PNEUMATIC LINEAR ACTUATOR

SINGLE ACTING series PC

SERVOVALVE spa
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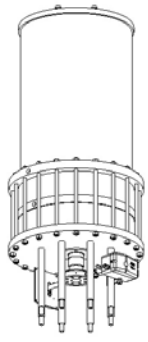
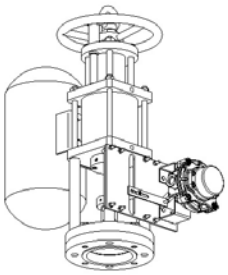
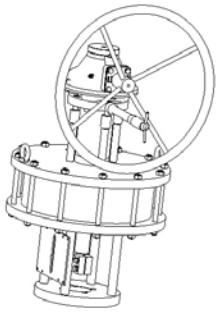
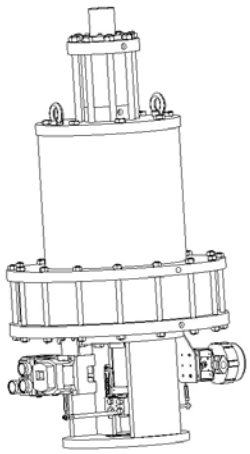

Pneumatic Single Acting Linear Actuator SERIES PC

TECHNICAL DESCRIPTION

Servovalve actuator type PC consists of pneumatic single acting cylinders designed to operate globe or gate or any other valve that might require a linear movement operator, with a fail safe spring action to close the valve.

PC actuator is designed and manufactured so to operate in the heaviest work condition due to his particularly simple and heavy-duty construction and resistance to corrosion phenomenon.

All PC actuator are designed with weather proof construction that assure complete protection for springs and all internal moving parts, minimizing the possibility of internal misalignment and reduces the chance of injury to operating personnel.

Spring cylinder is closed by means of safety stay-bolts that assure to open the cartridge, totally release and remove springs with fully operator safely procedure.
This construction allow actuator disassembling and maintenance on field without special tools and in total security.
Materials selected for safety bolts are suitable to assure low friction in spring compression and avoid any possible seizure.

Springs surfaces are treated and protected from corrosion to ensure long life and constant performances .

PC actuators can be supplied with helicoidal springs (series PC) or belleville springs (series PCT).

Pneumatic cylinders are realised in chromium plated carbon steel (available on request execution with electroless nickel plated cylinder) for corrosion resistance and friction reduction .

A PTFE charged slide guarantees a perfect drive and alignment of the piston under all load conditions allowing gasket seals long life.

Chromium plated carbon steel shaft , dynamic floating seals and PTFE charged bushing allow to reduce the sliding friction and avoid stick-slip effect.

Particular care in material selection and design ensure optimum performances and reduced hysteresis and dead band for accurate and precise automation of linear control valves .

The inner parts are lifetime lubricated, therefore only replacement of dynamic gaskets may become necessary after a long working time.

PC can be equipped with manual emergency override as handwheel or gear reductor or manual hydraulic handpump on request, as well as hydraulic dampers for particular valves or service

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QUALITY ASSURANCE AND CERTIFICATION

Design, manufacture and test procedures of PC linear pneumatic actuators are complying to the highest quality and efficiency standards and are based on Servovalve following awarded standard certifications:

- EN ISO 9001:2008
- EN ISO 14001-2004 Environmental Management System
- BS OHSAS 18001:2007 Occupational Health and Safety Assessment Series

PA linear pneumatic single acting actuators are also designed and certified according to :

- European Pressure Equipment Directive 97/23/CE (PED)
- Atex Directive 95/9/CE
- IEC 61508:2000 for application up to SIL 3 level
- Gost-R
- Rostechnadzor

TECHNICAL STANDARD PERFORMANCE

Pressure range

- air working pressure range : 2 ÷ 10 bar
- standard design pressure: 10,5 bar
- air test pressure: 1,5 max working pressure

Higher working pressure range or design pressure available on request

Environmental Temperature Range

- standard minimum temperature : -20°C
- standard maximum temperature : +80°C

Available execution for following environmental conditions (refer to actuator code legend options):
Minimum temperature -60°C
Maximum temperature +150°C
For different temperature contact our sales

Medium Supply

- instrument air (dry no-lubricated)
- sweet natural gas (dry no-lubricated)
- nitrogen
- execution for low pressure oil available on request
- different medium supply on request

Customised execution on request

Servovalve production is highly oriented in designing special execution to satisfy a wide range of customised requirement such as :

- On-off or modulating execution
- Execution for offshore or highly aggressive environmental
- Design of customised coupling yokes to fit any kind of valve topwork
- Execution with mechanical end stop screws in opening or closing or both directions
- Fast acting execution for HIPPS or Emergency Shutdown application
- Execution with dampers or special integral quick exhaust valve
- Subsea design

Please contact our sales department for technical evaluation in case of different customised requirement

Controls

PC actuators can be supplied fully equipped with control component packages to full fill customer requirement and comply to technical specifications for the various industrial control applications for on/off, modulating or ESD service
Controls are designed based on Servovalve technical skill and long experience in valve automation.

SPRING CLOSE – AIR OPEN

LINEAR ACTUATOR CODE MODE

MODEL P C V ☐ 4 2 0 / 2 / ☐ 1 0 2 / 1 1 0 N ☐ 5 5 B P ☐

MEDIUM
- **P** air or gas
- **H** oil or other liquid

SPRING ACTION
- **C** close
- **A** open
- **D** double acting

OPTIONAL DEVICE
- **V** handwheel
- **R** reductor
- **H** hydraulic pump
- **A** damper
- **Z** hydraulic pump and damper
- **X** special execution

BELLEVILLE SPRING
- **T** belleville springs
  (missing for double acting or helicoidal springs)

CYLINDER NOMINAL SIZE

NUMBER OF CYLINDER
- **2** n°2 cylinders
- **3** n°3 cylinders
  (missing for n°1 cylinder)

TYPE OF SPRING
- spring code
  (missing for double acting or belleville springs)

MAX SPRING BENCH

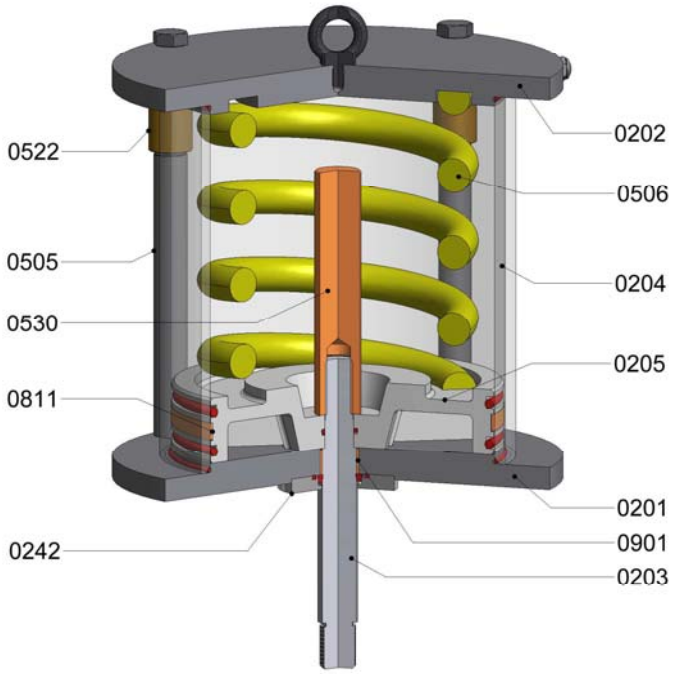
TEMPERATURE RANGE
- **N** -20°/+80°
- **B** -40°/+80°
- **A** -50°/+60°
- **G** -60°/+60°
- **H** -20°/+150°
- **S** special temperature

CYLINDER STROKE

COUPLING
- **B** bracket
- **C** columns
- **U** columns with flange
- **F** flange

CONTROL CIRCUIT
- **P** included
- **N** not included

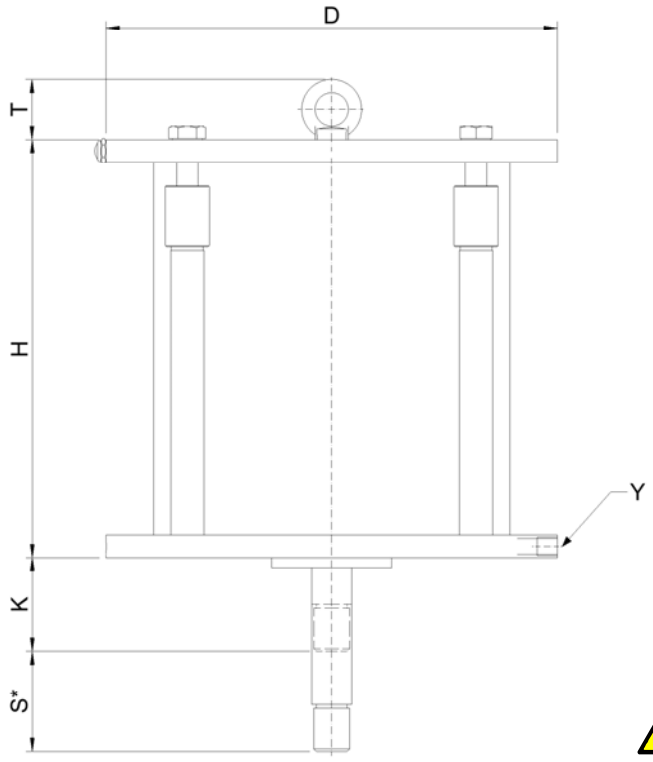
MECHANICAL END TRAVEL STOP
- **O** open position
- **C** closed position
- **D** open and closed position
  (missing for standard execution without mechanical end travel stop)



POS.	DESCRIPTION	MATERIAL
0201	INFERIOR HEAD	P 355 NL2 EN 10028-3
0202	SUPERIOR HEAD	P 355 NL2 EN 10028-3
0203	SHAFT	42CrMo4 EN 10083-3
0204	CYLINDER	E 355 EN 10297-1
0205	PISTON	AlSi6Cu4 EN 1706
0242	FLANGE	42CrMo4 EN 10083-3
0505	SAFETY TUBE	E 355 EN 10297-1
0506	SPRING	52SiCrNi5 EN 10089
0522	SAFETY NUT	CB331G EN 1982
0530	END STOPPER	C40 EN 10083-2
0811	PISTON DRIVE	PTFE+GRAPHITE
0901	BUSHING	BRONZE + PTFE

ALL O-RING AND GASKET MATERIAL

AMB. TEMP.	TEMP	O-RING	GASKET
STANDARD	-20 / +80	N.B.R.	POLYURETHANE
LOW TEMP.	-40 / -60	SILICON	SILICON
HIGH TEMP.	+90 / +120	VITON	VITON



OVERALL DIMENSIONS (mm) - STROKE = 55mm

TYPE	Ø D	H	K	T	Y
PC 125	■ 150	315	90	-	1/4" NPT
PC 160	■ 180	305	90	-	1/4" NPT
PC 200	■ 220	300	90	-	1/4" NPT
PC 250	340	315	90	45	1/4" NPT

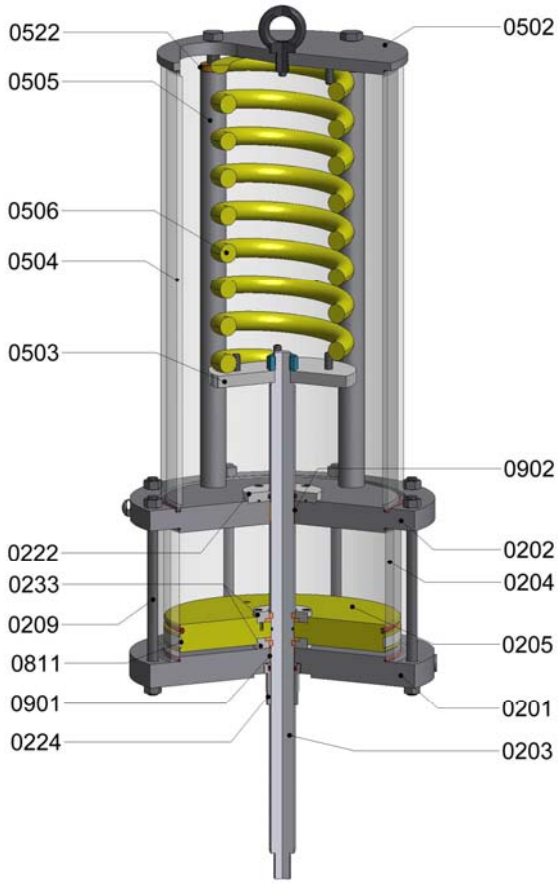
STROKE (S*) = ACTUATOR STROKE (mm)

Y = PNEUMATIC ACTUATOR CONNECTION

OVERALL DIMENSION (mm) - STROKE > 55mm

TYPE	Ø D	H	K	T	Y
PC 125	■ 150	150+3S*	90	-	1/4" NPT
PC 160	■ 180	140+3S*	90	-	1/4" NPT
PC 200	■ 220	135+3S*	90	-	1/4" NPT
PC 250	340	250+4S*	90	45	1/4" NPT

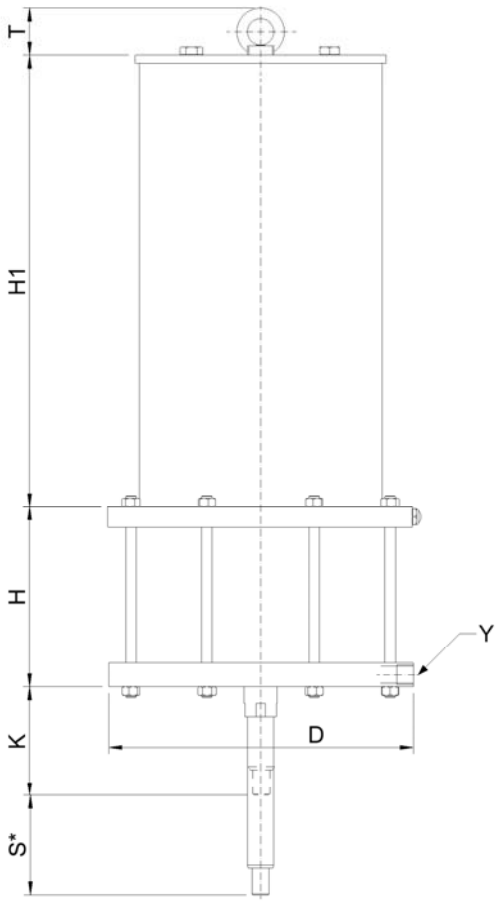
CAUTION: EYE BOLT FOR ACTUATOR LIFTING ONLY



POS.	DESCRIPTION	MATERIAL
0201	INFERIOR HEAD	P 355 NL2 EN 10028-3
0202	SUPERIOR HEAD	P 355 NL2 EN 10028-3
0203	SHAFT	42CrMo4 EN 10083-3
0204	CYLINDER	E 355 EN 10297-1
0205	PISTON	S 355 J2G3 EN 10025-2
0209	STAY BOLT	42CrMo4 EN 10269
0222	FLANGE	S 355 J2G3 EN 10025-2
0224	RING NUT	42CrMo4 EN 10083-3
0232	RING NUT	S 355 J2G3 EN 10025-2
0502	FLANGE	S 355 J2G3 EN 10025-2
0503	SPRIN DISC	S 355 J2G3 EN 10025-2
0504	TUBE	S 355 JR EN 10025-2
0505	SAFETY TUBE	E 355 EN 10297-1
0506	SPRING	52SiCrNi5 EN 10089
0522	SAFETY NUT	CB331G EN 1982
0811	PISTON DRIVE	PTFE+GRAPHITE
0901	BUSHING	BRONZE + PTFE
0902	BUSHING	BRONZE + PTFE

ALL O-RING AND GASKET MATERIAL

AMB. TEMP.	TEMP	O-RING	GASKET
STANDARD	-20 / +80	N.B.R.	POLYURETHANE
LOW TEMP.	-40 / -60	SILICON	SILICON
HIGH TEMP.	+90 / +120	VITON	VITON



OVERALL DIMENSIONS (mm)

TYPE	Ø D	H	H1	K	T	Y
PC 300	410	140+S*	see note	110	75	1/2" NPT
PC 360	470	145+S*	see note	110	75	1/2" NPT
PC 420	555	145+S*	see note	110	75	1/2" NPT
PC 500	590	150+S*	see note	120	75	1/2" NPT
PC 520	640	165+S*	see note	120	75	1/2" NPT
PC 600	700	175+S*	see note	120	75	1/2" NPT
PC 620	745	180+S*	see note	120	75	1/2" NPT
PC 700	830	215+S*	see note	140	100	3/4" NPT
PC 800	930	240+S*	see note	140	110	3/4" NPT

H1 NOTE

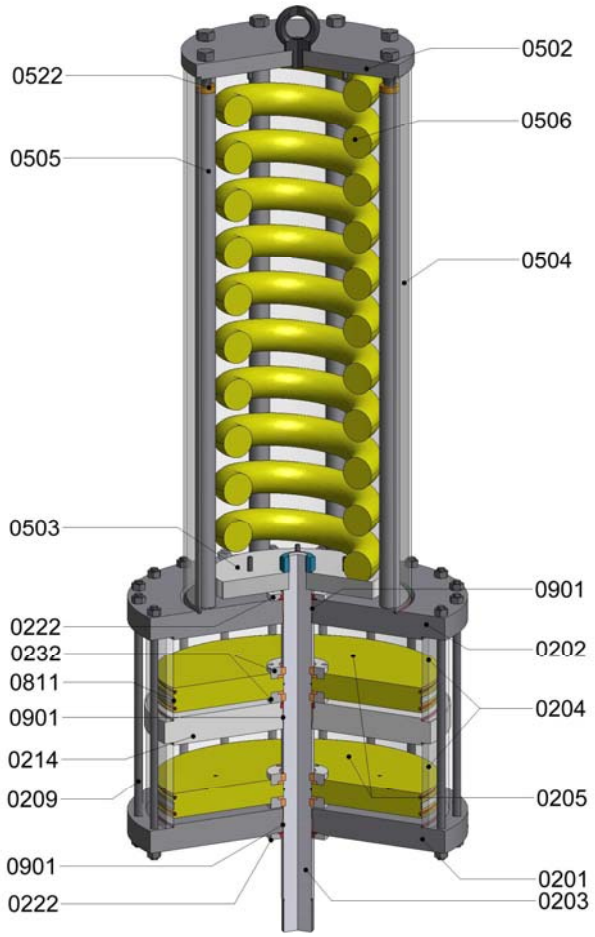
FOR TYPE OF SPRING = 1[][] DIMENSION H1 = max. 510 mm.
FOR TYPE OF SPRING = 2[][] DIMENSION H1 = max. 970 mm.
FOR TYPE OF SPRING = 3[][] DIMENSION H1 = max. 1430 mm.

STROKE (S*) = ACTUATOR STROKE (mm)

Y = PNEUMATIC ACTUATOR CONNECTION

CAUTION: EYE BOLT FOR ACTUATOR LIFTING ONLY

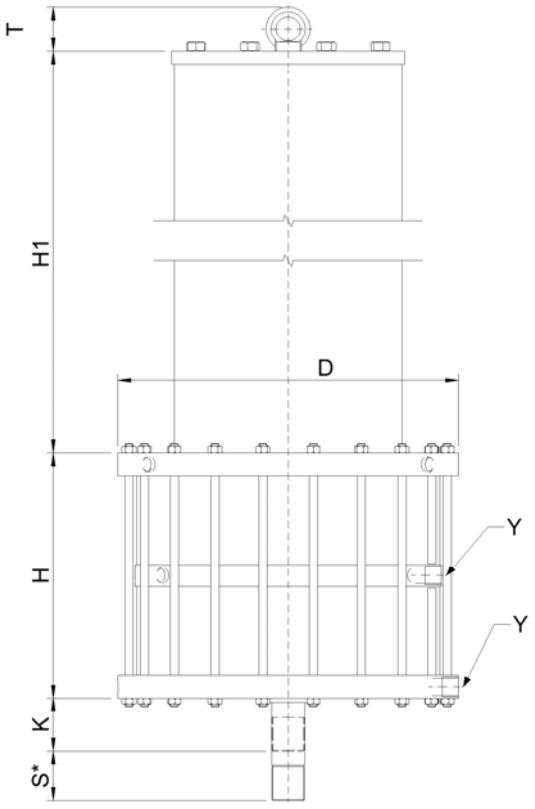
Pneumatic Linear Actuator PC 420/2 ÷ 800/2



POS.	DESCRIPTION	MATERIAL
0201	INFERIOR HEAD	P 355 NL2 EN 10028-3
0202	SUPERIOR HEAD	P 355 NL2 EN 10028-3
0203	SHAFT	42CrMo4 EN 10083-3
0204	CYLINDER	E 355 EN 10297-1
0205	PISTON	S 355 J2G3 EN 10025-2
0209	STAY BOLT	42CrMo4 EN 10269
0214	INTERMEDIATE HEAD	P 355 NL2 EN 10028-3
0222	FLANGE	42CrMo4 EN 10083-3
0232	FLANGE	S 355 J2G3 EN 10025-2
0502	FLANGE	S 355 J2G3 EN 10025-2
0503	SPRIN DISC	S 355 J2G3 EN 10025-2
0504	TUBE	E 355 JR EN 10025-2
0505	SAFETY TUBE	E 355 EN 10297-1
0506	SPRING	52SiCrNi5 EN 10089
0522	SAFETY NUT	CB 331G EN 1982
0811	PISTON DRIVE	PTFE+GRAPHITE
0901	BUSHING	BRONZE + PTFE

ALL O-RING AND GASKET MATERIAL

AMB. TEMP.	TEMP	O-RING	GASKET
STANDARD	-20 / +80	N.B.R.	POLYURETHANE
LOW TEMP.	-40 / -60	SILICON	SILICON
HIGH TEMP.	+90 / +120	VITON	VITON



OVERALL DIMENSIONS (mm)

TYPE	Ø D	H	H1	K	T	Y
PC 420/2	560	285+2S*	see note	110	75	1/2" NPT
PC 500/2	595	305+2S*	see note	120	75	1/2" NPT
PC 520/2	645	310+2S*	see note	120	75	1/2" NPT
PC 600/2	710	325+2S*	see note	120	75	1/2" NPT
PC 620/2	745	345+2S*	see note	120	75	1/2" NPT
PC 700/2	840	410+2S*	see note	140	110	3/4" NPT
PC 800/2	940	445+2S*	see note	140	110	3/4" NPT

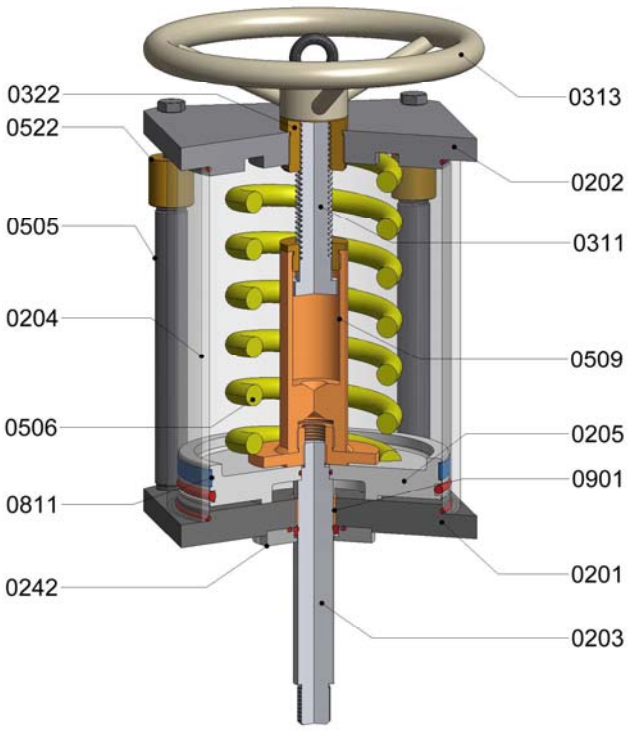
H1 NOTE
FOR TYPE OF SPRING = 1[][] DIMENSION H1 = max. 510 mm.
FOR TYPE OF SPRING = 2[][] DIMENSION H1 = max. 970 mm.
FOR TYPE OF SPRING = 3[][] DIMENSION H1 = max. 1430 mm.

STROKE (S*) = ACTUATOR STROKE (mm)

Y = PNEUMATIC ACTUATOR CONNECTION

CAUTION: EYE BOLT FOR ACTUATOR LIFTING ONLY

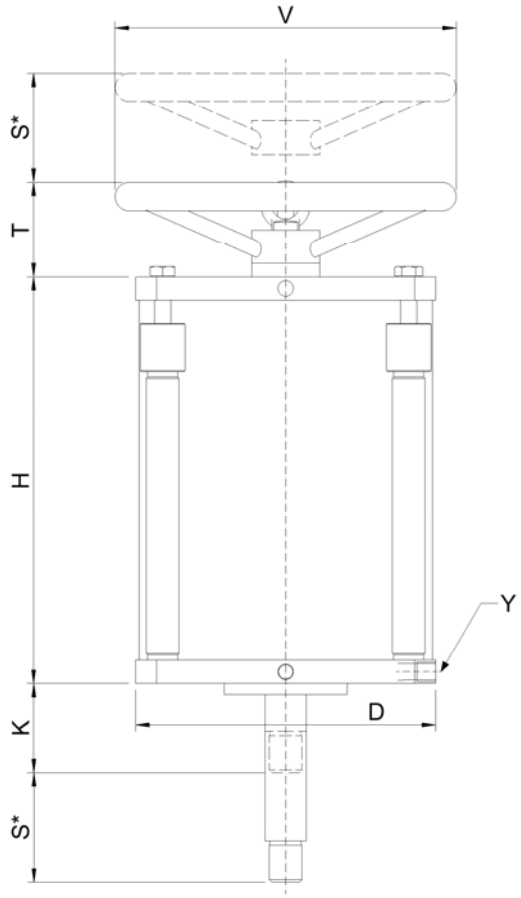
Pneumatic Linear Actuator PCV 125 ÷ 250



POS.	DESCRIPTION	MATERIAL
0201	INFERIOR HEAD	P 355 NL2 EN 10028-3
0202	SUPERIOR HEAD	P 355 NL2 EN 10028-3
0203	SHAFT	42CrMo4 EN 10083-3
0204	CYLINDER	E 355 EN 10297-1
0205	PISTON	AlSi6Cu4 EN 1706
0242	FLANGIA	42CrMo4 EN 10083-3
0311	STEM	X20Cr 13 EN 10088-1
0313	HANDWEEL	P 195 TR EN 10216-1
0322	RING NUT	CW 614 N EN 12164
0505	STAY BOLT	E 355 EN 10297-1
0506	SPRING	52SiCrNi5 EN 10089
0507	SCREW	8.8 EN 20898-1
0509	CANNOT	E 355 EN 10297-1
0510	RING NUT	CW 614 N EN 12164
0522	SAFETY NUT	S 355 J2G3 EN 10025-2
0811	PISTON DRIVE	PTFE+GRAPHITE
0901	BUSHING	BRONZE + PTFE

ALL O-RING AND GASKET MATERIAL

AMB. TEMP.	TEMP	O-RING	GASKET
STANDARD	-20 / +80	N.B.R.	POLYURETHANE
LOW TEMP.	-40 / -60	SILICON	SILICON
HIGH TEMP.	+90 / +120	VITON	VITON



OVERALL DIMENSIONS (mm) - STROKE = 55mm

TYPE	Ø D	H	K	T	Ø V	Y
PCV 125	■ 150	315	90	70	250	1/4" NPT
PCV 160	■ 180	305	90	70	250	1/4" NPT
PCV 200	■ 220	300	90	70	250	1/4" NPT
PCV 250	340	315	90	90	350	1/4" NPT

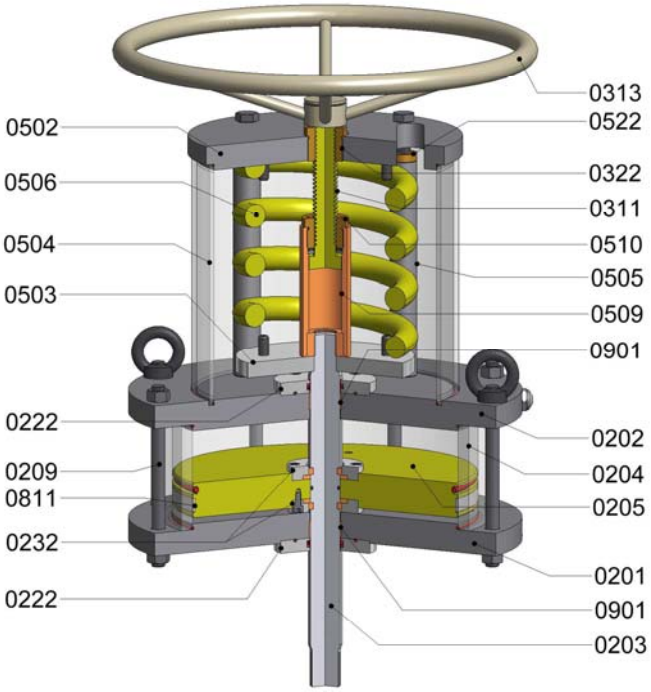
STROKE (S*) = ACTUATOR STROKE (mm)

Y = PNEUMATIC ACTUATOR CONNECTION

OVERALL DIMENSION (mm) - STROKE > 55mm

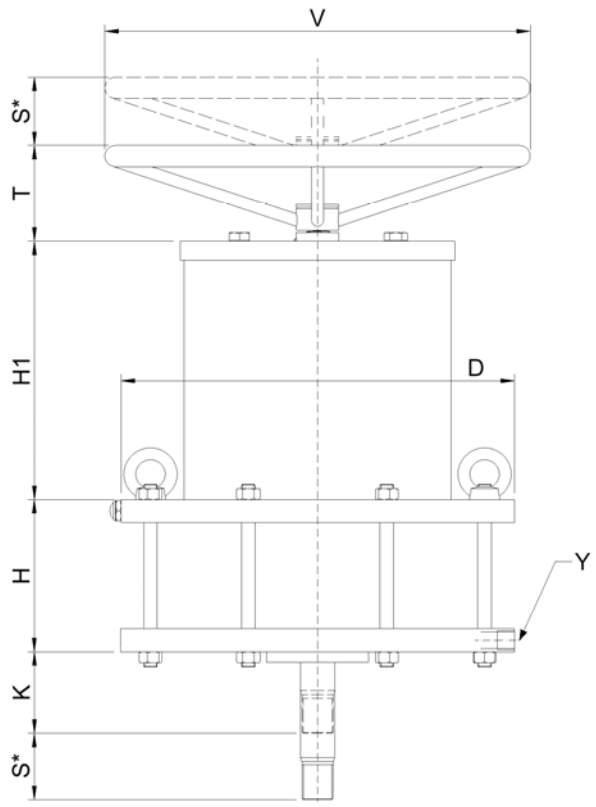
TYPE	Ø D	H	K	T	Ø V	Y
PCV 125	■ 150	150+3S*	90	70	250	1/4" NPT
PCV 160	■ 180	140+3S*	90	70	250	1/4" NPT
PCV 200	■ 220	135+3S*	90	70	250	1/4" NPT
PCV 250	340	250+4S*	90	90	350	1/4" NPT

CAUTION: EYE BOLT FOR ACTUATOR LIFTING ONLY



POS.	DESCRIPTION	MATERIAL
0201	INFERIOR HEAD	P 355 NL2 EN 10028-3
0202	SUPERIOR HEAD	P 355 NL2 EN 10028-3
0203	SHAFT	42CrMo4 EN 10083-3
0204	CYLINDER	E 355 EN 10297-1
0205	PISTON	S 355 J2G3 EN 10025-2
0209	STAY BOLT	42CrMo4 EN 10269
0222	FLANGE	42CrMo4 EN 10083-3
0232	RING NUT	S 355 J2G3 EN 10025-2
0311	STEM	X20Cr 13 EN 10088-1
0313	HANDWHEEL	P 195 TR EN 10216-1
0322	RING NUT	CW 614 N EN 12164
0502	FLANGE	S 355 J2G3 EN 10025-2
0503	SPRING DISC	S 355 J2G3 EN 10025-2
0504	TUBE	E 355 JR EN 10025-2
0505	SAFETY TUBE	E 355 EN 10297-1
0506	SPRING	52SiCrNi5 EN 10089
0509	TUBE SLEEVE	E 355 EN 10297-1
0510	RING NUT	CW 614 N EN 12164
0522	SAFTY NUT	CB 331G EN 1982
0811	PISTON DRIVE	PTFE+GRAPHITE
0901	BUSHING	BRONZE + PTFE

ALL O-RING AND GASKET MATERIAL			
AMB. TEMP.	TEMP	O-RING	GASKET
STANDARD	-20 / +80	N.B.R.	POLYURETHANE
LOW TEMP.	-40 / -60	SILICON	SILICON
HIGH TEMP.	+90 / +120	VITON	VITON



OVERALL DIMENSIONS (mm)							
TYPE	Ø D	H	H1	K	T	Ø V	Y
PCV 300	410	140+S*	see note	110	110	500	1/2" NPT
PCV 360	470	145+S*	see note	120	110	500	1/2" NPT
PCV 420	555	145+S*	see note	120	130	600	1/2" NPT

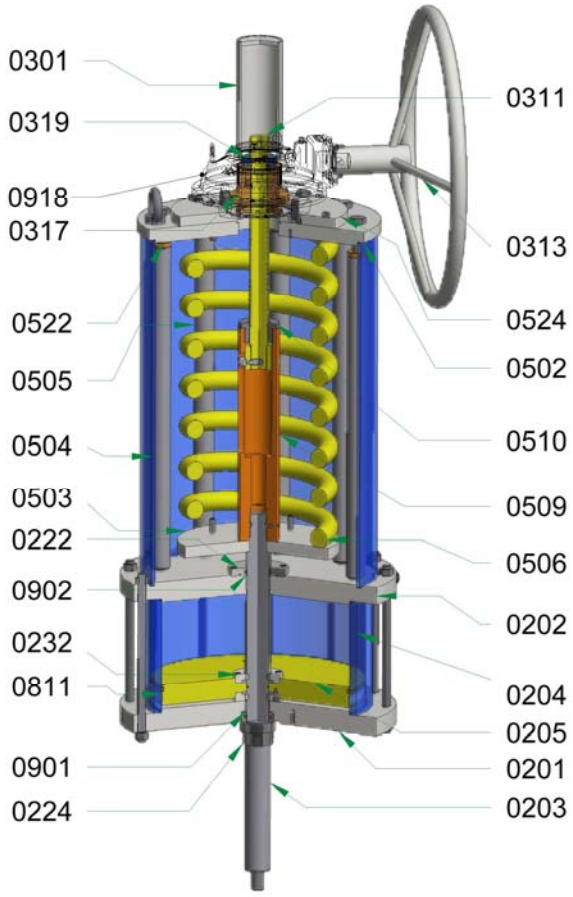
H1 NOTE

FOR TYPE OF SPRING = 1[][] DIMENSION H1 = max. 510 mm.
FOR TYPE OF SPRING = 2[][] DIMENSION H1 = max. 970 mm.
FOR TYPE OF SPRING = 3[][] DIMENSION H1 = max. 1430 mm.

STROKE (S*) = ACTUATOR STROKE (mm)

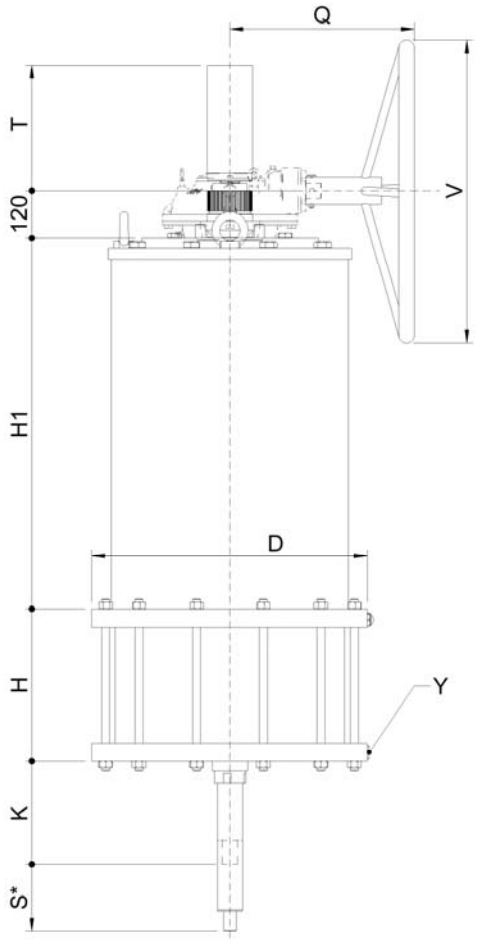
Y = PNEUMATIC ACTUATOR CONNECTION

CAUTION: EYE BOLT FOR ACTUATOR LIFTING ONLY



0902	BUSHING	BRONZE + PTFE
0901	BUSHING	BRONZE + PTFE
0811	PISTON DRIVE *	PTFE+GRAPHITE
0522	SAFETY NUT	CB 331G EN 1982
0524	COUPLING FLANGE	S 355 J2G3 EN 10025-2
0510	RING NUT	42CrMo4 EN 10083-3
0509	TUBE SLEEVE	E 355 EN 10297-1
0506	SPRING	52SiCrNi5 EN 10089
0505	SAFETY TUBE	E 355 EN 10297-1
0504	TUBE	E 355 EN 10297-1
0503	SPRING DISC	S 355 J2G3 EN 10025-2
0502	FLANGE	S 355 JR EN 10025-2
0319	RING NUT	42CrMo4 EN 10083-3
0317	SCREW THREAD	CB 333G EN 1982
0313	HANDWHEEL	P 195 TR EN 10216-1
0311	STEM	X20Cr 13 EN 10088-1
0301	TUBE	E 355 EN 10297-1
0232	RING NUT	S 355 J2G3 EN 10025-2
0224	RING NUT	42CrMo4 EN 10083-3
0222	FLANGE	C40 EN 10083-2
0205	PISTON	S 355 J2G3 EN 10025-2
0204	CYLINDER	E 355 EN 10297-1
0203	SHAFT	42CrMo4 EN 10083-3
0202	HEAD	P 355 NL2 EN 10028-3
0201	HEAD	P 355 NL2 EN 10028-3
Pos.	DESCRIPTION	MATERIAL

ALL O-RING AND GASKET MATERIAL			
AMB. TEMP.	TEMP	O-RING	GASKET
STANDARD	-20 / +80	N.B.R.	POLYURETHANE
LOW TEMP.	-40 / -60	SILICON	SILICON
HIGH TEMP.	+90 / +120	VITON	VITON



OVERALL DIMENSIONS (mm)

TYPE	Ø D	H	H1	K	Q	T	Ø V	Y
PCR 360	470	145+S*	see note	110	330	140+S*	600	1/2" NPT
PCR 420	555	145+S*	see note	110	330	140+S*	600	1/2" NPT
PCR 500	590	150+S*	see note	120	350	140+S*	600	1/2" NPT
PCR 520	640	165+S*	see note	120	350	140+S*	600	1/2" NPT
PCR 600	700	175+S*	see note	120	380	140+S*	800	1/2" NPT
PCR 620	745	180+S*	see note	120	380	140+S*	800	1/2" NPT
PCR 700	830	215+S*	see note	140	400	140+S*	800	3/4" NPT
PCR 800	930	240+S*	see note	140	450	140+S*	800	3/4" NPT

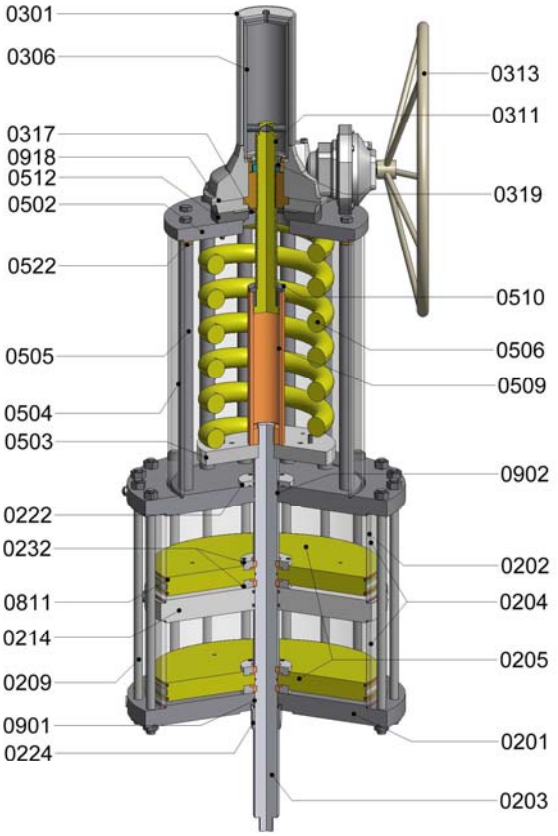
H1 NOTE
FOR TYPE OF SPRING = 1[][] DIMENSION H1 = max. 510 mm.
FOR TYPE OF SPRING = 2[][] DIMENSION H1 = max. 970 mm.
FOR TYPE OF SPRING = 3[][] DIMENSION H1 = max. 1430 mm.

STROKE (S*) = ACTUATOR STROKE (mm)

Y = PNEUMATIC ACTUATOR CONNECTION

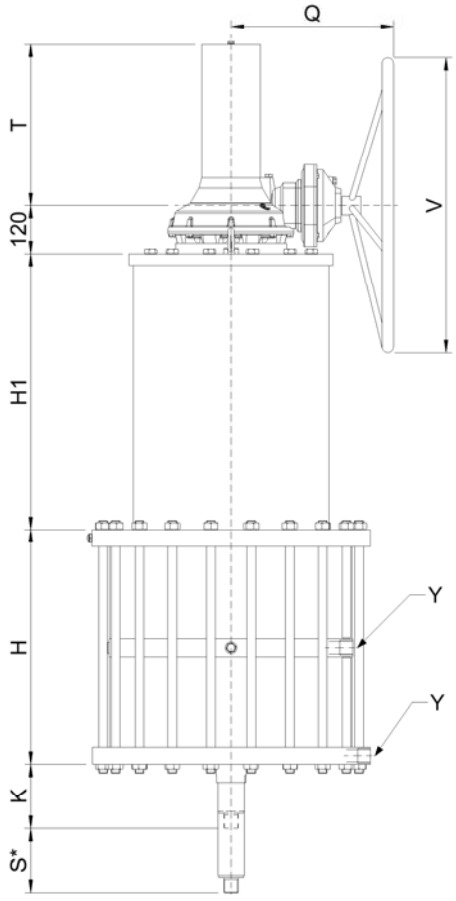
CAUTION: EYE BOLT FOR ACTUATOR LIFTING ONLY

Pneumatic Linear Actuator PCR 420/2 ÷ 800/2



POS.	DESCRIPTION	MATERIAL
0201	INFERIOR HEAD	P 355 NL2 EN 10028-3
0202	SUPERIOR HEAD	P 355 NL2 EN 10028-3
0203	SHAFT	42CrMo4 EN 10083-3
0204	CYLINDER	E 355 EN 10297-1
0205	PISTON	S 355 J2G3 EN 10025-2
0209	STAY BOLT	42CrMo4 EN 10269
0214	CYLINDER	P 355 NL2 EN 10028-3
0222	FLANGE	C40 EN 10083-2
0224	RING NUT	42CrMo4 EN 10083-3
0232	FLANGE	S 355 J2G3 EN 10025-2
0301	TUBE	E 355 EN 10297-1
0306	TUBE	E 355 EN 10297-1
0311	STEM	42CrMo4 EN 10083-3
0313	HANDWHEEL	P 195 TR EN 10216-1
0317	NUT	CB 333G EN 1982
0319	RING NUT	42CrMo4 EN 10083-3
0502	EXTERNAL HEAD	S 355 J2G3 EN 10025-2
0503	DISC SPRING	S 355 J2G3 EN 10025-2
0504	TUBE	E 355 EN 10297-1
0505	SAFETY TUBE	E 355 EN 10297-1
0506	SPRING	52SiCrNi5 EN 10089
0509	TUBE SLEEVE	E 235 EN 10217-1
0510	RING NUT	42CrMo4 EN 10083-3
0512	FLANGE	S 355 J2G3 EN 10025-2
0522	SAFETY NUT	CB 331G EN 1982
0811	PISTON DRIVE	PTFE+GRAPHITE
0901	BUSHING	BRONZE + PTFE
0902	BUSHING	BRONZE + PTFE
0918	REDUCTOR	CAST IRON

ALL O-RING AND GASKET MATERIAL			
AMB. TEMP.	TEMP	O-RING	GASKET
STANDARD	-20 / +80	N.B.R.	POLYURETHANE
LOW TEMP.	-40 / -60	SILICON	SILICON
HIGH TEMP.	+90 / +120	VITON	VITON



OVERALL DIMENSIONS (mm)

TYPE	Ø D	H	H1	K	Q	T	Ø V	Y
PCR 420/2	560	285+2S*	see note	110	330	140+S*	600	1/2" NPT
PCR 500/2	595	305+2S*	see note	120	350	140+S*	600	1/2" NPT
PCR 520/2	645	310+2S*	see note	120	350	140+S*	600	1/2" NPT
PCR 600/2	710	325+2S*	see note	120	380	140+S*	800	1/2" NPT
PCR 620/2	745	345+2S*	see note	120	380	140+S*	800	1/2" NPT
PCR 700/2	840	410+2S*	see note	140	400	140+S*	800	3/4" NPT
PCR 800/2	940	445+2S*	see note	140	450	140+S*	800	3/4" NPT

H1 NOTE

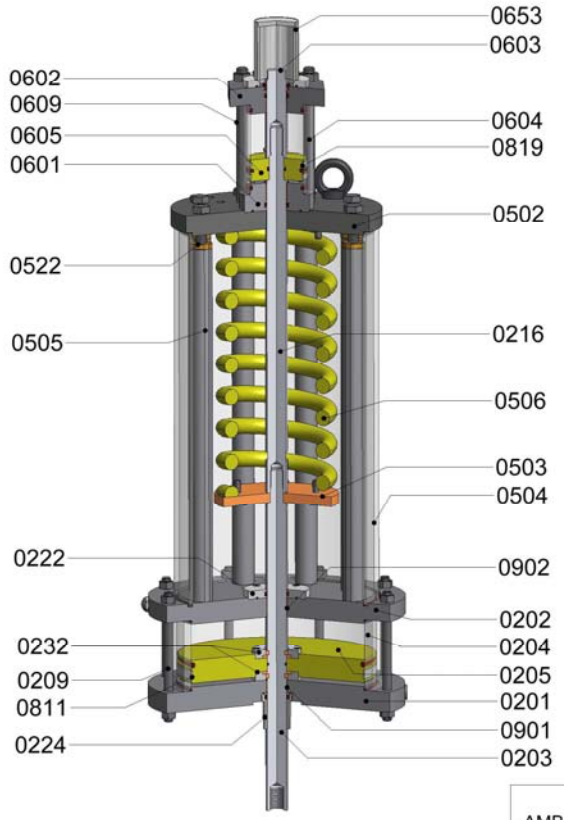
FOR TYPE OF SPRING = 1[][] DIMENSION H1 = max. 510 mm.
FOR TYPE OF SPRING = 2[][] DIMENSION H1 = max. 970 mm.
FOR TYPE OF SPRING = 3[][] DIMENSION H1 = max. 1430 mm.

STROKE (S*) = ACTUATOR STROKE (mm)

Y = PNEUMATIC ACTUATOR CONNECTION

CAUTION: EYE BOLT FOR ACTUATOR LIFTING ONLY

Pneumatic Linear Actuator PCA/H/Z 420 ÷ 800

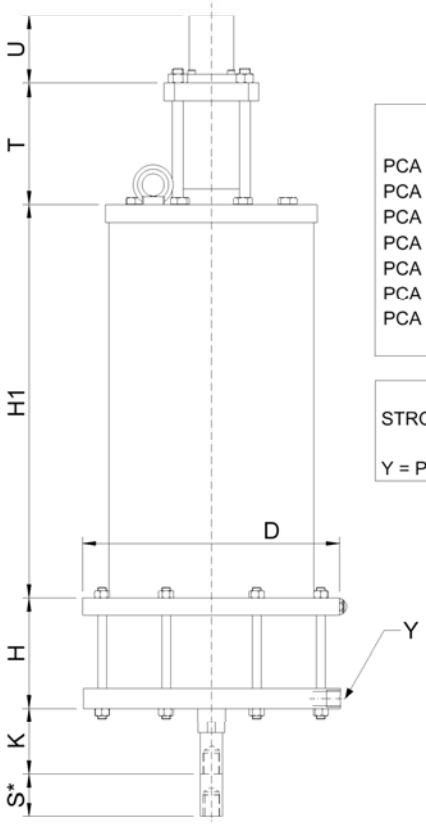


PCA = with damper **PCH** = with hydraulic pump
PCZ = with hydraulic pump and damper

POS.	DESCRIPTION	MATERIAL
0201	INFERIOR HEAD	P 355 NL2 EN 10028-3
0202	SUPERIOR HEAD	P 355 NL2 EN 10028-3
0203	SHAFT	42CrMo4 EN 10083-3
0204	CYLINDER	E 355 EN 10297-1
0205	PISTON	S 355 J2G3 EN 10025-2
0209	STAY BOLT	42CrMo4 EN 10269
0216	SHAFT	42CrMo4 EN 10083-3
0222	FLANGE	C40 EN 10083-2
0224	RING NUT	42CrMo4 EN 10083-3
0232	RING NUT	S 355 J2G3 EN 10025-2
0502	FLANGE	S 355 J2G3 EN 10025-2
0503	SPRING DISC	S 355 J2G3 EN 10025-2
0504	TUBE	E 355 EN 10297-1
0505	SAFETY TUBE	E 355 EN 10297-1
0506	SPRING	52SiCrNi5 EN 10089
0522	SAFETY NUT	CB 331G EN 1982
0601	FLANGE	P 355 NL2 EN 10028-3
0602	HEAD	P 355 NL2 EN 10028-3
0603	SHAFT	42CrMo4 EN 10083-3
0604	HYDRAULIC CYLINDER	E 355 EN 10297-1
0605	HYDRAULIC PISTON	S 355 J2G3 EN 10025-2
0609	STAY BOLT	42CrMo4 EN 10269
0653	CAP	C40 EN 10083-2
0811	PISTON DRIVE	PTFE+GRAPHITE
0819	PISTON DRIVE	PTFE+GRAPHITE
0901	BUSHING	BRONZE + PTFE
0902	BUSHING	BRONZE + PTFE

ALL O-RING AND GASKET MATERIAL

AMB. TEMP.	TEMP	O-RING	GASKET	DAMPER
STANDARD	-20 / +80	N.B.R.	POLYURETHANE	N.B.R.
LOW TEMP.	-40 / -60	SILICON	SILICON	FLUOROSILICONE
HIGH TEMP.	+90 / +120	VITON	VITON	VITON



OVERALL DIMENSIONS (mm)

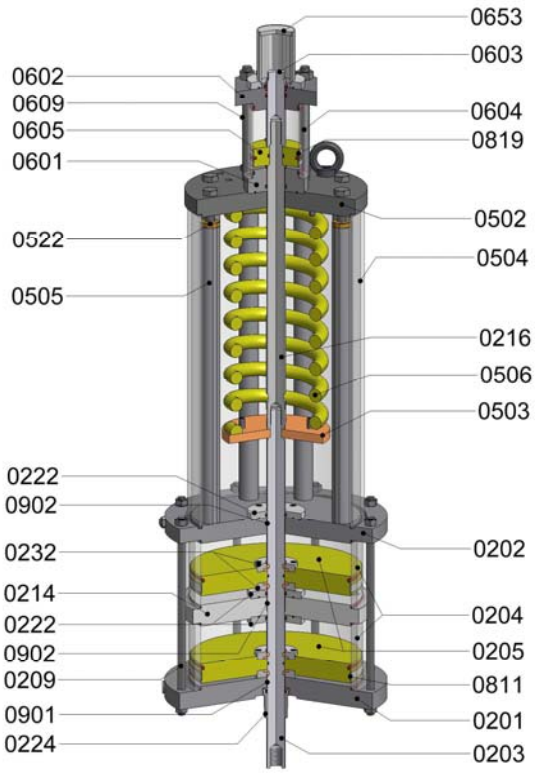
TYPE	Ø D	H	H1	K	T	U	Y
PCA PCH PCZ 420	555	145+S*	170+7S*	110	160+S*	40+S*	1/2" NPT
PCA PCH PCZ 500	590	150+S*	170+7S*	120	160+S*	40+S*	1/2" NPT
PCA PCH PCZ 520	640	165+S*	170+7S*	120	160+S*	40+S*	1/2" NPT
PCA PCH PCZ 600	700	175+S*	170+8S*	120	160+S*	40+S*	1/2" NPT
PCA PCH PCZ 620	745	180+S*	170+8S*	120	160+S*	40+S*	1/2" NPT
PCA PCH PCZ 700	830	215+S*	180+9S*	140	170+S*	40+S*	3/4" NPT
PCA PCH PCZ 800	930	240+S*	180+9S*	140	170+S*	40+S*	3/4" NPT

STROKE (S*) = ACTUATOR STROKE (mm)

Y = PNEUMATIC ACTUATOR CONNECTION

CAUTION: EYE BOLT FOR ACTUATOR LIFTING ONLY

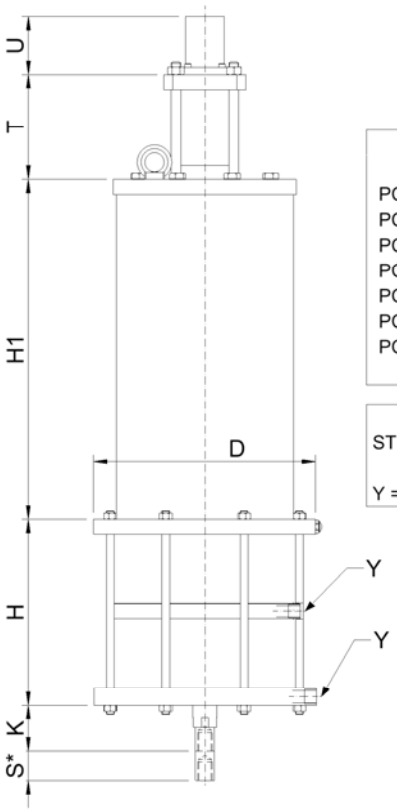
Pneumatic Linear Actuator PCA/H/Z 420/2÷800/2



PCA = with damper **PCH** = with hydraulic pump
PCZ = with hydraulic pump and damper

POS.	DESCRIPTION	MATERIAL
0201	INFERIOR HEAD	P 355 NL2 EN 10028-3
0202	SUPERIOR HEAD	P 355 NL2 EN 10028-3
0203	SHAFT	42CrMo4 EN 10083-3
0204	CYLINDER	E 355 EN 10297-1
0205	PISTON	S 355 J2G3 EN 10025-2
0209	STAY BOLT	42CrMo4 EN 10269
0214	INTERMEDIATE HEAD	P 355 NL2 EN 10028-3
0216	SHAFT	42CrMo4 EN 10083-3
0222	FLANGE	C40 EN 10083-2
0224	RING NUT	42CrMo4 EN 10083-3
0232	FLANGE	S 355 J2G3 EN 10025-2
0502	FLANGE	S 355 J2G3 EN 10025-2
0503	SPRING DISC	S 355 J2G3 EN 10025-2
0504	TUBE	E 355 EN 10297-1
0505	SAFETY TUBE	E 355 EN 10297-1
0506	SPRING	52SiCrNi5 EN 10089
0522	SAFETY NUT	CB 331G EN 1982
0601	INFERIOR HEAD DUMPER	P 355 NL2 EN 10028-3
0602	SUPERIOR HEAD DUMPER	P 355 NL2 EN 10028-3
0603	SHAFT	42CrMo4 EN 10083-3
0604	HYDRAULIC CYLINDER	E 355 EN 10297-1
0605	HYDRAULIC PISTON	S 355 J2G3 EN 10025-2
0609	STAY BOLT	42CrMo4 EN 10269
0653	CAP	C40 EN 10083-2
0811	PISTON DRIVE	PTFE+GRAPHITE
0819	PISTON DRIVE	PTFE+GRAPHITE
0901	BUSHING	BF = BRONZE + PTFE
0902	BUSHING	BF = BRONZE + PTFE

ALL O-RING AND GASKET MATERIAL				
AMB. TEMP.	TEMP	O-RING	GASKET	DAMPER
STANDARD	-20 / +80	N.B.R.	POLYURETHANE	N.B.R.
LOW TEMP.	-40 / -60	SILICON	SILICON	FLUOROSILICONE
HIGH TEMP.	+90 / +120	VITON	VITON	VITON

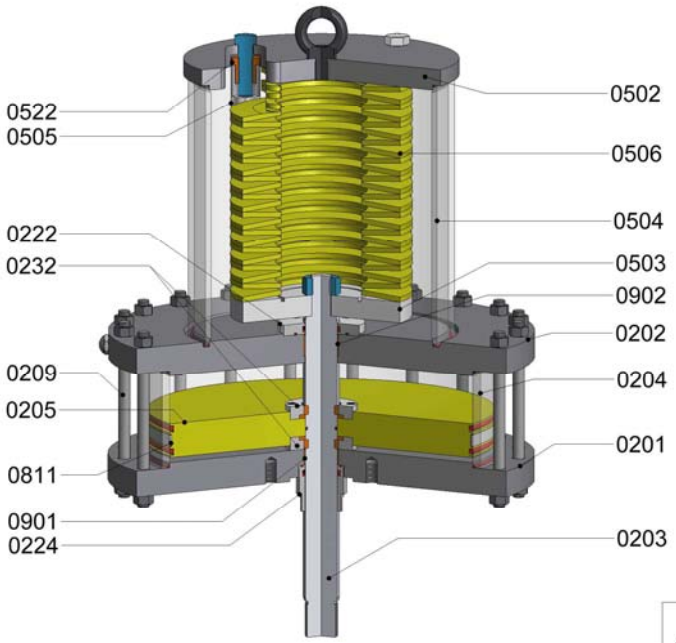


OVERALL DIMENSIONS (mm)							
TYPE	Ø D	H	H1	K	T	U	Y
PCA PCH PCZ 420/2	560	285+2S*	170+7S*	110	170+7S*	40+S*	1/2" NPT
PCA PCH PCZ 500/2	595	305+2S*	170+7S*	120	170+7S*	40+S*	1/2" NPT
PCA PCH PCZ 520/2	645	310+2S*	170+7S*	120	170+7S*	40+S*	1/2" NPT
PCA PCH PCZ 600/2	710	325+2S*	170+8S*	120	180+8S*	40+S*	1/2" NPT
PCA PCH PCZ 620/2	755	345+2S*	170+8S*	120	180+8S*	40+S*	1/2" NPT
PCA PCH PCZ 700/2	840	410+2S*	180+9S*	140	190+9S*	40+S*	3/4" NPT
PCA PCH PCZ 800/2	940	445+2S*	180+9S*	140	190+9S*	40+S*	3/4" NPT

STROKE (S*) = ACTUATOR STROKE (mm)

Y = PNEUMATIC ACTUATOR CONNECTION

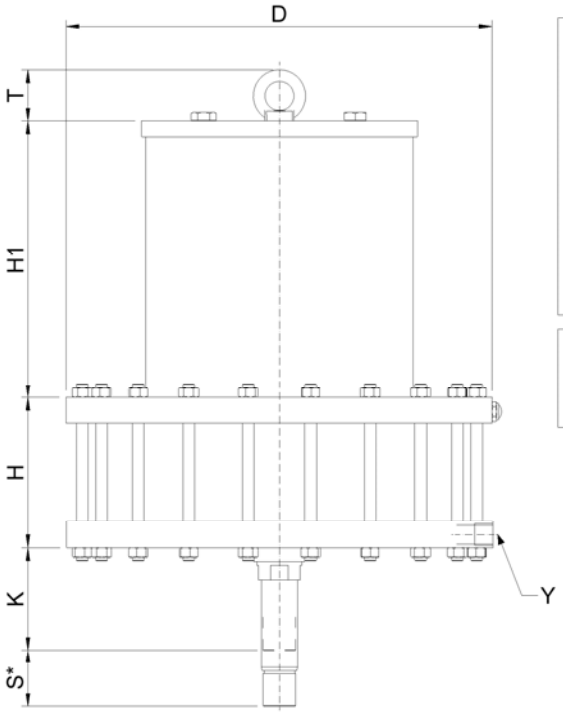
CAUTION: EYE BOLT FOR ACTUATOR LIFTING ONLY



POS.	DESCRIPTION	MATERIAL
0201	INFERIOR HEAD	P 355 NL2 EN 10028-3
0202	SUPERIOR HEAD	P 355 NL2 EN 10028-3
0203	SHAFT	42CrMo4 EN 10083-3
0204	CYLINDER	E 355 EN 10297-1
0205	PISTON	S 355 J2G3 EN 10025-2
0209	STAY BOLT	42CrMo4 EN 10269
0222	FLANGE	S 355 J2G3 EN 10025-2
0224	RING NUT	42CrMo4 EN 10083-3
0232	RING NUT	S 355 J2G3 EN 10025-2
0502	FLANGE	S 355 J2G3 EN 10025-2
0503	SPRING DISC	S 355 J2G3 EN 10025-2
0504	TUBE	S 355 JR EN 10025-2
0505	SAFETY TUBE	E 355 EN 10297-1
0506	SPRING	51CrV4 EN 10089
0522	SAFETY NUT	CB331G EN 1982
0811	PISTON DRIVE	PTFE+GRAPHITE
0901	BUSHING	BRONZE + PTFE
0902	BUSHING	BRONZE + PTFE

ALL O-RING AND GASKET MATERIAL

AMB. TEMP.	TEMP	O-RING	GASKET
STANDARD	-20 / +80	N.B.R.	POLYURETHANE
LOW TEMP.	-40 / -60	SILICON	SILICON
HIGH TEMP.	+90 / +120	VITON	VITON



OVERALL DIMENSIONS (mm)

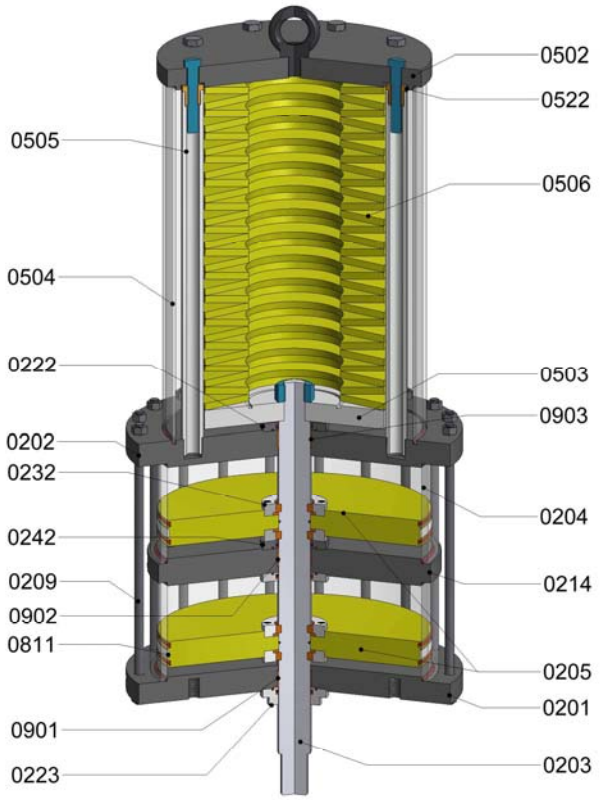
TYPE	Ø D	H	H1	K	T	Y
PCT 300	410	140+S*	105+6S*	110	65	1/2" NPT
PCT 360	470	165+S*	165+6S*	110	65	1/2" NPT
PCT 420	555	165+S*	105+6S*	110	65	1/2" NPT
PCT 500	590	135+S*	105+6S*	120	65	1/2" NPT
PCT 520	640	135+S*	105+7S*	120	65	1/2" NPT
PCT 600	700	145+S*	105+7S*	120	80	1/2" NPT
PCT 620	745	145+S*	105+7S*	120	80	1/2" NPT
PCT 700	830	145+S*	115+8S*	140	80	3/4" NPT
PCT 800	930	180+S*	115+8S*	140	80	3/4" NPT

STROKE (S*) = ACTUATOR STROKE (mm)

Y = PNEUMATIC ACTUATOR CONNECTION

CAUTION: EYE BOLT FOR ACTUATOR LIFTING ONLY

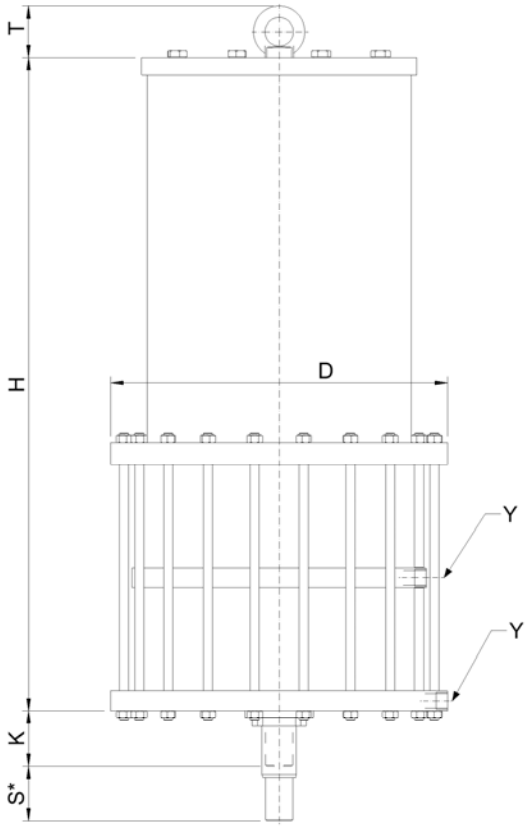
Pneumatic Linear Actuator PCT 420/2 ÷ 800/2



POS.	DESCRIPTION	MATERIAL
0201	INFERIOR HEAD	P 355 NL2 EN 10028-3
0202	SUPERIOR HEAD	P 355 NL2 EN 10028-3
0203	SHAFT	42CrMo4 EN 10083-3
0204	CYLINDER	E 355 EN 10297-1
0205	PISTON	S 355 J2G3 EN 10025-2
0209	STAY BOLT	42CrMo4 EN 10269
0214	INTERMEDIATE HEAD	P 355 NL2 EN 10028-3
0222	FLANGE	S 355 J2G3 EN 10025-2
0223	FLANGE	42CrMo4 EN 10083-3
0232	FLANGE	S 355 J2G3 EN 10025-2
0242	FLANGE	S 355 J2G3 EN 10025-2
0502	FLANGE	S 355 J2G3 EN 10025-2
0503	SPRIN DISC	S 355 J2G3 EN 10025-2
0504	TUBE	E 355 JR EN 10025-2
0505	SAFETY TUBE	E 355 EN 10297-1
0506	SPRING	52SiCrNi5 EN 10089
0522	SAFETY NUT	CB 331G EN 1982
0811	PISTON DRIVE	PTFE+GRAPHITE
0901	BUSHING	BRONZE + PTFE
0902	BUSHING	BRONZE + PTFE
0903	BUSHING	BRONZE + PTFE

ALL O-RING AND GASKET MATERIAL

AMB. TEMP.	TEMP	O-RING	GASKET
STANDARD	-20 / +80	N.B.R.	POLYURETHANE
LOW TEMP.	-40 / -60	SILICON	SILICON
HIGH TEMP.	+90 / +120	VITON	VITON



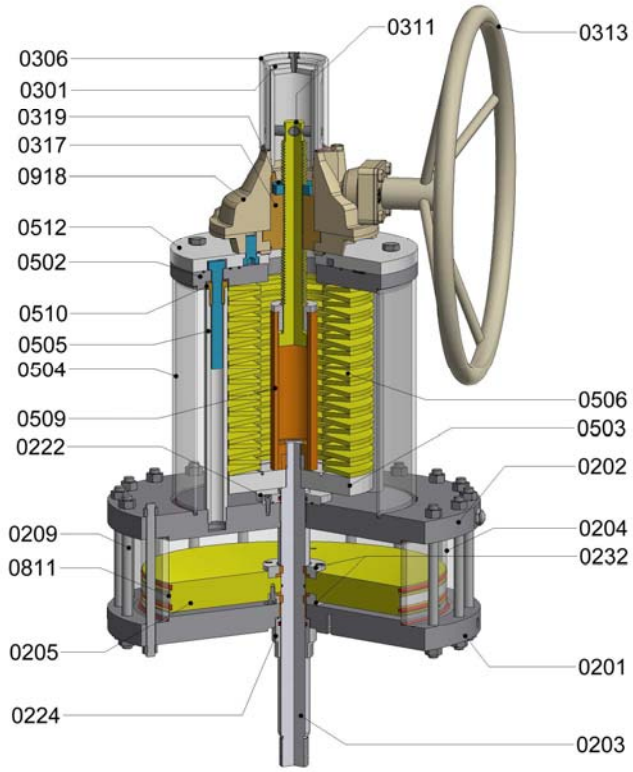
OVERALL DIMENSIONS (mm)

TYPE	Ø D	H	H1	K	T	Y
PCT 420/2	560	285+2S*	105+6S*	110	75	1/2" NPT
PCT 500/2	595	305+2S*	105+6S*	120	75	1/2" NPT
PCT 520/2	645	310+2S*	105+7S*	120	75	1/2" NPT
PCT 600/2	710	325+2S*	105+7S*	120	75	1/2" NPT
PCT 620/2	745	345+2S*	105+7S*	120	75	1/2" NPT
PCT 700/2	840	410+2S*	115+8S*	140	110	3/4" NPT
PCT 800/2	940	445+2S*	115+8S*	140	110	3/4" NPT

STROKE (S*) = ACTUATOR STROKE (mm)

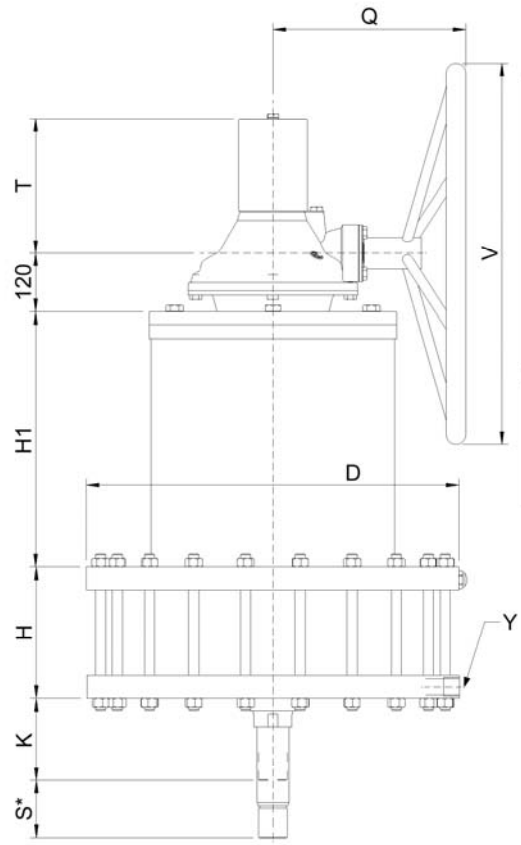
Y = PNEUMATIC ACTUATOR CONNECTION

CAUTION: EYE BOLT FOR ACTUATOR LIFTING ONLY



POS.	DESCRIPTION	MATERIAL
0201	INFERIOR HEAD	P 355 NL2 EN 10028-3
0202	SUPERIOR HEAD	P 355 NL2 EN 10028-3
0203	SHAFT	42CrMo4 EN 10083-3
0204	CYLINDER	E 355 EN 10297-1
0205	PISTON	S 355 J2G3 EN 10025-2
0209	STAY BOLT	42CrMo4 EN 10269
0222	FLANGE	C40 EN 10083-2
0224	RING NUT	42CrMo4 EN 10083-3
0232	RING NUT	S 355 J2G3 EN 10025-2
0233	HALF RING	42CrMo4 EN 10083-3
0236	RING	42CrMo4 EN 10083-3
0301	TUBE	E 355 EN 10297-1
0306	TUBE	E 355 EN 10297-1
0311	STEM	X20Cr 13 EN 10088-1
0313	HANDWHEEL	P 195 TR EN 10216-1
0317	SCREW	CB 333G EN 1982
0319	RING NUT	42CrMo4 EN 10083-3
0502	FLANGE	S 355 J2G3 EN 10025-2
0503	SPRING DISC	S 355 J2G3 EN 10025-2
0504	TUBE	S 355 JR EN 10025-2
0505	SAFETY TUBE	E 355 EN 10297-1
0506	SPRING	51CrV4 EN 10089
0509	TUBE SLEEVE	E 355 EN 10297-1
0510	RING NUT	CB331G EN 1982
0512	FLANGE	S 355 J2G3 EN 10025-2
0522	SAFETY NUT	CB331G EN 1982
0811	PISTON DRIVE	PTFE+GRAPHITE
0901	BUSHING	BRONZE + PTFE
0902	BUSHING	BRONZE + PTFE
0918	REDUCTOR	CAST IRON

ALL O-RING AND GASKET MATERIAL			
AMB. TEMP.	TEMP	O-RING	GASKET
STANDARD	-20 / +80	N.B.R.	POLYURETHANE
LOW TEMP.	-40 / -60	SILICON	SILICON
HIGH TEMP.	+90 / +120	VITON	VITON



OVERALL DIMENSIONS (mm)

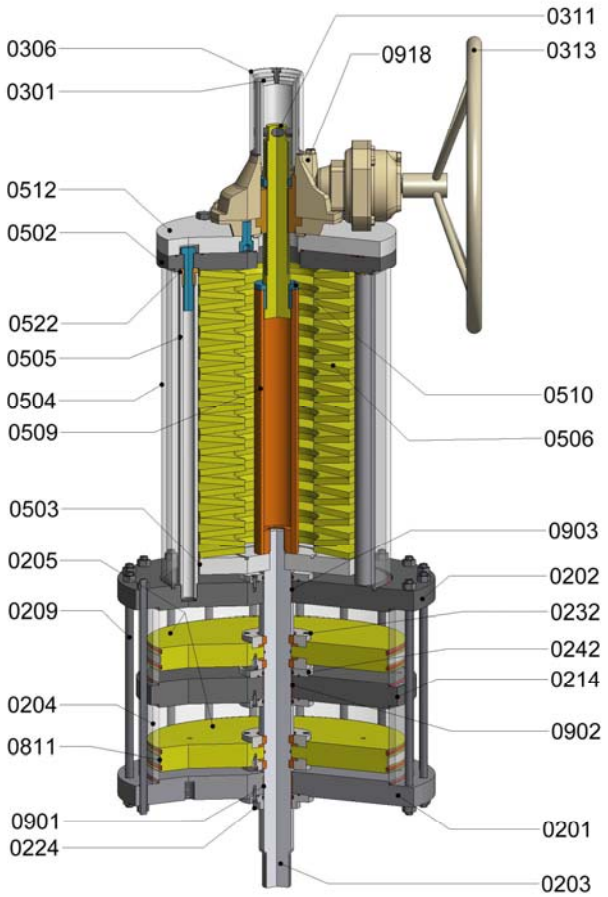
TYPE	Ø D	H	H1	K	Q	T	Ø V	Y
PCRT 360	470	145+S*	165+6S*	110	330	140+S*	600	1/2" NPT
PCRT 420	555	145+S*	105+6S*	110	330	140+S*	600	1/2" NPT
PCRT 500	590	150+S*	105+6S*	120	350	140+S*	600	1/2" NPT
PCRT 520	640	165+S*	105+7S*	120	350	140+S*	600	1/2" NPT
PCRT 600	700	175+S*	105+8S*	120	380	140+S*	800	1/2" NPT
PCRT 620	745	180+S*	105+8S*	120	380	140+S*	800	1/2" NPT
PCRT 700	830	215+S*	115+8S*	140	400	140+S*	800	3/4" NPT
PCRT 800	930	240+S*	115+8S*	140	450	140+S*	800	3/4" NPT

STROKE (S*) = REQUESTED ACTUATOR STROKE (mm)
STANDARD ACTUATOR STROKE S* = 55 mm

Y = PNEUMATIC ACTUATOR CONNECTION

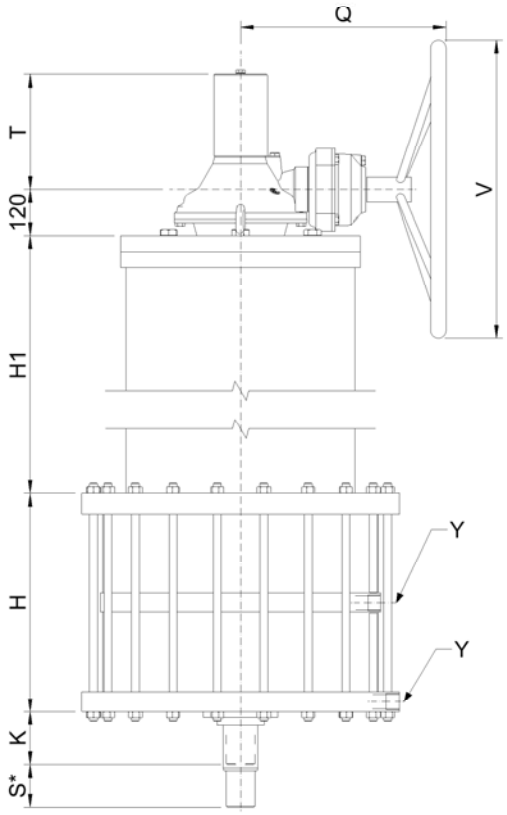
CAUTION: EYE BOLT FOR ACTUATOR LIFTING ONLY

Pneumatic Linear Actuator PCRT 420/2÷800/2



POS.	DESCRIPTION	MATERIAL
0201	INFERIOR HEAD	P 355 NL2 EN 10028-3
0202	SUPERIOR HEAD	P 355 NL2 EN 10028-3
0203	SHAFT	42CrMo4 EN 10083-3
0204	CYLINDER	E 355 EN 10297-1
0205	PISTON	S 355 J2G3 EN 10025-2
0209	STAY BOLT	42CrMo4 EN 10269
0214	CYLINDER	P 355 NL2 EN 10028-3
0222	FLANGE	C40 EN 10083-2
0224	RING NUT	42CrMo4 EN 10083-3
0232	FLANGE	S 355 J2G3 EN 10025-2
0301	TUBE	E 355 EN 10297-1
0306	TUBE	E 355 EN 10297-1
0311	STEM	42CrMo4 EN 10083-3
0313	HANDWHEEL	P 195 TR EN 10216-1
0317	NUT	CB 333G EN 1982
0319	RING NUT	42CrMo4 EN 10083-3
0502	EXTERNAL HEAD	S 355 J2G3 EN 10025-2
0503	SPRING DISC	S 355 J2G3 EN 10025-2
0504	TUBE	E 355 EN 10297-1
0505	SAFETY TUBE	E 355 EN 10297-1
0506	SPRING	51CrV4 EN 10089
0509	TUBE SLEEVE	E 235 EN 10217-1
0510	RING NUT	42CrMo4 EN 10083-3
0512	FLANGE	S 355 J2G3 EN 10025-2
0522	SAFETY NUT	CB 331G EN 1982
0811	PISTON DRIVE	PTFE+GRAPHITE
0901	BUSHING	BRONZE + PTFE
0902	BUSHING	BRONZE + PTFE
0918	REDUCTOR	CAST IRON

ALL O-RING AND GASKET MATERIAL			
AMB. TEMP.	TEMP	O-RING	GASKET
STANDARD	-20 / +80	N.B.R.	POLYURETHANE
LOW TEMP.	-40 / -60	SILICON	SILICON
HIGH TEMP.	+90 / +120	VITON	VITON



OVERALL DIMENSIONS (mm)

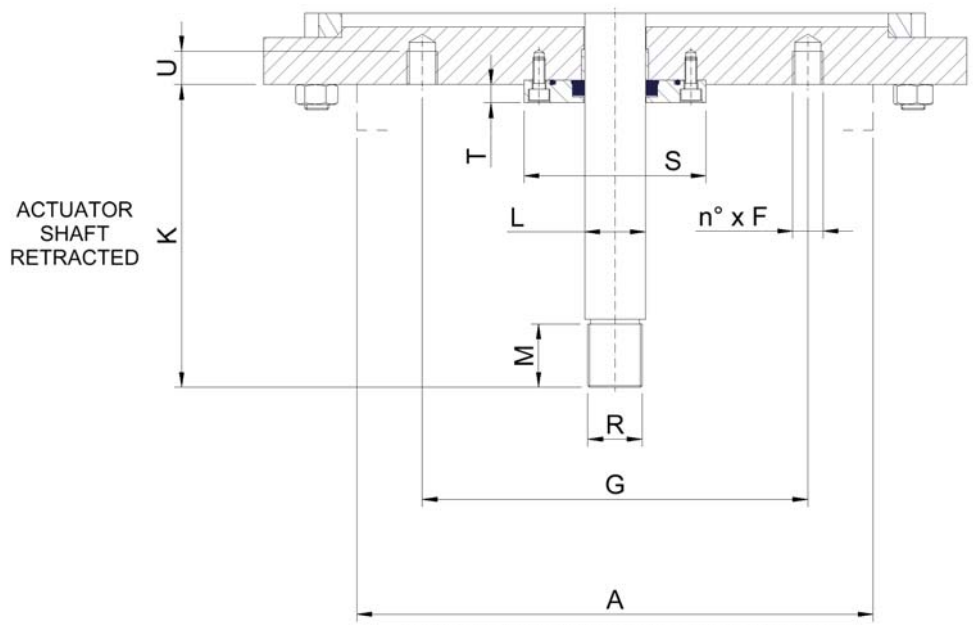
TYPE	Ø D	H	H1	K	Q	T	Ø V	Y
PCRT 420/2	560	285+2S*	105+6S*	110	330	140+S*	600	1/2" NPT
PCRT 500/2	595	305+2S*	105+6S*	120	350	140+S*	600	1/2" NPT
PCRT 520/2	645	310+2S*	105+7S*	120	350	140+S*	600	1/2" NPT
PCRT 600/2	710	325+2S*	105+7S*	120	380	140+S*	800	1/2" NPT
PCRT 620/2	745	345+2S*	105+7S*	120	380	140+S*	800	1/2" NPT
PCRT 700/2	840	410+2S*	115+8S*	140	400	140+S*	800	3/4" NPT
PCRT 800/2	940	445+2S*	115+8S*	140	450	140+S*	800	3/4" NPT

STROKE (S*) = ACTUATOR STROKE (mm)

Y = PNEUMATIC ACTUATOR CONNECTION

CAUTION: EYE BOLT FOR ACTUATOR LIFTING ONLY

STANDARD ACTUATOR COUPLING FLANGE



CYLINDER TYPE	Ø A	F	Ø G	K	Ø L	M	R	Ø S	T	U
125	-	4 x M 12	125	90	25	25	M 20	90	8	15
160	-	4 x M 16	165	90	25	25	M 20	90	8	15
200	-	4 x M 16	165	90	30	30	M 24	90	8	15
250	210	4 x M 16	165	90	30	35	M 27	90	8	15
300	210	4 x M 20	165	110	40	40	M 32 x 2	120	12	15
360	290	4 x M 20	254	110	40	45	M 36 x 2	120	12	15
420	290	4 x M 20	254	110	50	50	M 42 x 2	120	12	25
500	400	8 x M 20	356	120	50	55	M 48 x 2	120	12	25
520	400	8 x M 20	356	120	60	55	M 48 x 2	120	12	25
600	400	8 x M 20	356	120	60	60	M 52 x 2	120	12	25
620	400	8 x M 20	356	120	60	60	M 52 x 2	120	12	30
700	470	8 x M 30	406	140	70	65	M 58 x 2	150	12	35
800	470	8 x M 30	406	140	80	75	M 68 x 2	150	12	35
420/2	400	8 x M 20	356	110	60	60	M 52 X 2	120	12	25
500/2	400	8 x M 20	356	120	60	65	M 58 x 2	120	12	25
520/2	400	8 x M 20	356	120	70	65	M 58 x 2	150	12	25
600/2	470	8 x M 30	406	120	70	75	M 68 x 2	150	12	25
620/2	470	8 x M 30	406	120	70	75	M 68 x 2	150	12	30
700/2	560	8 x M 36	483	140	80	85	M 78 x 2	150	12	35
800/2	560	8 x M 36	483	140	90	85	M 78 x 2	150	19	35

CUSTOMIZED COUPLING FLANGE OR YOKE ACCORDING
TO CUSTOMER REQUIREMENTS ON REQUEST