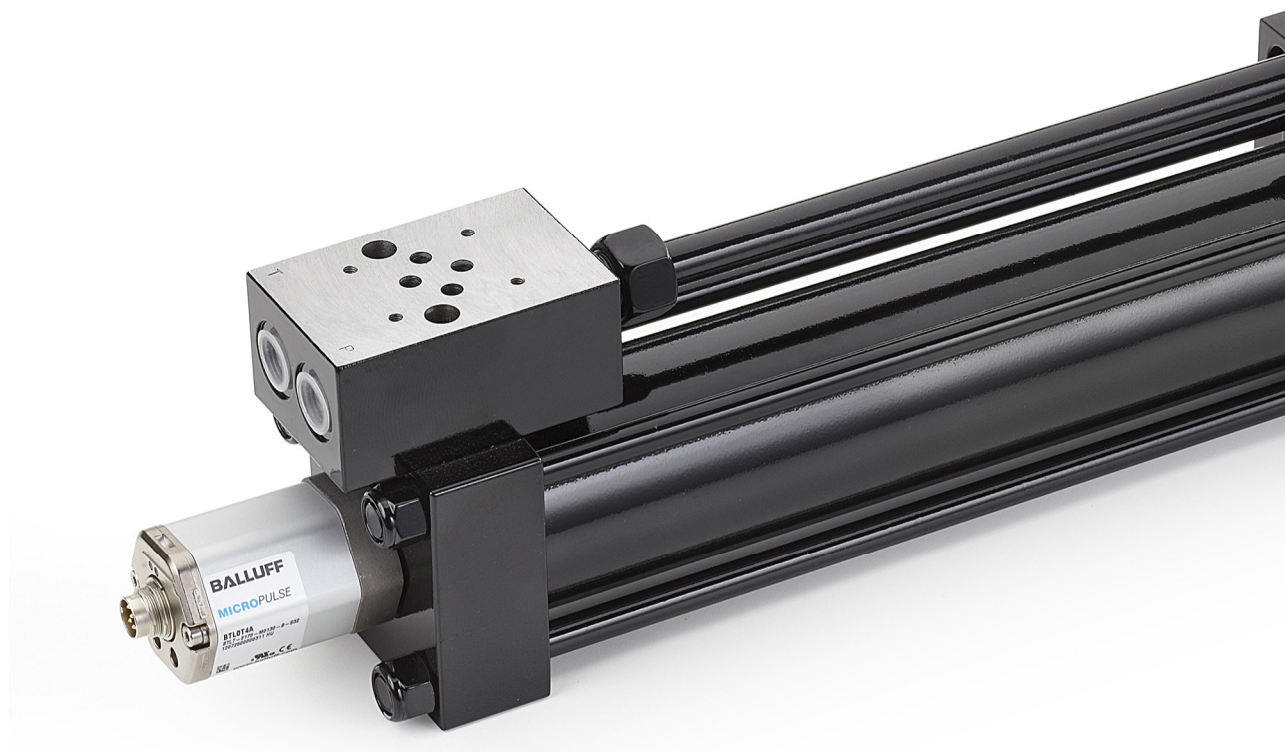


CHT CYLINDERS SERIES

STANDARD ISO 6020/2 - 1991 -
DIN 24554 160 BAR COMPACT SERIES



CHT CYLINDERS SERIES

STANDARD ISO 6020/2 - 1991 -
DIN 24554 160 BAR COMPACT SERIES



CHT series integrates **magnetostrictive transducers** that allows to keep track of the rod position. This series is designed to guarantee maximum reliability, high performance and endurance.

The integrated transducer and the technology used, assure precision and lack of friction, as the parts in movement are not in contact with each other.

These characteristics allow the cylinder to operate in heavy working environments, protected from dirt and shock, ensuring maximum reliability of the system and reducing the need of maintenance to a minimum. Transducers can be supplied with analogue, digital or IO/LINK output.

The compact construction that follows **ISO 6020/2 and DIN 24554** standards, with squared heads and tie rods, suits every kind of industrial application with compact dimensions and continuous nominal pressure up to 16 MPa. The choice of selected materials, the severe controls of 100% of all cylinders produced and the quality of the means of production, allow Grices to reach high standards of quality, reliability and enduring product performance.

The seals used, supplied by premium suppliers, grant high performance and international availability.

The wide range of seals, allows us to offer cylinders for applications with different kinds of hydraulic fluids, speed, frequency and operating temperature.

Technical specifications:

- Standard ISO 6020/2 and DIN 24554 mounting styles.
- Magnetostrictive position transducer integrated with analogue output signal (intensity or tension) or digital output signal (SSI, CAN-open, PROFIBUS-DP or IO/LINK)
- Nominal pressure 16 MPa (continuous operation)
- Maximum pressure 25 MPa
- Bore 40-200 mm
- Stroke: up to 4000 mm
- Up to 3 rod diameter per bore
- 10 Mounting styles Ref. ISO MP1 - MP3 - MS2 - MT1 - MT2 - MT4 - ME5 - MP5 - MX3 - MX5

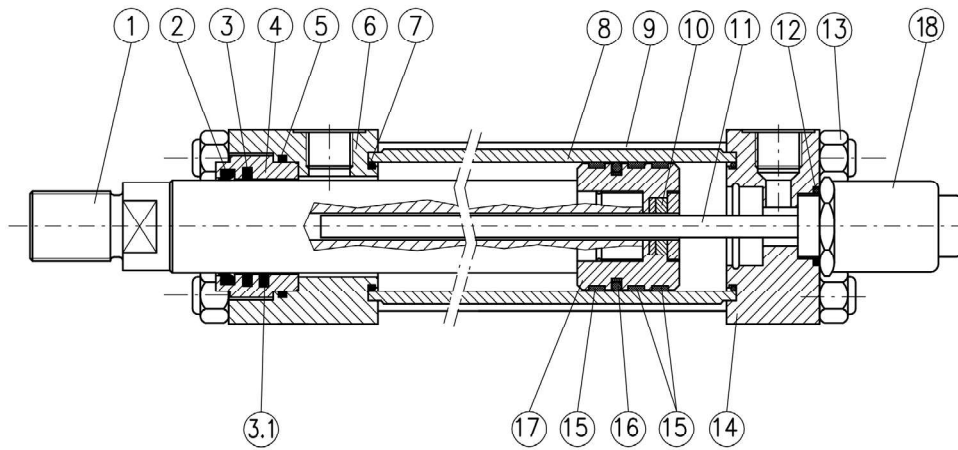
Options:

- Analogue output signal: 4/20 mA or 0/10 V
- Digital output signal: SSI, CAN-open, PROFIBUS-DP, IO/LINK
- Front cushioning
- Air bleeds
- Rod treatment : chromed, induction hardened and chromed, nickel-chromed
- Drainage
- Subplate CETOP 03/05
- Protective case

EPC Cylinder configurator

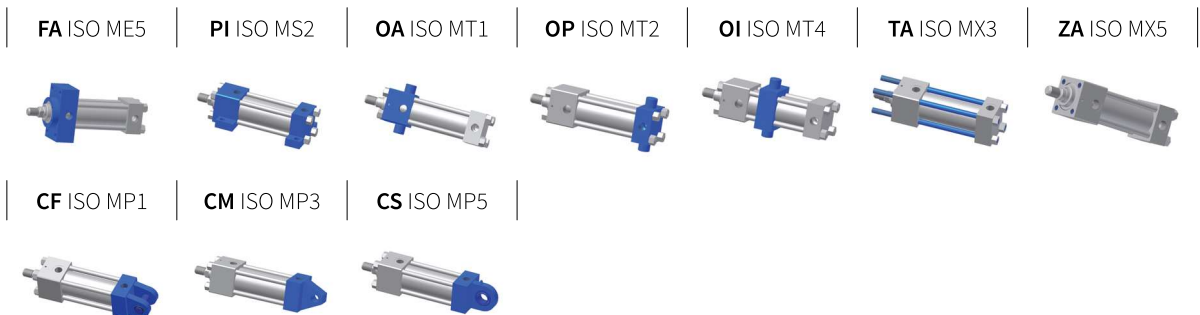
This is an innovative tool that allows the client to configure CHT cylinders in a rapid and intuitive way, guiding the technician through the choices of all the options available. Once the cylinder code is defined, the EPC software provides 2D, 3D and PDF drawings, and gives the user the possibility to save projects and request offers. With the complete access, reserved to the purchasing department, it is possible to make orders directly. For all orders received through EPC an extra discount will be applied.

Login at: <http://configuratore.grices.it/>



N°	ITEM	MATERIAL
1	Rod	Chromium-plated steel
2	Dust scraper	Polyurethane
3	Rod seal	NBR e PTFE / Polyurethane
3.1	2° Rod seal (option L)	NBR e PTFE
4	Guide sleeve	Spheroidal cast iron
5	O-Ring + PBK	NBR + Polyurethane
6	Head	Steel
7	O-Ring + PBK	NBR + Polyurethane
8	Body	Steel
9	Tie rod	Steel
10	Magnet	-
11	Waveguide	Steel
12	O-Ring	NBR
13	Self-braking nut	Steel
14	Rear head	Steel
15	Anti-friction slide	PTFE
16	Piston B seal	NBR
17	Piston	Steel
18	Position transducer	-

Mounting style



TECHNICAL CHARACTERISTICS



STANDARD ISO 6020/2 - 1991 -
 DIN 24554 160 BAR COMPACT SERIES

LINEAR POSITION TRANSDUCERS

To immediately check the rod position, install a linear position transducer.

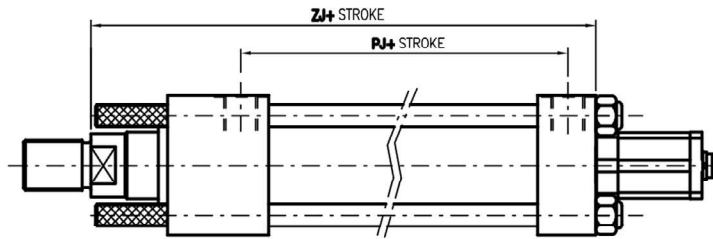
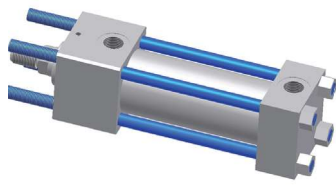
The magnetostrictive technology allows to detect the rod position even in heavy duty conditions and/or high frequency applications, avoiding the contact between the moving parts.

The transducer, in addition to offering a high reliability, permits easy maintenance. Analogue or digital versions are available.

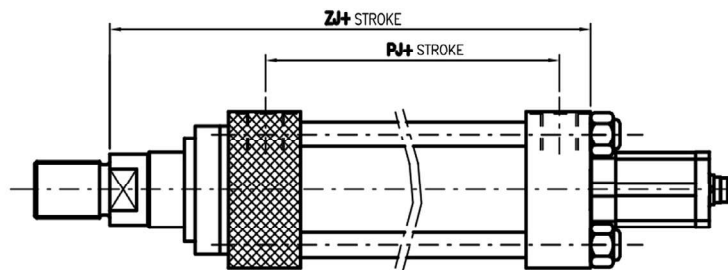
Resolution	0,01 mm
Independent linearity	±0,05 % (% of the total stroke)
Repeatability	±0,01 % (% of the total stroke)
Max. speed	2 m/sec
Working temperature	-20 +80 °C
Analogue/digital signal	0+10 V 10+0 V or 4+20 mA / SSI, CAN OPEN, PROFIBUS DP, IO/LINK
Strokes	50÷3850 mm
Max. transducer pressure	35 MPa (350 Bar)
Power supply	24 V DC ±10 %
Protection degree (connector installed)	IP-67

1.1 AVAILABLE VERSIONS AND DIMENSIONS

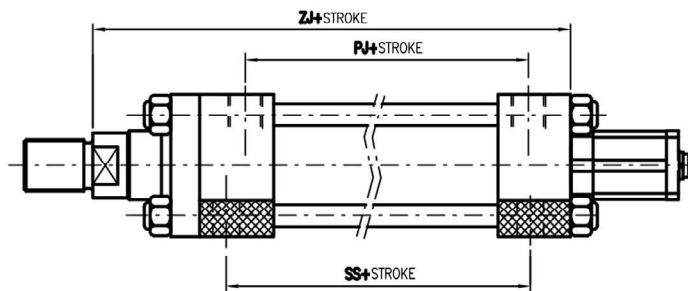
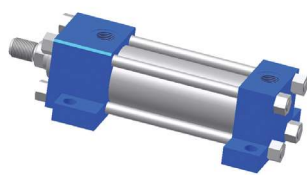
TA ISO type MX3



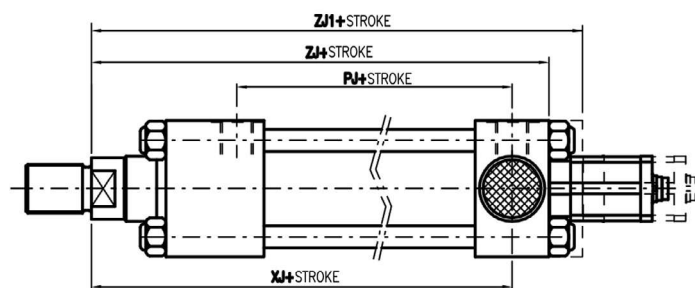
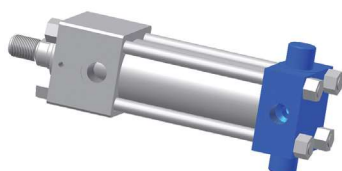
FA ISO type ME5



PI ISO type MS2

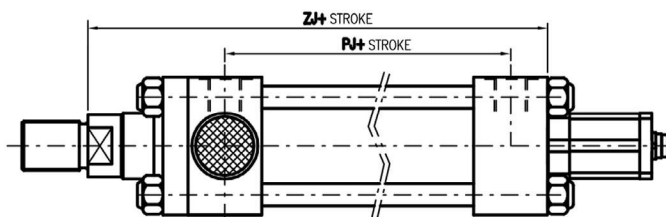
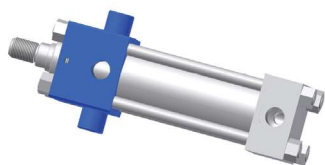


OP ISO type MT2

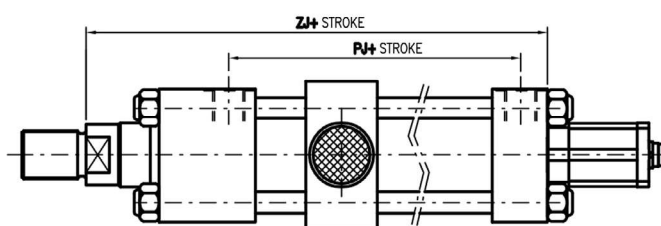
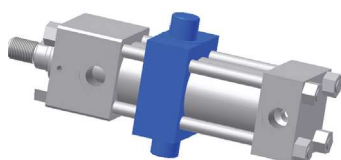


OP: (ISO MT2)

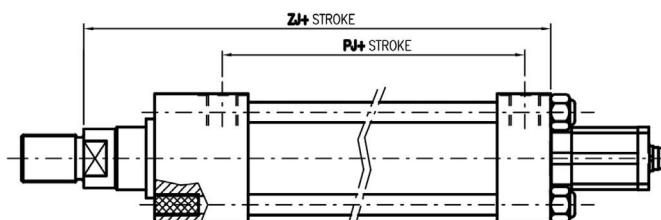
OA ISO type MT1



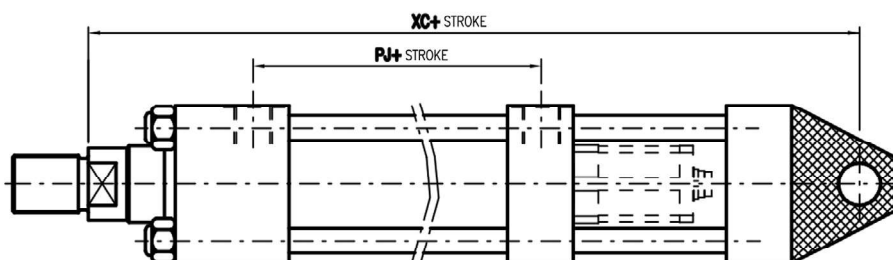
OI ISO type MT4



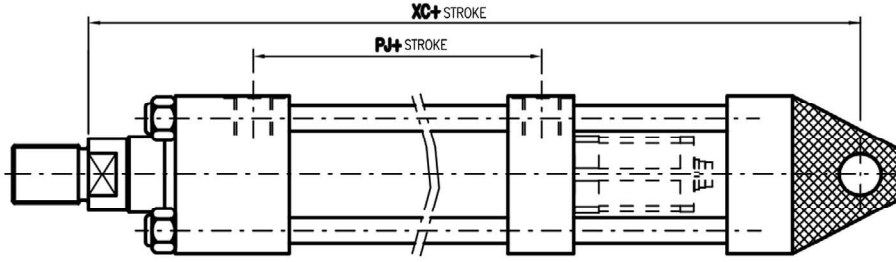
ZA ISO type MX5



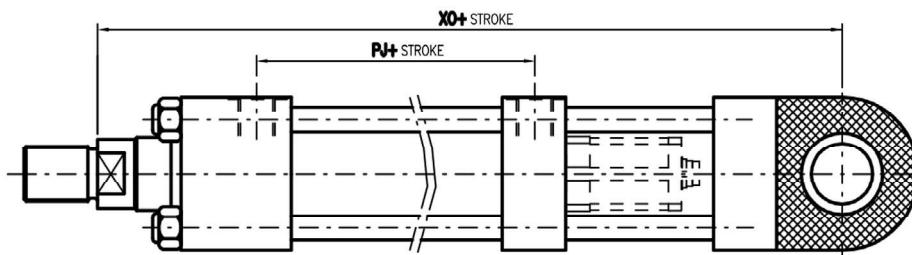
CM ISO type MP3



CF ISO type MP1

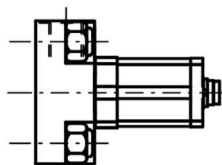


CS ISO type MP5



BORE	PJ	SS	XC	XJ	XO	ZJ	ZJ1
40	*107	*132	NA	*168	NA	*187	NA
50	*108	*126	NA	*174	NA	*193	NA
63	*112	*118	*444	*181	*450	*200	NA
80	93	105	*494	168	*503	190	NA
100	101	102	*536	187	*540	203	216
125	232	131	*575	209	*590	232	244
160	121	130	*607	230	*636	245	273
200	158,5	172	*694	276	*728	299	331

* Dimensions not ISO



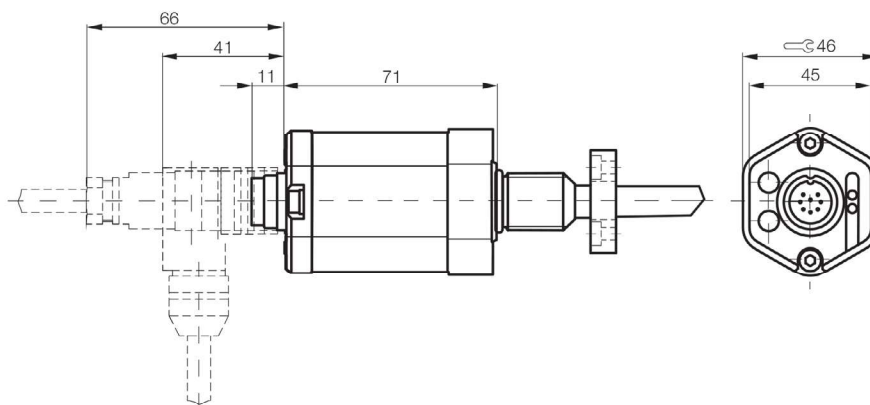
Nuts configuration for bottom head bore 40-50
 Mounting style TA - FA - PI - OP - OA - OI - ZA

1.2 TRANSDUCERS DIMENSION

Transducers dimension **TYPE UT - UC - SI** with connector type:

STRAIGHT CBKS-S 32-00: Y1

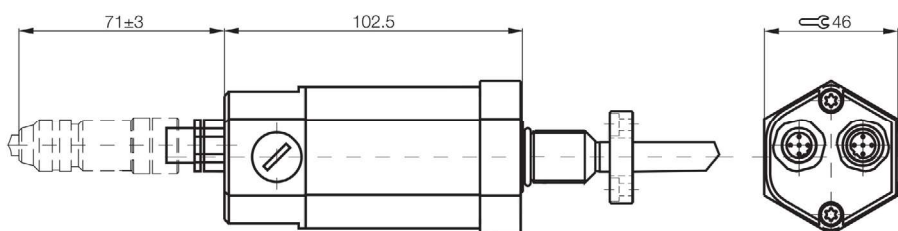
90° CBKS-S 33-00: Y2



Transducers dimension **TYPE HH** with connector type **Y4**:

CBKS-S 92-00

CBKS-S 94-00

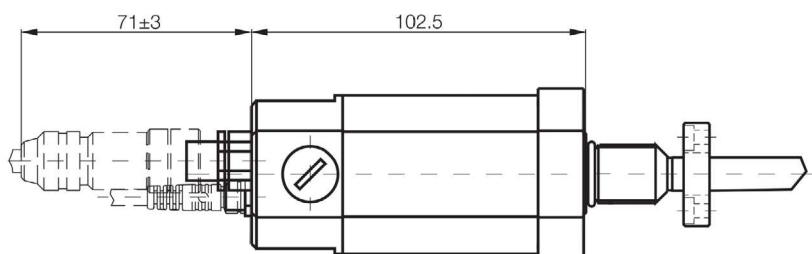


Transducers dimension **TYPE TT** with connector type **Y3**:

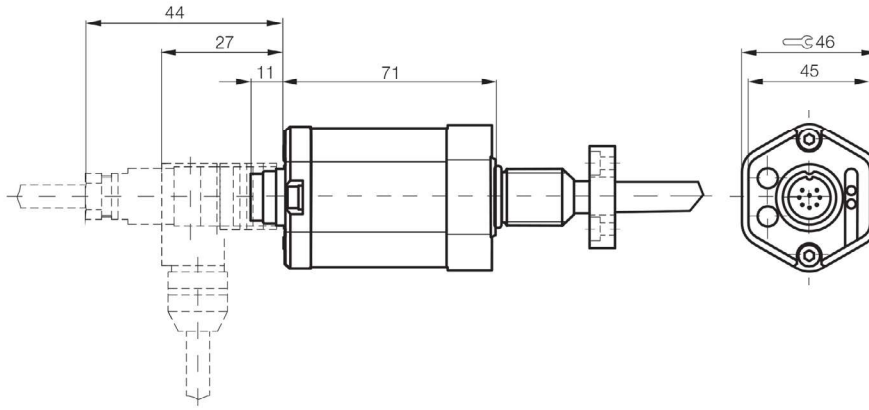
CBKS-S 105-00

CBKS-S 103-00

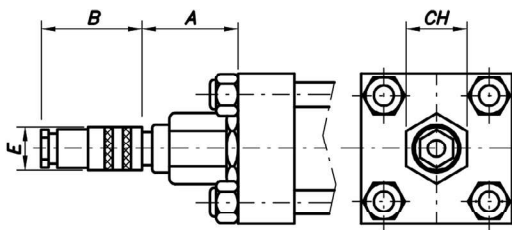
CBKS-S 48-15-CP-05



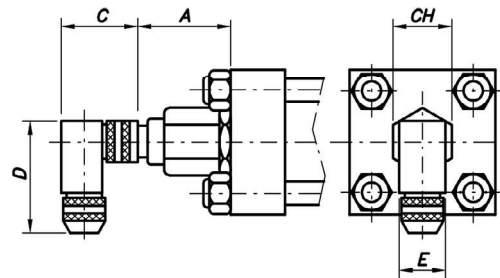
Transducers dimension **TYPE IO/LINK** with outlets **Y5** and **Y6**



1.3 CONNECTORS DIMENSION



Type: CBKS-S 32 M-00



Type: CBKS-S 33 M-00

Type	A	B	C	D	E	CH
CBKS-S 32 M-00	74	69	-	-	18	46
CBKS-S 33 M-00	74	-	48	54	20	46

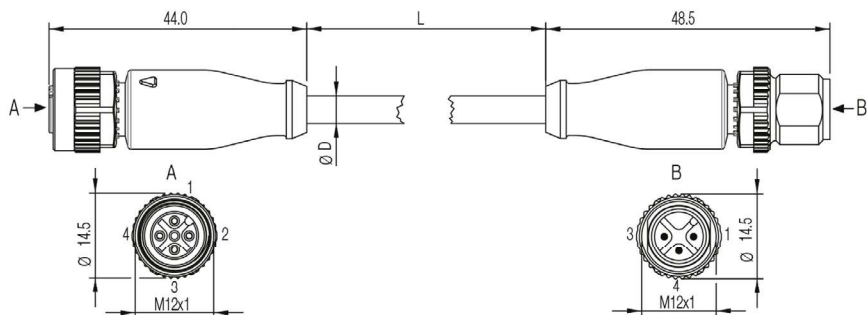
Connection	Pin	Color
<p>View from the bushing weld side</p>	1	Yellow
	2	Grey
	3	Pink
	5	Green
	6	Blue
	7	Brown
	8	White

IO/LINK CONNETTORS

Position transducer (A)		IO/LINK Master (B)
1	L+ (18...30 V)	1
2	None	-
3	L- (GND)	3
4	C/Q	4

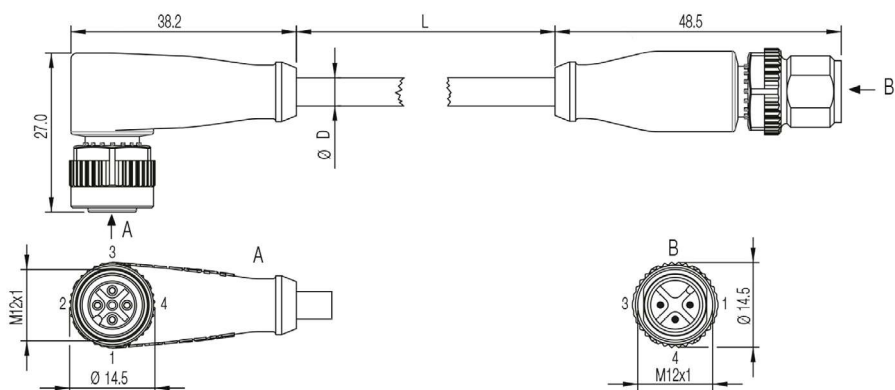
Straight outlet - straight connector option Y5 - IO/LINK

PBCC0374 with 4m cable

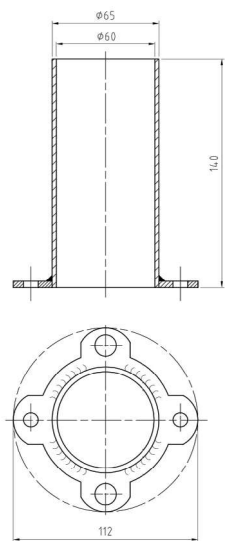


Angled outlet - straight connector option Y6 - IO/LINK

PBCC037M with 4m cable



1.4 SENSOR PROTECTION DIMENSIONS



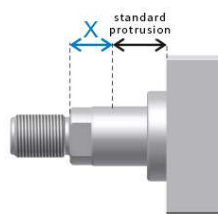
EXAMPLE OF ORDER ACRONYM

CHT/50/28/530/OI00BUT00000Y1Q132R120XV...

CHARACTERISTIC	DESCRIPTION	SYM.	EXMAPLE
SERIES	Tie rod execution	CHT	CHT/
BORE	Indicate in mm		CHT/ 50/
ROD	Indicate in mm		CHT/50/ 28/
STROKE	Indicate in mm		CHT/50/28/ 530/
EXECUTION	Front flange	FA	CHT/50/28/530/ OI
	Feet	PI	
	Female hinge	CF	
	Male hinge	CM	
	Joint hinge	CS	
	Front trunnion	OA	
	Intermediate trunnion	OI	
	Rear trunnion	OP	
	Front protruding tie rods	TA	
	Front treaded holes	ZA	
CUSHIONING	None	0	CHT/50/28/530/OI 0
	Front cushioning	1	
SPACER	None	0	CHT/50/28/530/OI 00
	50 mm	1	
	100 mm	2	
	150 mm	3	
	200 mm	4	
SEALS	Nitrile+PTFE (anti-friction)	B	CHT/50/28/530/OI00 B
TRANSDUCER OUTPUT	Tension 0-10 V UT	UT	CHT/50/28/530/OI00 BUT
	Electrical current 4-20 M	UC	
	SSI Interface	SI	
	CANopen Interface	HH	
	PROFIBUS Interface	TT	
	IO/LINK Interface	LK	
ROD END	Type M (standard)	0	CHT/50/28/530/OI00 BUT0
	Type D	D	
	Type F	F	
	Hammer head	U	
AIR BLEEDS	None	0	CHT/50/28/530/OI00 BUT00
	Front	G	
	Rear	H	
	Front + rear	I	
DOUBLE ROD SEAL	None	0	CHT/50/28/530/OI00 BUT000
	Double rod seal	L	
DRAINAGE	None	0	CHT/50/28/530/OI00 BUT0000
	Rod side	W	
ROD TREATMENT	Standard chromium-plated	0	CHT/50/28/530/OI00 BUT00000
	Heavy chromium-plated, 0.045mm thick, 100h salt mist ISO 3768	P	
	Hardening and chromium-plating	T	
	Ni-CROMAX30 chromium-plated, nickelplated, ASTM B 117 1000h	N	
CONNECTOR	None	0	CHT/50/28/530/OI00 BUT000000
	Straight CBKS-S 32 M-00	Y1	
	Angled 90° CBKS-S 33 M-00	Y2	

CHARACTERISTIC	DESCRIPTION				SYM.	EXAMPLE
CONNECTOR	Male connector CBKS-S-105-00 Female connector CBKS-S-103-00 Supply cable CBKS-S 48-15-CP-05				Y3	CHT/50/28/530/OI00BUT000000
	Female connector CBNS-S92-00 Male connector CBNS-S94-00				Y4	
	Straight outlet - straight connector PBCC 0374				Y5	
	Angled outlet - straight connector PBCC 037M				Y6	
FRONT HEAD						
POS. OIL PORTS	Side 1	Side 2	Side 3	Side 4		CHT/50/28/530/OI00BUT000000Q1
POS. CUSHIONING	0 if not requested					CHT/50/28/530/OI00BUT000000Q13
	Side 1	Side 2	Side 3	Side 4		
POS. AIR BLEED	0 if not requested					CHT/50/28/530/OI00BUT000000Q132
	Side 1	Side 2	Side 3	Side 4		
REAR HEAD						
POS. OIL PORTS	Side 1	Side 2	Side 3	Side 4		CHT/50/28/530/OI00BUT000000Q132R1
POS. AIR BLEED	0 if not requested					CHT/50/28/530/OI00BUT000000Q132R12
	Side 1	Side 2	Side 3	Side 4		
*EXTRA ROD X1 QUOTE	Indicate mm					CHT/50/28/530/OI00BUT000000Q132R120
XV QUOTE	Indicate mm (only version MT4)					CHT/50/28/530/OI00BUT000000Q132R120XV...

*Specify the possible extra-rod (X) size in addition to the standard rod protrusion:



Login at: <http://configuratore.grices.it/>

Configure your cylinder in a quick and intuitive way choosing all the available options.

Note

The indicated operating pressures are efficient for smooth applications without blows. For extreme loads or high operating pressures with high frequency, is necessary to use mounting styles and thread-rod links designed to be stress-resistant. For further information contact our Technical Department.