ZG 1605
Double rod cylinder

Data sheet 01.19/DS15420
Double rod cylinder ZG 1605

**Description:**

In addition to the ISO 6020/2 and DIN 24554 Storz designed hydraulic cylinder series ZBD 1605 the double rod hydraulic cylinder series ZG 1605 was developed. These hydraulic cylinders are occurring on both sides piston rod. Their components are substantially the same as in the standardized series ZBD 1605. Each piston diameters are associated with two piston rod diameter.

Cylinder tube, cylinder head and cylinder base are interconnected by tie rods. 3 types of mounting are available by default.

To ensure the hydraulic cylinders a wide range of applications, there are several seal variants to choose from. We hereby provide the user with a cylinder bank, which is a logical extension of the internationally standardized 160 bar tie rod cylinders. High level of availability, storage-common parts and the guarantee of a future-proof design are some distinctive features of these cylinders.

**Technical Specifications:**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal pressure</td>
<td>160 bar (16 MPa)</td>
</tr>
<tr>
<td>Static test pressure</td>
<td>240 bar (24 MPa)</td>
</tr>
<tr>
<td>Piston-Ø</td>
<td>25 – 200 mm</td>
</tr>
<tr>
<td>Temperature range</td>
<td>-20 °C … +80 °C</td>
</tr>
<tr>
<td>Viscosity range</td>
<td>(10 … 600) $10^{-6}$ m²/s</td>
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<tr>
<td>Stroke speed range</td>
<td>0 – 0.5 m/s</td>
</tr>
<tr>
<td>Hydraulic fluid</td>
<td>Mineral oil according to DIN 51524, HFD-fluids</td>
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</tbody>
</table>
Double rod cylinder ZG 1605

Mounting types:

ME5 Rectangular

MS2 Foot mounting

MT4 Trunnion

other types of mounting on request
Double rod cylinder ZG 1605

Mounting type ME5 – Rectangular
## Double rod cylinder ZG 1605

### Mounting type MS2 – Foot mounting

<table>
<thead>
<tr>
<th>Piston-ø (mm)</th>
<th>Rod-ø MM (mm)</th>
<th>Annular area A2 (cm²)</th>
<th>ZM + 2 x Stroke</th>
<th>Pipe connection EE</th>
<th>Whitworth pipe thread</th>
<th>Rod thread KK</th>
<th>A h15</th>
<th>B</th>
<th>E</th>
<th>H 1)</th>
<th>LH h10</th>
<th>LV + Stroke</th>
<th>PK + Stroke ±1,25</th>
<th>Ø SB H13</th>
<th>ST</th>
<th>SV + Hub</th>
<th>TS jsl3</th>
<th>US</th>
<th>WF ±2</th>
<th>XS ±2</th>
<th>Y ±2</th>
<th>Attenuation length</th>
<th>Wrench size</th>
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1) Applies only to piston-ø 25 and 32
2) Attenuation not adjustable
# Double rod cylinder ZG 1605

## Mounting type MT4 – Trunnion

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<th>Piston-ø (mm)</th>
<th>Rod-ø MM (mm)</th>
<th>Annular area A2 (cm²)</th>
<th>ZM + 2 x Stroke</th>
<th>Pipe connection EE</th>
<th>Whitworth pipe thread</th>
<th>Rod thread KK</th>
<th>Annular area A2 (cm²)</th>
<th>ZM + 2 x Stroke</th>
<th>Pipe connection EE</th>
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<th>Minimum stroke</th>
<th>XV</th>
<th>Bias X</th>
<th>Attenuation length Wrench size</th>
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</tbody>
</table>

1) Applies only to piston-ø 25 and 32
2) Attenuation not adjustable
3) The desired value is XV specify when ordering. Tolerance ±2
## Double rod cylinder ZG 1605

### Seal variations – Schematic diagram

#### Rod seal

<table>
<thead>
<tr>
<th>Code letter</th>
<th>Schematic diagram</th>
<th>Characteristic</th>
</tr>
</thead>
</table>
| R (Standard version) | ![Schematic diagram](image1.png) | - U seal of polyurethane  
  + Temperature range: -30 °C to +80 °C  
  + Hydraulic fluid: Mineral oil  
  + Generally used in industry  
  + Excellent wear resistance |
| K and KV (Viton) | ![Schematic diagram](image2.png) | - U seal of perbunan  
  + Temperature range: -30 °C to +100 °C  
  + Applications where good ease in conjunction with minimal leakage is required (e.g. as machine tools)  
  + This sealing profile is also available in Viton available (for high temperatures and HFD fluids) |

#### Piston seal

<table>
<thead>
<tr>
<th>Code letter</th>
<th>Schematic diagram</th>
<th>Characteristic</th>
</tr>
</thead>
</table>
| G (Standard version) | ![Schematic diagram](image3.png) | - Teflon seal with buna N o-ring seal  
  + Temperature range: -10 °C to +80 °C  
  + Hydraulic fluid: Mineral oil  
  + Stick-slip-free movement, wear, insensitive to air contaminated systems  
  + Optimum seal for all use cases where no absolute tightness is required  
  + As GV version, with Viton O-ring, for high temperatures (up to +200 °C) and low flammability HFD fluids |
| GV (Teflon-Viton) | ![Schematic diagram](image4.png) | ![Schematic diagram](image5.png) | - Complete gasket set of perbunan  
  + Temperature range: -10 °C to +80°C  
  + Suitable for applications where absolute tightness is required on the piston (e.g. jacking cylinders); and general industrial applications, unless stick-slip-free feed movement must be guaranteed |
Double rod cylinder ZG 1605

Model code:

Double rod cylinder
Nominal Pressure 160 bar (16 Mpa)
optionally with or without cushioning

Piston diameter in mm

Piston rod diameter in mmm

Mounting type
- ME5 Rectangular on the cylinder head
- MS2 Foot mounting
- MT4 Trunnion (XV dimension to be stated when ordering)

Stroke in mm

Rod seal
- R U seal (material polyurethane AU) Standard version
- K U seal (material perbunan NBR)
- KV U seal (material Viton)

Piston seal
- G Teflon seal, Standard version
- GV Teflon seal (material PTFE + Viton)
- H Complete gasket set

Cushioning
- 0 without
- 1 both sides
- 2 Side B (right side of diagram)
- 3 Side A (left side of diagram)

Surface of piston rod
- C Induction hardened and hard-chrom plated

Piston rod end
- 1 External thread

Material of piston rod
- C Standard version, structural steel / heat treatable steel

Pipe connection
- G Standard version, Whitworth pipe thread
- M Metric thread

Construction code (to be assigned by the manufacturer)
Hydraulic cylinder standard
Hydraulic telescopic cylinders
Hydraulic cylinders with displacement encoder
Hydraulic adjustment cylinder
Testing cylinders
Special cylinders for all applications
Standardized mounting parts
Hydraulic power units and components