



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

# GT-H-T40

Integrally geared single stage turbocompressor

## Compressor Type

|                              |  |
|------------------------------|--|
| Medium                       | Air  |
| Compressor type              | Integrally geared Single Stage Turbocompressor   |
| Frame family                 | GT-H-T40   |
| Frame                        | (L)ow pressure / (H)igh pressure   |
| Regulation systems available | X – Variable Discharge Diffuser (1-point)<br>XY – Variable Discharge Diffuser & IGV (2-point)  |
| Motor power range            | Up to 800 kW   |
| Mounting versions available  | For B3 motor type with common basement   |
| Weight (approximate)         | Compressor Core Unit 2.200 kg<br>Compressor B3 with 600 kW motor 5.000 kg<br><i>Specific weight depends on motor size and starter auxiliaries selected</i> |
| Compressor floor mounting    | Machine mounts, glued or bolted  |

## Performance data

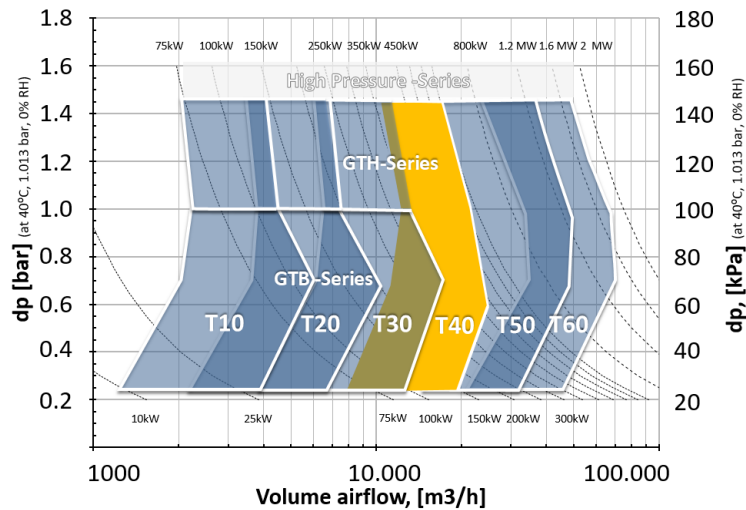
|                              |  |
|------------------------------|--|
| Design flow range            | 11.000 to 25.000 m <sup>3</sup> /h<br>defined at 40° C, 1.013 bar 65% rH   |
| Flow regulation range        | From 40 – 100% design flow   |
| Design pressure range        | 0,3 to 1,45 bar(g)<br>defined at 40° C, 1.013 bar 65% rH   |
| Vibration level              | below 2.8 mm/s according to ISO 10816-1  |
| Sound emission (1m distance) | Without noise enclosure: 94 dB(A)<br>With noise enclosure: 80+/-3 dB(A)<br><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 +55° C |
| Ambient temperature range             | 0° to +55° C   |
| H <sub>2</sub> S Content in inlet air | Up to 10 ppm   |

# GT-H-T40

Integrally geared single stage turbocompressor



Design point envelope boundaries of product family

## Materials

|                       |   |
|-----------------------|---|
| Main castings         | Nodular cast iron EN GJS-400/15 EN1563, design: 6,5 bar, 200°C  |
| Impeller              | Aluminum DIN3.1924 AlCu2MgNi – milled from solid  |
| Labyrinth seals       | Aluminum alloy  |
| Mechanical components | Steel 34CrNiMo6   |
| Vanes                 | Brass, aluminum alloy or stainless steel  |
| Gearwheels            | High tensile steel 16NiCrS4, hardened and ground  |
| Bearing fast shaft    | Hydrodynamic bearing (tilting-pad type)   |
| Bearing slow shaft    | Hydrodynamic or deep groove ball bearings   |
| Lubrication           | Forced oil lubrication with integrated mechanical and electrical positive displacement oil pumps, oil/air or water 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 G2; main stage with G4 bag type filters |
| Inlet silencer | Labyrinth type with no foam                                |

### Discharge systems

|                    |   |
|--------------------|---|
| Flexible joint     | DN250/DN300, bellow of stainless steel AISI 321, flanges aluminum DIN2501 PN10              |
| Discharge diffuser | DN250/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        | DN250/DN300-700, dual flap wafer type, nodular cast iron EN GJS-400                         |

### Panels and Instrumentation

|                     |   |
|---------------------|---|
| Local Control panel | Siemens, Allen Bradley, Telemecanique PLC; 7 or 9" color HMI                      |
| Instrumentation     | Oil/Air Temperature, Oil/Air Pressure, PSL Oil, LSL-LI Oil, PDT, PDT at air inlet |
| Surge switch device | At compressor inlet   |

Published by and copyright © 2016 – Next Turbo Technologies S.p.A.  
Registered Office in Via Robbioni 39, 21100 Varese, Italy  
More information available at <http://www.next-turbo.com>

All rights reserved. Trademarks mentioned in this document are the property of NTT S.p.A., its affiliates or their respective owners. Subject to change without prior notice. The information in this document contains general description of the technical features, which may not apply in all cases. The required technical options should therefore be specified in the contract.