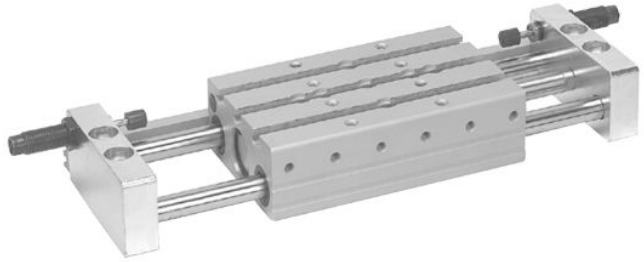


## AVENTICS Series SH

The AVENTICS Series GPC is distinguished by high side load capacity and torsion protection. The drive and guide rods are robust and precise with high torque and transverse force absorption.



## Technical data

|                                    |  |
|------------------------------------|--|
| Industry                           | Industrial                               |
| Piston Ø                           | 20 mm                                    |
| Piston rod Ø                       | 10 mm                                    |
| Stroke                             | 100 mm                                   |
| Functional principle               | Double-acting                            |
| Bearing type                       | ball bearing                             |
| Magnetic piston                    | with magnetic piston                     |
| Cushioning                         | hydraulic                                |
| Cushioning                         | non-adjustable                           |
| Min. working pressure              | 2 bar                                    |
| Max. working pressure              | 10 bar                                   |
| Min. ambient temperature           | 0 °C                                     |
| Min. ambient temperature           | 32 °F                                    |
| Max. ambient temperature           | 65 °C                                    |
| Max. ambient temperature           | 149 °F                                   |
| Min. oil content of compressed air | 0 mg/m <sup>3</sup>                      |
| Max. oil content of compressed air | 5 mg/m <sup>3</sup>                      |
| Easy2Combine                       | Easy2Combine capable with connection kit |
| Port                               | M5                                       |
| Retracting piston force            | 148 N                                    |
| Retracting piston force            | 33.27 lbf                                |
| Extracting piston force            | 198 N                                    |
| Extracting piston force            | 44.51 lbf                                |
| Max. speed                         | 0.5 m/s                                  |
| Impact energy                      | 0.15 J                                   |
| Max. play with locked end position | 0.07 mm                                  |

# Guide cylinders, Series GPC-ST

R402000252

AVENTICS  
Series SH

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|  |                |
|--|----------------|
| Medium                                 | Compressed air |
| Max. particle size                     | 50 µm          |
| Pressure for determining piston forces | 6,3 bar        |
| Weight                                 | 1.31 kg        |

## Material

|                      |                      |
|----------------------|----------------------|
| Housing material     | Aluminum             |
| Surface housing      | anodized             |
| Seal material        | Polyurethane         |
| Material front plate | Steel, chrome-plated |
| Surface front plate  | galvanized           |
| Material guide rods  | Steel, chrome-plated |
| Surface guide rods   | hardened             |
| Bearing material     | Steel, chrome-plated |
| Surface bearing      | hardened             |
| Material piston rod  | Stainless Steel      |
| Part No.             | R402000252           |

## Technical information

The pressure dew point must be at least 15 °C less than ambient and medium temperature and may not exceed 3 °C.

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in <https://www.emerson.com/en-us/support>).

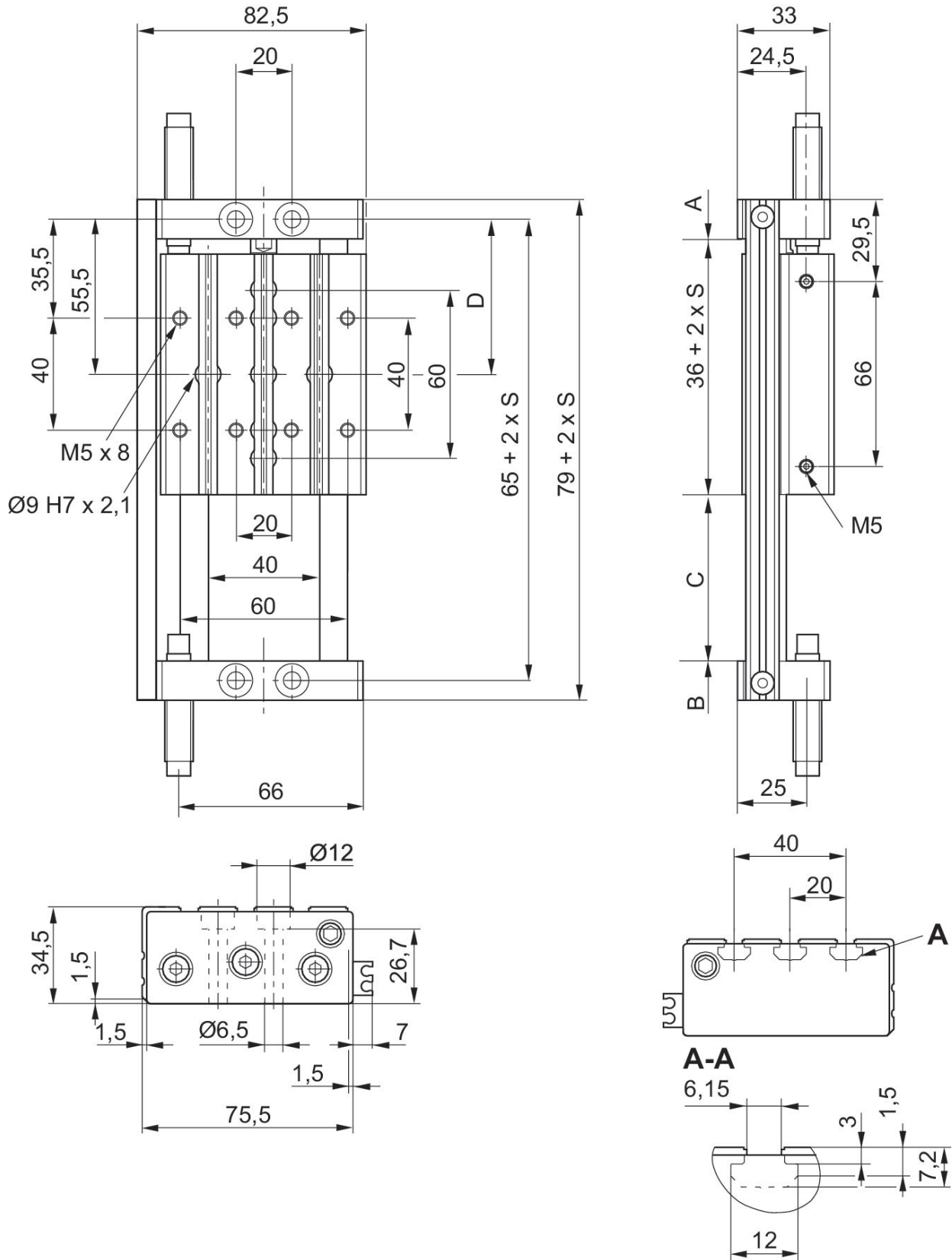
# Guide cylinders, Series GPC-ST

R402000252

AVENTICS  
Series SH

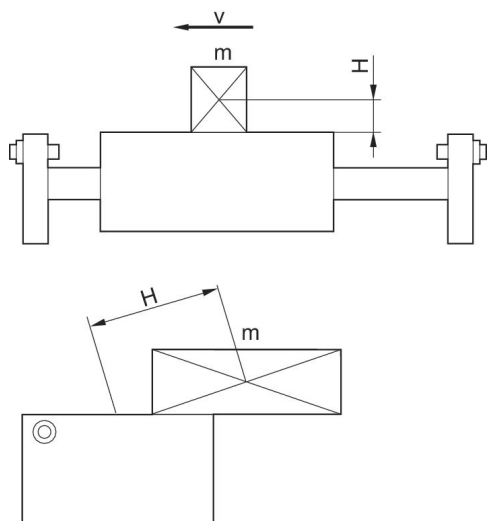
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## Dimensions

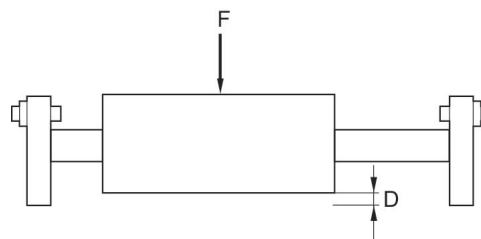


S = stroke

## Permissible dynamic load $m$ [kg]



## Maximum permissible force $F$ and deflection $D$ with static load



The load creates a high moment on the unit when reaching the end positions. It is therefore necessary not to exceed the limitations showed below. Following parameters must be considered: velocity, distance to center of mass and size of GPC-ST. When multiplying the mass  $m$  [kg] with the distance  $H$  [mm] the result must not exceed the values below. Example: A load of 2,3 kg shall be mounted with  $L$  52 mm on a GPC-ST dia. 20 stroke 50.  $m \times H$ ,  $2,3 \times 52 = 120$ . From the table below we can see that this is allowed for a velocity of 0,3 m/s.

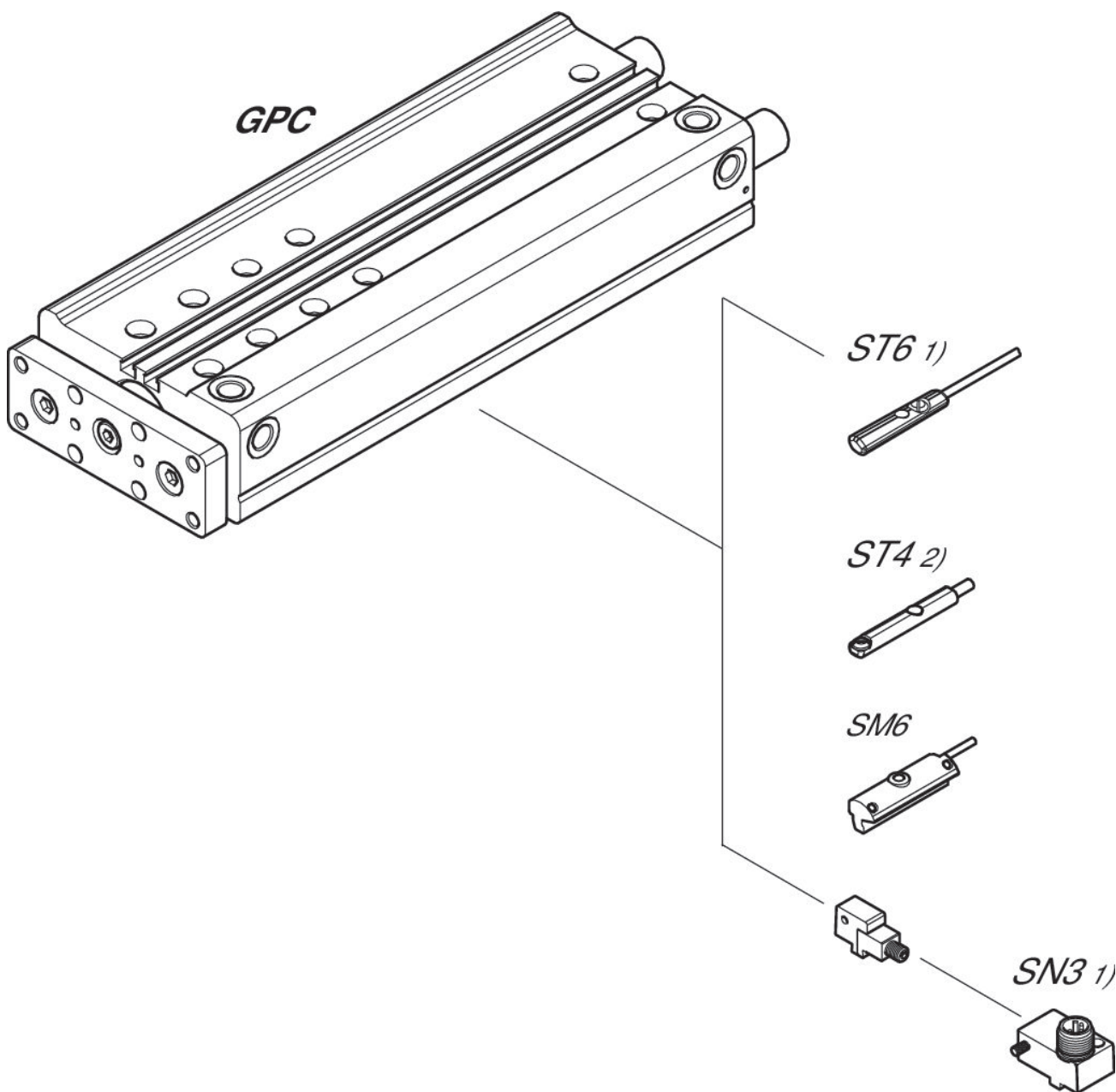
# Guide cylinders, Series GPC-ST

R402000252

AVENTICS  
Series SH

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## Overview drawing



1)  $\leq \text{Ø}12$  mm (GPC-BV, GPC-E, GPC-TL)

2) Only for  $\text{Ø}10$  mm (GPC-BV) and all  $\text{Ø}$  (GPC-ST)

NOTE: This overview drawing is only for orientation to indicate where the various accessory parts can be fastened to the cylinder. The illustration has been simplified for this purpose. It is thus not possible to derive the dimensions from this overview.

| Piston Ø | A 1) | A 2) | B 1) | B 2) | C 1) | C 2) | D 1)       | D 2)       |
|----------|------|------|------|------|------|------|------------|------------|
| 20       | 5.5  | 35.5 | 9.5  | 35.5 | S-56 | S    | 30,5+0,5xS | 60,5+0,5xS |

1) Min. 2) Max. S = stroke