, flanges aluminum DIN2501 PN10
Discharge diffuser	DN300/700, carbon steel, silenced, flanged DIN2501 PN10
Blow-off-valve	DN125/150, electrically actuated, butterfly valve in nodular cast iron EN GJS-400, silenced
Check valve	DN300-700, 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

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