

HYDRAULIC SERVOCYLINDERS SCG Series

The SCT hydraulic servo cylinders are double-acting actuators designed in accordance with ISO 6020/2 and are ideal for use in industrial applications requiring maximum reliability, high performance, and long service life. The SCT servo cylinders include:

- Standard linear position transducer featuring advanced magnetostrictive technology for precise position control in industrial automation applications
- the option of an integrated interface block; this allows a suitable control valve to be mounted directly on the servo cylinder.

GENERAL CONSTRUCTION NOTES

- Compact design with rounded ends and locknuts
- Custom steel components designed with high safety factors
- Bore sizes and shank diameters in accordance with standards
- Strokes ranging from 25 mm (for cylinders with a 150 mm block) to 3000 mm in 5 mm increments.
- Integrated linear position transducer with magnetostrictive technology
- Standard drain on the front head to drain fluid accumulated between the gaskets
- Standard low-friction seals
- Integrated interface module available in 4 different versions
 - ISO 4401-03-02-0-05 (dim.06)
 - ISO 4401-05-05-0-05 (dim.10)
 - ISO 4401-07-07-0-05 (dim.16)
 - ISO 4401-08-08-0-05 (dim.25)
- Chrome-plated rods, bolted and secured to the pistons, and manufactured to design specifications

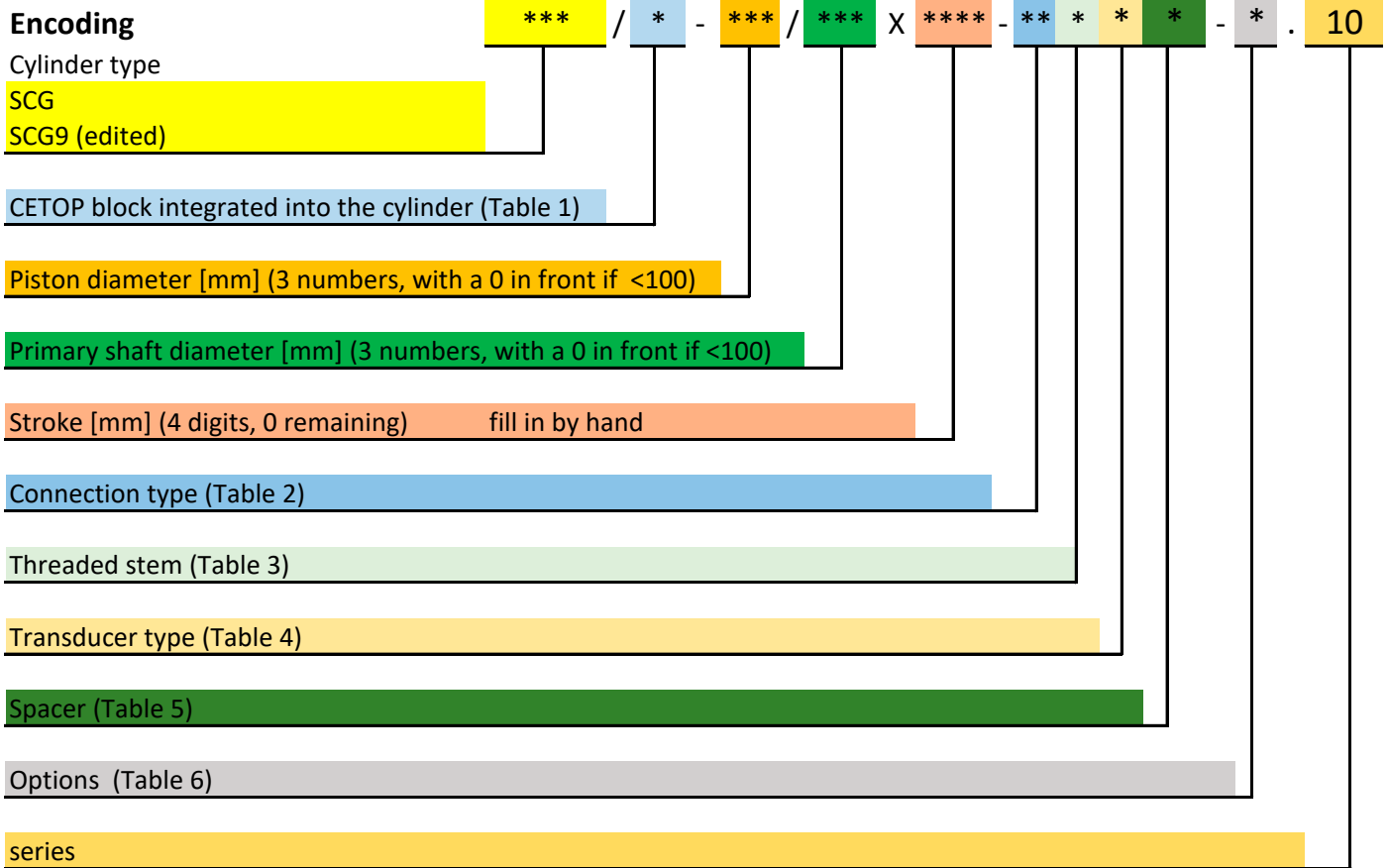
TECHNICAL SPECIFICATIONS

| | |
|--------------------------------------|---|
| Applicable regulations | ISO 6022 |
| Piston diameter [mm] | 50 - 63 - 80 - 100 - 125 - 160 - 180 - 200 - 250 - 320 |
| Shaft diameter [mm] | 36 - 45 - 56 - 70 - 90 - 110 - 125 - 140 - 180 - 220 |
| Operating pressure [bar / psi] | 250 / 3625,94 (continuous service) |
| Maximum pressure [bar / psi] | 320 / 4641,21 (peak pressure) |
| Operating temperature [°C] | From -20°C to +100°C |
| Translation speed [m/s] | Up to 15 m/s |
| Working fluid | Mineral oil that meets the standards ISO 6743/4 |
| Magnetostrictive position transducer | Analog output signal available 0-10V - analog 4-20 mA - Digital SSI |
| Degree of contamination | Class of 2018/2015 second ISO 4406:1999 |

CYLINDER TYPE

| <i>Table 1</i> | |
|----------------|-------------------------|
| CIL SCG | Standard servo cylinder |
| CIL SCG9 | Special servo cylinder |

CODING EXAMPLE



STANDARD FINISH BLACK PAINT RAL 9005

| table 1 | VALVE BLOCK |
|----------------|--------------------|
| 00 | no block |
| 03 | block CETOP 3 |
| 05 | block CETOP 5 |
| 07 | block CETOP 7 |
| 08 | block CETOP 8 |

| table 2 | TYPE OF ATTACK |
|----------------|---|
| F3 | front flange rif. ISO MF3 |
| F4 | rear flange rif. ISO MF4 |
| P5 | rear male hinge with a joint rif. ISO MP5 |
| T4 | central pivot hinge (ISO MT4) |
| C1 | feet (NO ISO) |
| XX | special |

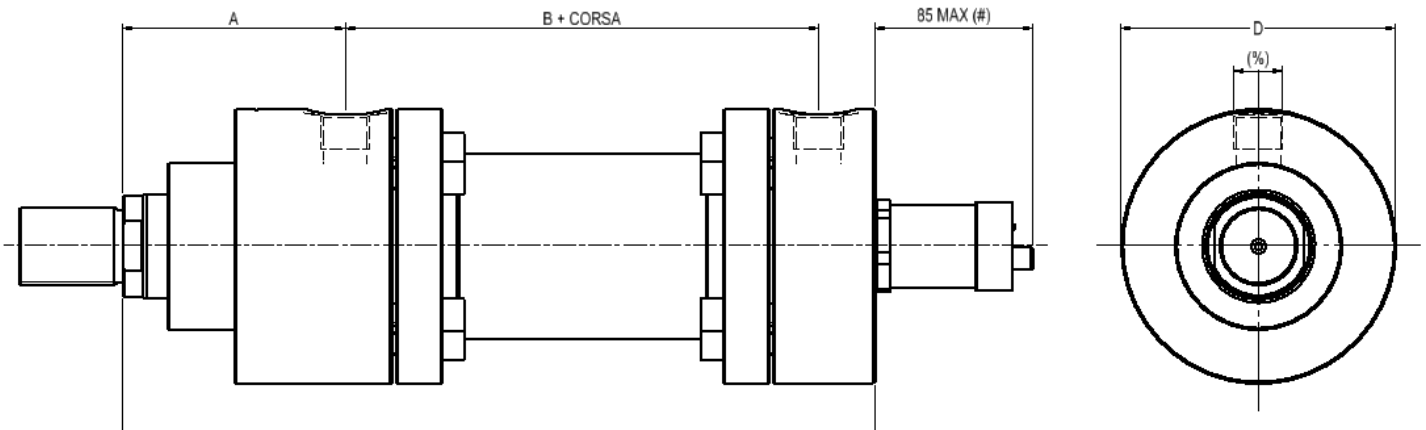
| table 3 | THREADING ON THE SHAFT |
|----------------|-------------------------------|
| A | Standard Male |
| B | Reduced Male |
| C | Standard Female |
| D | Female Reduced |
| X | Special |

| table 4 | TRANSDUCER OUTPUT TYPE |
|----------------|-------------------------------|
| E | Analog 4-20 mA |
| F | Analog 0-10 V |
| G | 24 bit Digital SSI Binary |
| H | 25 bit Digital SSI Binary |
| L | 24 bit Gray SSI Digital |
| M | 24 bit Gray SSI Digital |

| table 5 | SPACER |
|----------------|------------------|
| 0 | without |
| 1 | 25 mm |
| 2 | 50 mm |
| 3 | 75 mm |
| 4 | 100 mm |
| 5 | 125 mm |
| 6 | 150 mm |
| 7 | 175 mm |
| 8 | 200 mm |
| X | more than 200 mm |

| table 6 | OPTIONS |
|----------------|--|
| 0 | nothing |
| K | nickel and chrome-plated stem (Nicrom) |
| T | tempered rod 42CrMo4 |

SIZE



| Ø Piston | Ø Stem | A ±2 | B ±1,5 | C | D |
|----------|--------|------|--------|-----|------|
| 50 | 36 | 98 | 120 | 244 | Ø108 |
| 63 | 45 | 112 | 133 | 274 | Ø124 |
| 80 | 56 | 120 | 155 | 305 | Ø148 |
| 100 | 70 | 134 | 171 | 335 | Ø175 |
| 125 | 90 | 153 | 205 | 396 | Ø214 |
| 160 | 110 | 185 | 235 | 467 | Ø270 |
| 180 | 110 | 205 | 250 | 505 | Ø315 |
| 200 | 140 | 220 | 281,5 | 550 | Ø330 |
| 250 | 180 | 260 | 325 | 652 | Ø412 |
| 320 | 220 | 310 | 350 | 764 | Ø210 |

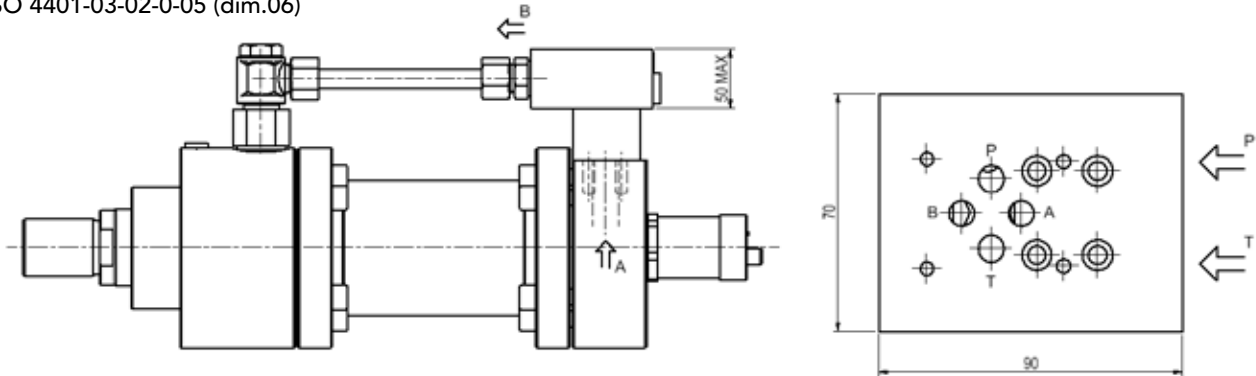
(#) For information regarding the transducer's dimensions for cylinders with 50- and 60-mm bores, please contact the technical department

(%) For SAE or GAS port sizes, refer to the CG ISO 6022 cylinder catalog

NOTE: For missing dimensional data, please refer to the CG ISO 6022 cylinder catalog.

SCG cylinders have oil ports on side 1 and can be supplied with built-in ISO plates (sizes 06, 10, 16, and 25) for mounting valves directly on the cylinder.

- ISO 4401-03-02-0-05 (dim.06)



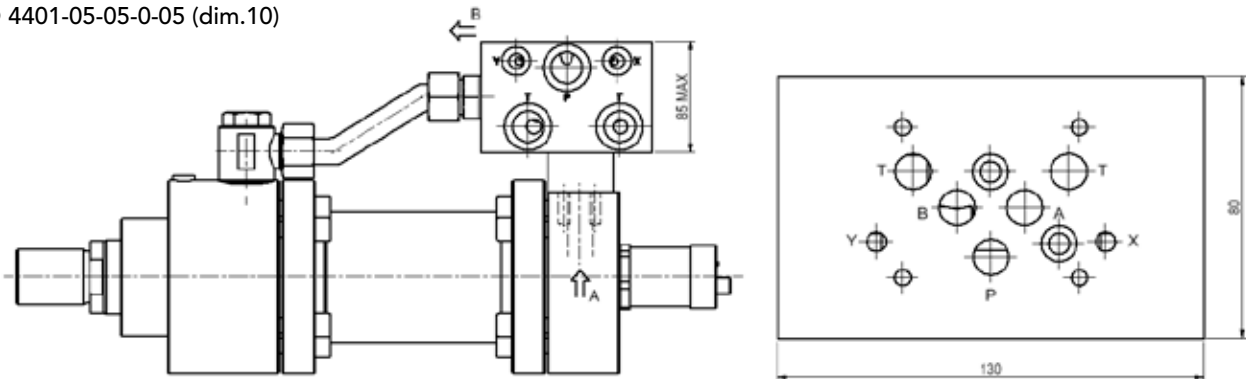
03 = Mounting plate 4401-03-02-0-05 (dim. 06)

P and T oil ports = G 3/8

Bore sizes from 40 to 200 mm and strokes greater than 100 mm

For shorter strokes, please contact CABOL Technical Office

- ISO 4401-05-05-0-05 (dim.10)



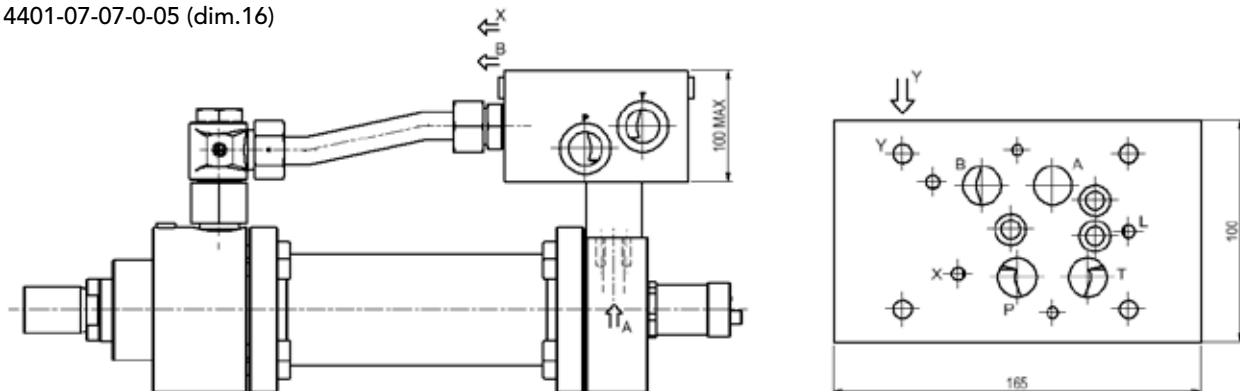
05 = Mounting plate 4401-05-05-0-05 (dim. 10)

P and T oil ports = G 3/4; X and Y = G 1/4

Bore sizes from 40 to 200 mm and strokes greater than 150 mm

For shorter strokes, please contact CABOL Technical Office

- ISO 4401-07-07-0-05 (dim.16)



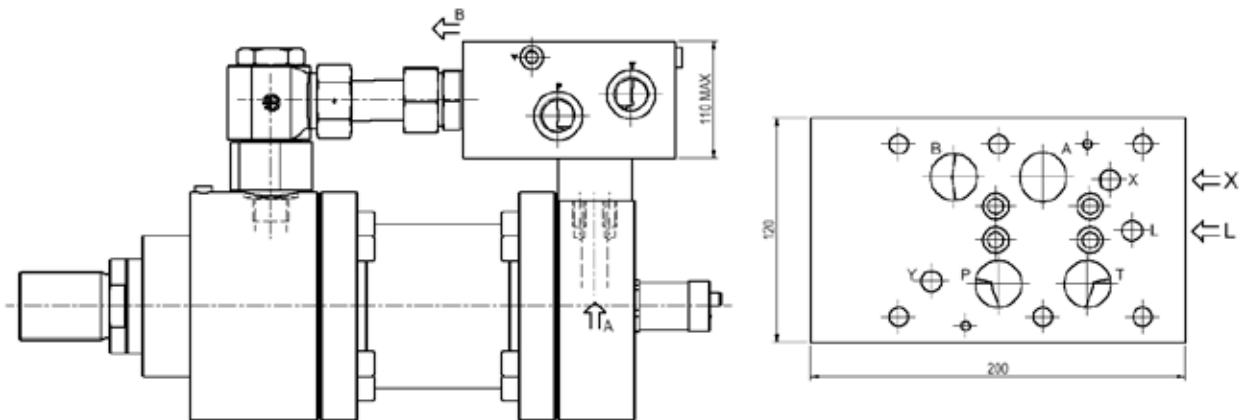
07 = Mounting plate 4401-07-07-0-05 (dim. 16)

P and T oil ports; L, X and Y = G 1/4

Bore sizes from 80 to 200 mm and strokes greater than 150 mm

For shorter strokes, please contact CABOL Technical Office

- ISO 4401-08-08-0-05 (dim.25)



08 = Mounting plate 4401-08-08-0-05 (dim. 25)
 P and T oil ports = G 1; L, X and Y = G 1/4
 Bore sizes from 125 to 200 mm and strokes greater than 150 mm
 For shorter strokes, please contact CABOL Technical Office

POSITION TRANSDUCER

Cabol SCG servo cylinders come standard with transducers.

The non-contact design of the position transducer ensures a long service life and allows it to be used even in harsh environmental conditions (shocks, vibrations, etc.) or at high operating frequencies.

The technical design allows the transducer to be replaced without disassembling the cylinder, ensuring quick and easy maintenance. They are available in a wide range of models.

The transducer electronics are available with the following outputs:

Analog:

- 4-20 mA
- 0-10 V

Digital:

- 24 bit Binary
- 25 bit Binary
- 24 bit Gray
- 25 bit Gray

ELECTRONIC CONNECTIONS

The 6 or 7 pin M16 male connector is located on the back of the transducer.

Straight female connectors are included in the package:

- 6 pin female connector for analog signals
- 7 pin female connector for SSI digital signals

90° female connectors are available upon request

For other types of connectors or outputs, please contact our technical department

Position transducers from other manufacturers are available upon request; please contact our technical department



Cabol Fluid Engineering srl
Via Gazzotti, 251/269
Modena – Italy
+39 059 281621
info@cabol.eu
www.cabol.eu



Quality Management
System Certificate
ISO 9001:2015