



# HYDRAULIC SERVO CYLINDERS - SCT 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 provide:

- 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 construction with square ends and tie rods
- 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 gaskets
- 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 6020/2
Piston diameter [mm]	40 - 50 - 63 - 80 - 100 - 125 - 160 - 200 - (*)
Shaft diameter [mm]	28 - 36 - 45 - 56 - 70 - 90 - 110 - 140
Operating pressure [bar / psi]	160 / 2320,6 (continuous operation)
Maximum pressure [bar / psi]	250 / 3625,94 (peak pressure)
Operating temperature [°C]	From -20°C to +100°C
Translation speed [m/s]	Up to 15 m/s
Working fluid	Mineral oil compliant with ISO 6743/4
Magnetostrictive position transducer	Analog output signal available 0-10V - analog 4-20 mA - Digital SSI
Degree of contamination	Class 20/18/15 according to ISO 4406:1999

(\*) for bore sizes other than those listed, please contact the Cabol Technical Office

## CYLINDER TYPE

<i>Tabella 1</i>	
CIL SCT	Standard servo cylinder
CIL SCT9	Special servo cylinder

## CODING EXAMPLE

CIL CT9 / 00 - 050/036 X 1900 - X3 A E 8 - 0 . 10

### Encoding

Cylinder type

SCT  
SCT9 (edited)

CETOP block integrated into the cylinder (Table 1)

Piston diameter [mm] (3 numbers, with a 0 in front if <100)

Primary shaft diameter [mm] (3 numbers, with a 0 in front if <100)

Stroke [mm] (4 numbers, 0 remaining) fill in by hand

Connection type (Table 2)

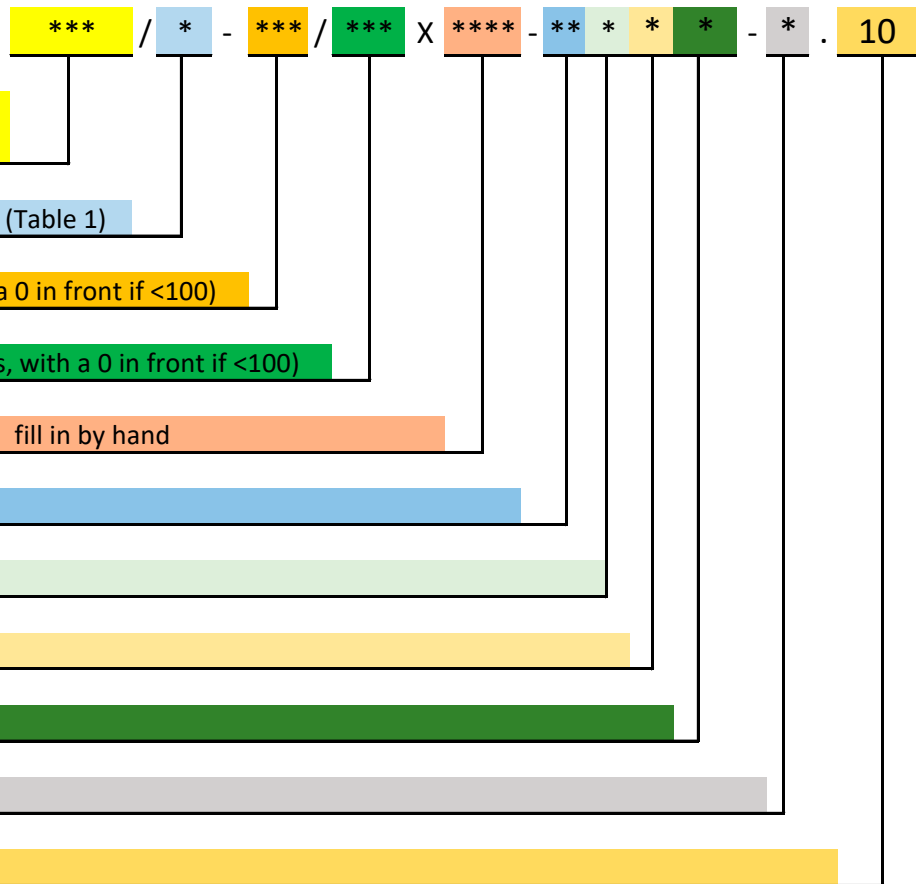
Threaded Shaft (Table 3)

Transducer type (Table 4)

spacer (Table 5)

options (Table 6)

series



STANDARD FINISH BLACK PAINT RAL 9005

<b>table 1</b>	<b>VALVE BLOCK</b>
00	no block
03	block CETOP 3
05	block CETOP 5
07	block CETOP 7
08	block CETOP 8

<b>table 2</b>	<b>TYPE OF ATTACK</b>
P1	female hinge MP1
P3	fixed male hinge MP3
S2	foot MS2
T1	front collar MT1
T2	rear collar MT2
T4	intermediate collar MT4
E5	front flange ME5
E6	rear flange ME6
P5	male hinge + joint MP5
X2	rear extended tie rods MX2
X1	extended front and rear tie rods MX1
X3	front extended tie rods MX3
C1	front threaded holes (NO ISO)
C2	rear threaded holes (NO ISO)
C3	front threaded holes + extended rear tie rods (NO ISO)
C4	rear threaded holes + extended front tie rods (NO ISO)
XX	special

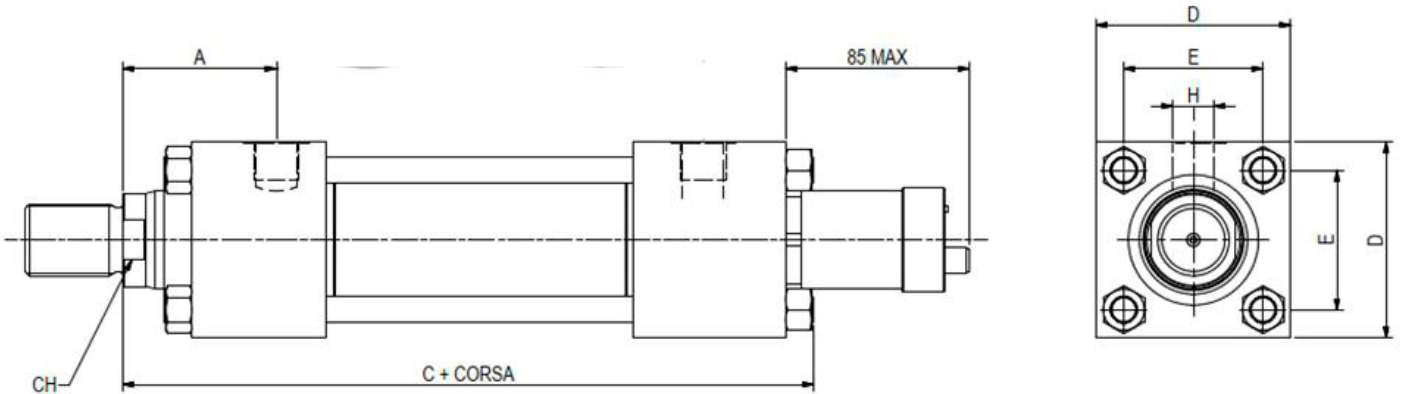
<b>table 3</b>	<b>THREADING ON THE SHAFT</b>
A	Standard Male
B	Reduced Male
C	Standard Female
D	Female Reduced
X	Special

<b>table 4</b>	<b>TRANSDUCER OUTPUT TYPE</b>
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 SSI Gray Digital
M	24 bit SSI Gray Digital

<b>table 5</b>	<b>SPACER</b>
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 stem 42CrMo4

## SIZE



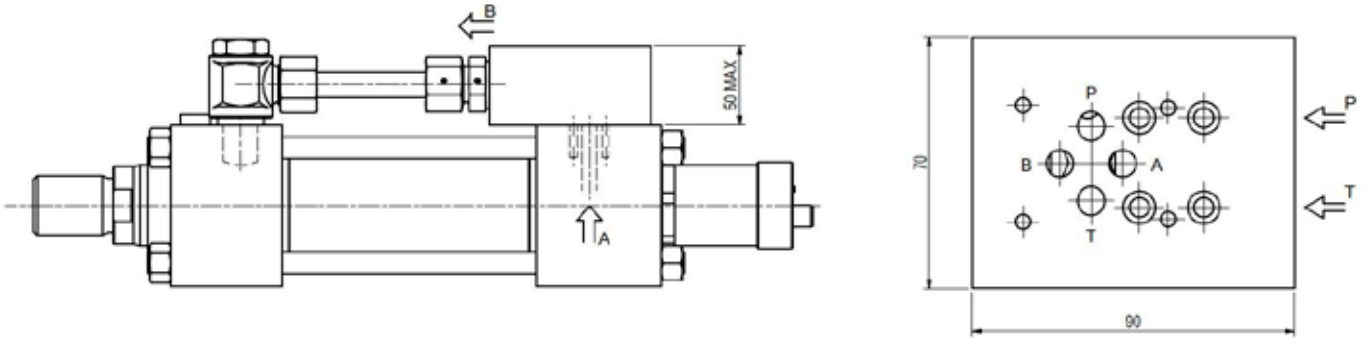
Ø Piston	Ø Stem	A ±2	C ±1,5	D ±1,5	E js13	H 6g	CH
40	28	62	204	63	47,7	G 3/8	22
50	36	67	211,5	75	52,3	G 1/2	30
63	45	71	209	90	64,3	G 1/2	39
80	56	77	238	115	82,7	G 3/4	48
100	70	82	250	130	96,9	G 3/4	62
125	90	86	285	165	125,9	G 1	80
160	110	86	305	205	154,9	G 1	100
200	140	98	343	245	190,2	G 1 1/4	128

NOTE: For missing overall dimensions, refer to the CT ISO 6020/2 cylinder catalog

## CONTROL VALVE INTERFACE

SCT 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)



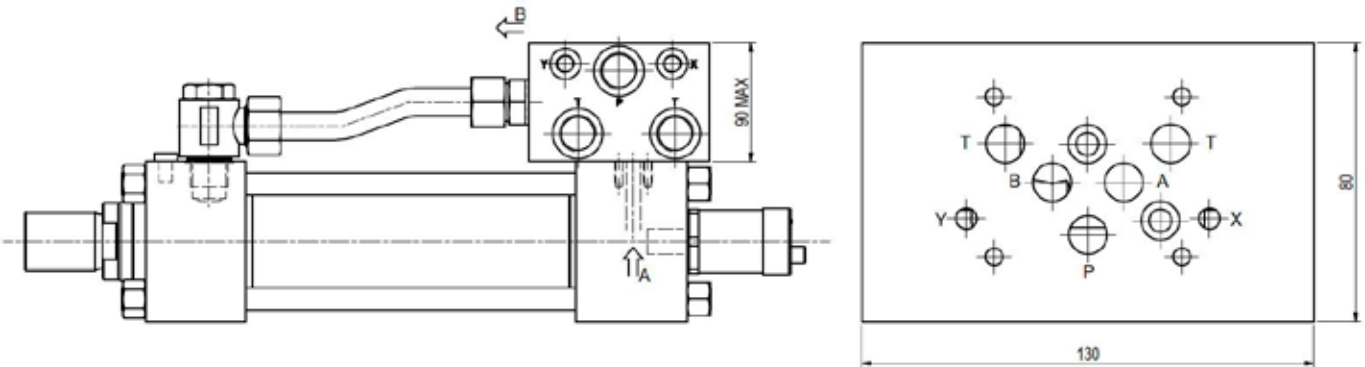
03 = mounting plate 4401-03-02-0-05 (dim. 06)

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)



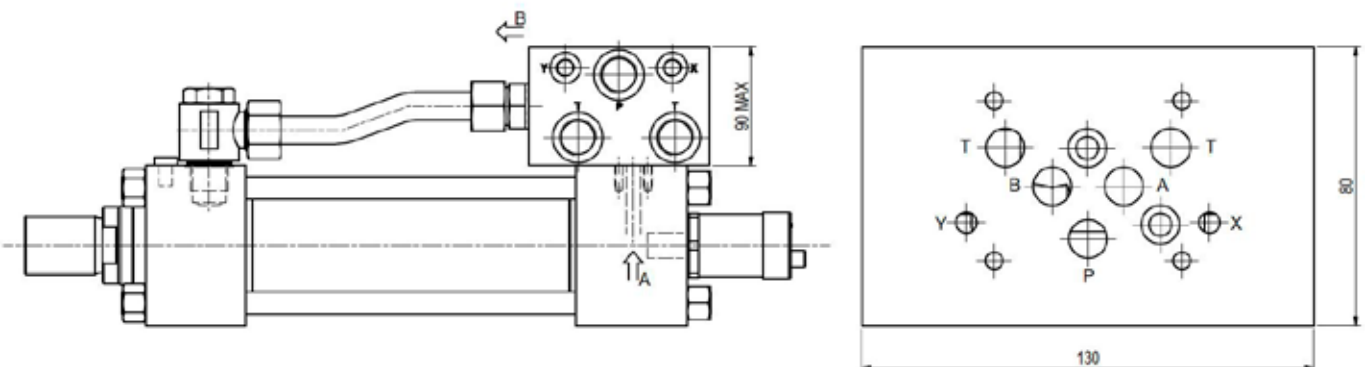
05 = mounting plate 4401-05-05-0-05 (dim. 10)

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)



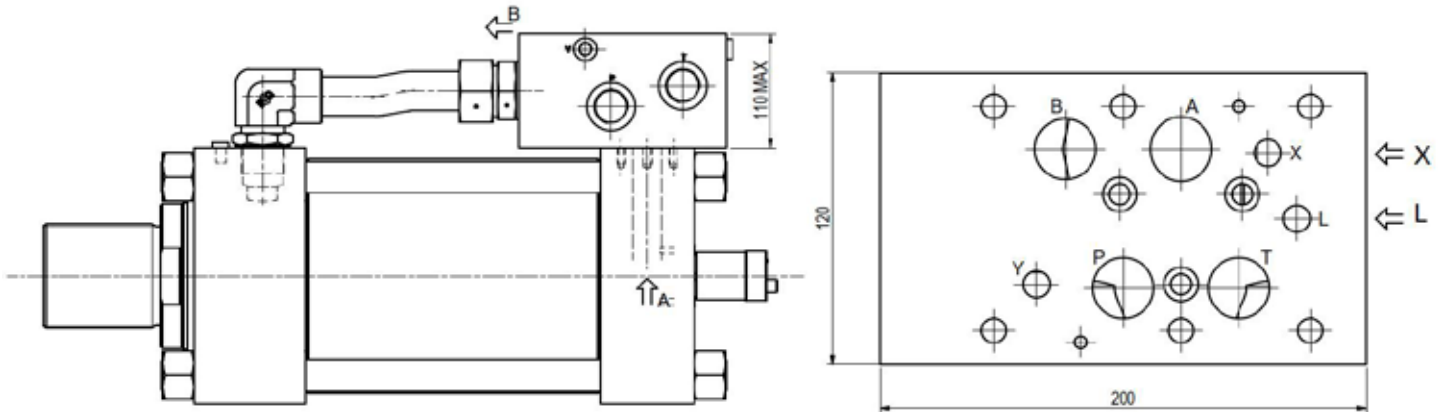
07 = mounting plate 4401-07-07-0-05 (dim. 16)

P and T oil ports = G 1; 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 80 to 200 mm and strokes greater than 150 mm

For shorter strokes, please contact CABOL Technical Office

## POSITION TRANSDUCER

Cabol SCT 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 office

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



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Quality Management  
System Certificate  
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