

TWIN CYLINDERS

SERIES QX

Double-acting, magnetic, guided
 Ø 10x2, 16x2, 20x2, 25x2, 32x2 mm



- High force
- Precise movement
- Integrated guide
- QXB:
 - Linear ball bearings
- QXT:
 - Sintered bronze bushes

Series QX actuators offer a wide range of solutions covering a great number of applications which require a guided linear movement.

The design of the double piston, besides assuring a solid and effective guide, offers double force in compact dimensions. Where a high force with precise movement is required, along with a non-rotation function and integrated guide, the QX cylinders are the ideal solution.

The range includes two guide versions with sintered bronze bushes or with linear ball bearings.

General Data

Type of construction	Compact, non magnetic QXT = sintered bronze bushes - QXB = linear ball bearings
Operation	Double-acting
Materials	Body and flange = anodized AL QXT piston rod = stainless steel AISI 303 - QXB piston rod = hardened steel C50 Seals = PU
Mounting method	By means of threaded holes
Strokes	From 10 to 100
Operating temperature	0° ÷ 80°C (with dry air - 20°C)
Operating speed	50 ÷ 500 mm/s
Operating pressure	1 ÷ 10 bar
Fluid	Clean air, without lubrication. If lubricated air is used, it is recommended to use oil ISOVG32. Once applied the lubrication should never be interrupted.

TWIN CYLINDERS
SERIES QX - STROKES
Standard strokes

■ = Double-acting

∅	10	20	30	40	50	75	100
10	■	■	■	■	■	■	
16	■	■	■	■	■	■	■
20	■	■	■	■	■	■	■
25	■	■	■	■	■	■	■
32	■	■	■	■	■	■	■

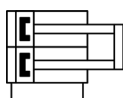
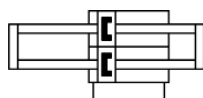
Coding Examples

QX	T	2	A	020	A	050
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QX	SERIES	
T	VERSION T = sintered bronze bushes B = linear ball bearings	
2	OPERATION 2 = double-acting (1 flange) radial/axial pressure supply (∅10 on the side only) 3 = double-acting through-rod (double-flange), radial pressure supply	PNEUMATIC SYMBOLS CD15 CD16
A	MATERIALS A = anodized aluminium body, rolled stainless steel AISI 303 (QXT) or hardened steel C50 (QXB) piston rod	
020	BORE 010 = 10 mm 016 = 16 mm 020 = 20 mm 025 = 25 mm 032 = 32 mm	
A	TYPE OF DESIGN A = standard	
050	STROKE (see the table)	
	CERTIFICATIONS = Standard EX = ATEX	

Pneumatic symbols

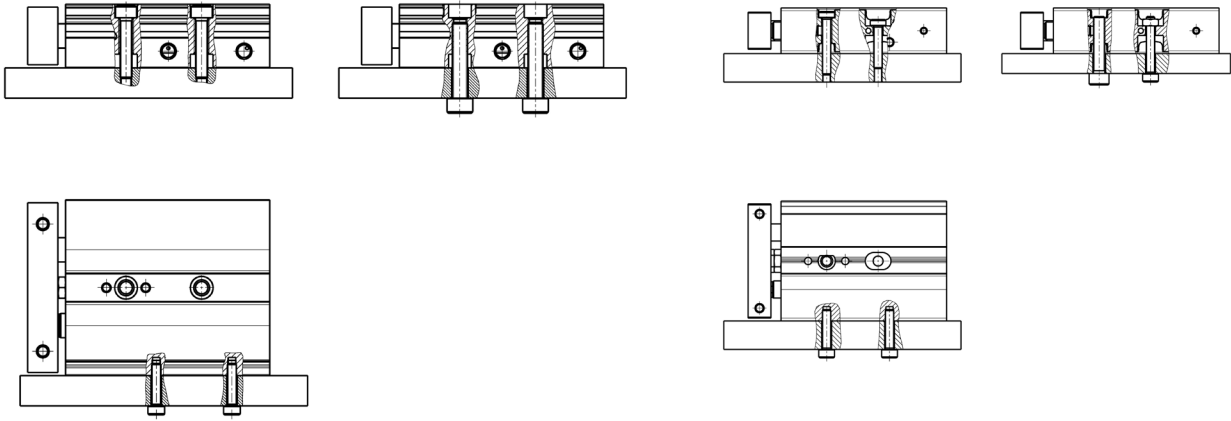
The pneumatic symbols which have been indicated in the CODING EXAMPLE are shown below.

CD15

CD16


Fixing examples with flange in motion

(1) For diameters from 16 to 32

(2) To mount the sensors of QX cylinders $\varnothing 10$ in the middle grooves, it is advisable to use M3 screws UNI 9327 and nuts M3 UNI 5589.



(1)

(2)

Fixing examples with cylinder body in motion

The front and rear regulation screw allows the adjustment of the stroke up to -10mm .

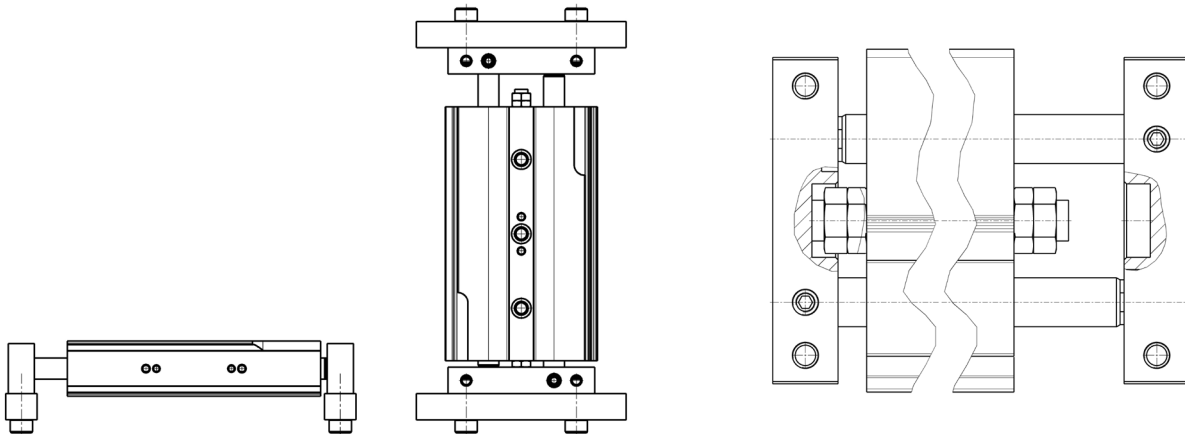
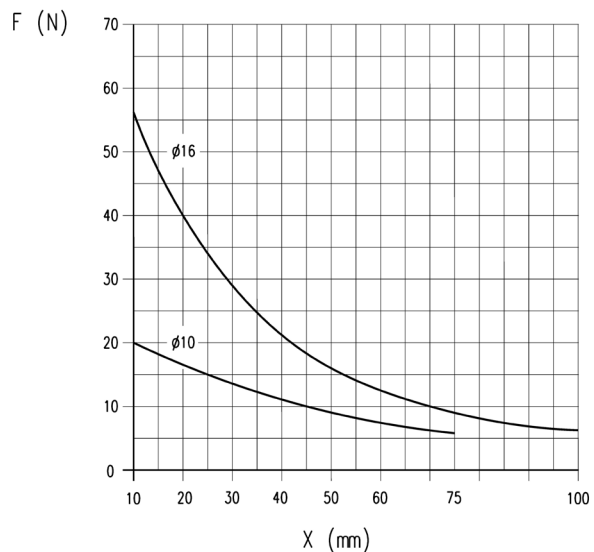
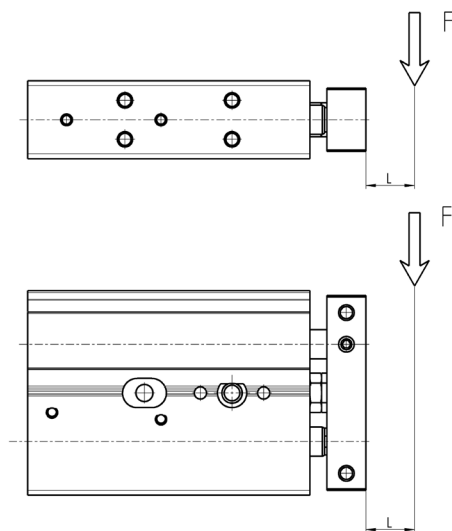


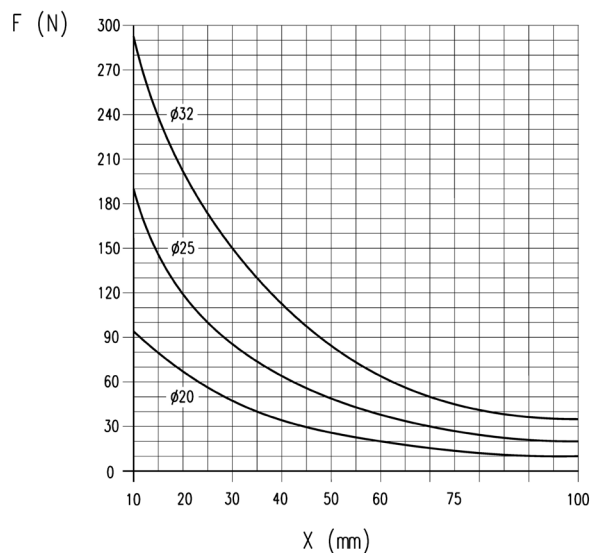
Diagram of max. applicable loads depending on the stroke (X)



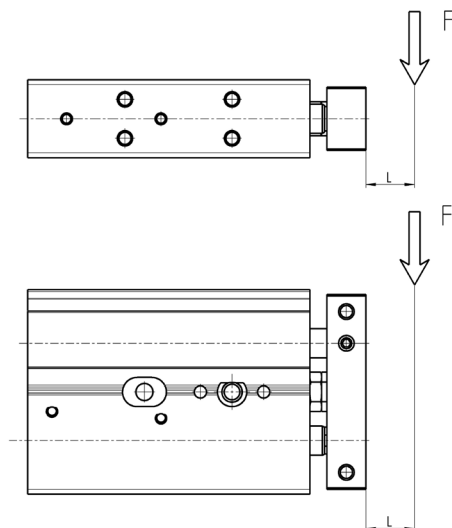
X = cylinder stroke mm
 F = load applied on the flange in N



Load "F" should be considered fixed on the flange of the cylinder and with a theoretical projection of $L = 0$ mm.

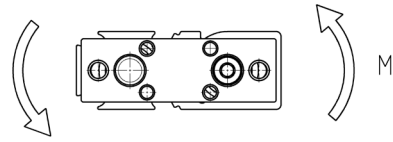
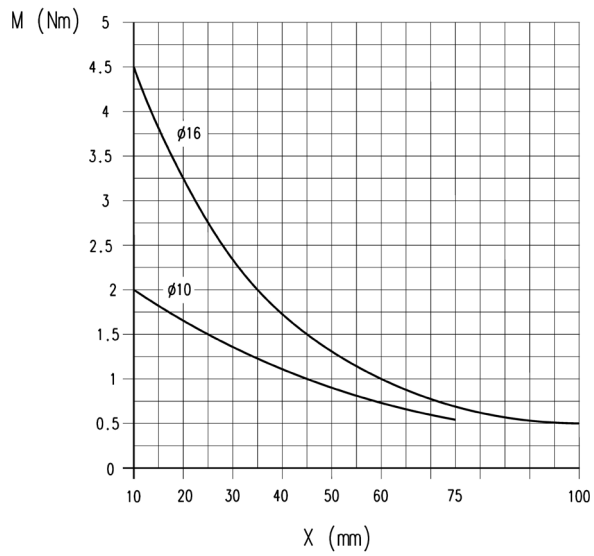


X = cylinder stroke mm.
 F = load applied on the flange in N.

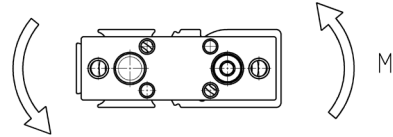
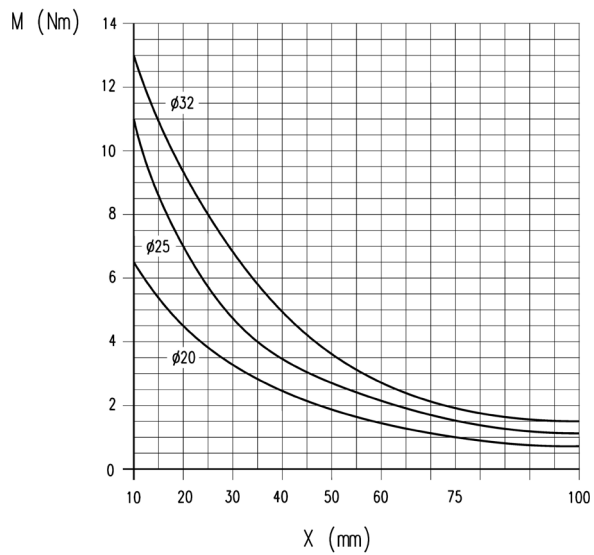


Load "F" should be considered fixed on the flange of the cylinder and with a theoretical projection of $L = 0$ mm.

Diagram of max. torque moment depending on the stroke (X)



X = cylinder stroke in mm
M = torque moment applied on the flange in Nm

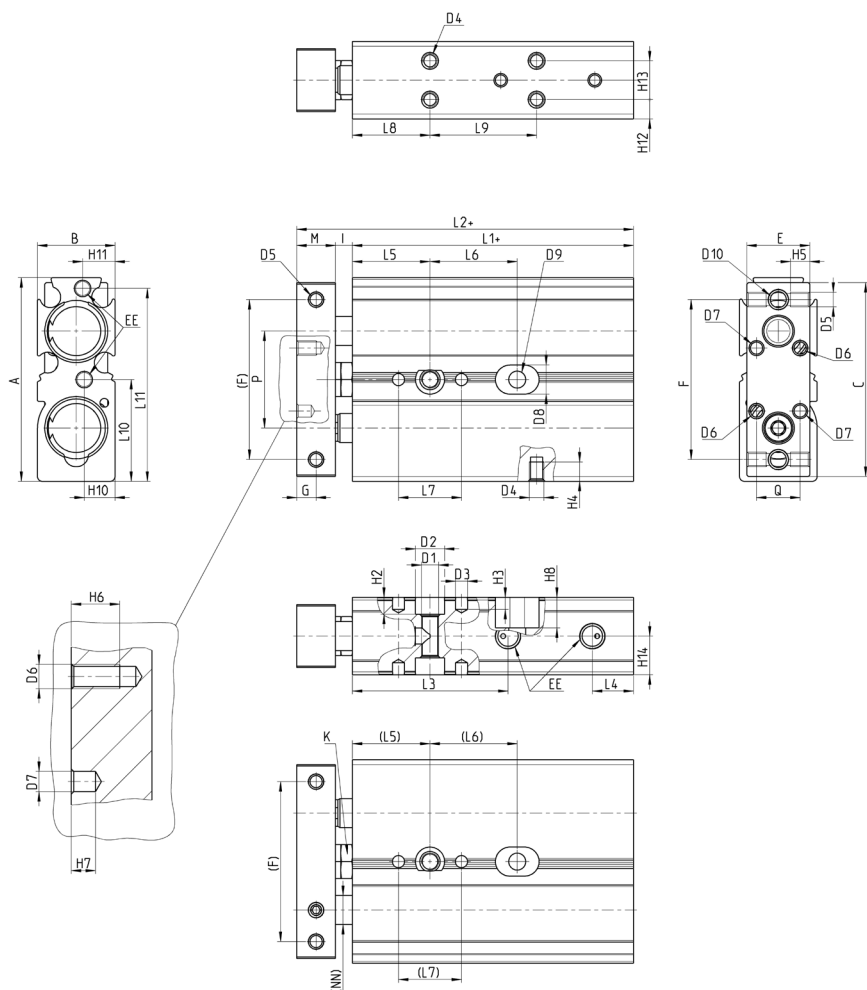


X = cylinder stroke in mm
M = torque moment applied on the flange in Nm

Cylinders, single flange

PNEUMATIC ACTUATION

1



+ = add the stroke

TWIN CYLINDERS
SERIES QX - DIMENSIONS

+ = add the stroke

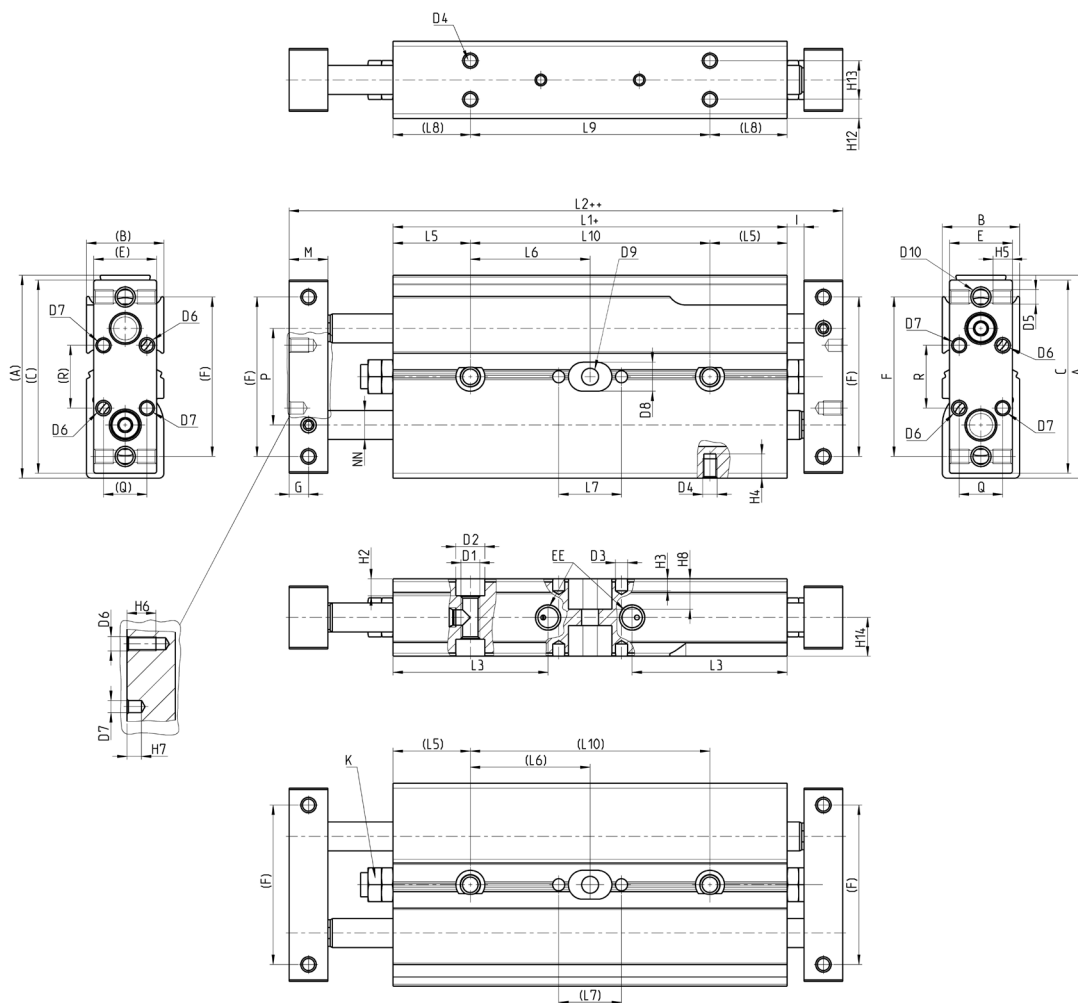
Stroke [mm]	Ø 10	Ø 16	Ø 20	Ø 25	Ø 32
A	42	58	62	76	94
B	16	21	25	30	37
C	40	56	60	71	92
E	13	19	22	27	35
F	33	42	50	60	75
G	4	5	6	6	8
I	3,5	2,5	4,5	4,5	4
M	8	10	12	12	16
Q	9	11	16	16	16
R	13	13	18	18	18
L1+	48	57,5	67,5	70,5	80,5
L2+	59,5	70	84	87	100,5
L3	32,1	34	39,5	44,0	46,5
L4	8,5	8,5	9	8,5	12
L5	16	20	25	30	30
L6	10	18	25	30	40
L6	20	28	25	30	40
L6	30	38	35	40	50
L6	40	48	35	40	50
L6	50	58	35	40	50
L6	75	83	45	60	70
L6	100	-	55	60	70
L7	13	13	20	20	20
L8	16	30	30	30	30
L9	10	22	25	30	40
L9	20	32	25	30	40
L9	30	42	35	40	50
L9	40	52	35	40	50
L9	50	62	35	40	50
L9	75	87	45	60	70
L9	100	-	55	60	70
L10	-	29	31	38	47
L11	-	52	57,2	71,5	47
H2	3,5	4,5	5,5	6,5	6,5
H3	2,5	4,0	4,0	4,0	4,0
H4	4,0	5,0	4,5	5,0	7,5
H5	6,5	6,0	6,0	6,0	7,5
H6	8,0	6,0	8,0	8,0	8,0
H7	3,0	3,0	4,0	4,0	4,0
H8	6,3	-	-	-	-
H10	-	10,5	10,5	15	8,5
H11	-	16,5	20,2	21,5	28,5
H12	4	10,5	8,00	8,5	8,5
H13	8	-	9,0	13,0	20,0
H14	8	5,5	12,5	15,0	18,5
D1	M4	M5	M6	M8	M8
D2	6	7,5	9,5	10,5	10,5
D3	2,5	2,5	4	4	4
D4	M3	M3	M4	M5	M5
D5	M3	M4	M4	M5	M5
D6	M3	M3	M4	M4	M4
D7	2,5	2,5	4,0	4,0	4,0
D8	6,0	-	-	-	-
D9	3,5	-	-	-	-
D10	M4	M5	M5	M6	M6
NN	6	8	10	12	16
EE	M5	M5	M5	M5	G1/8
K	7	7	8	8	10
P	20	25	29	35	45

For out of standard intermediate strokes (ex. stroke 37), you have to consider the dimensions referring to the immediately higher stroke (ex. stroke 40) with a maximum permitted reduction of 10 mm.

Cylinders, double flange

PNEUMATIC ACTUATION

1



+ = add the stroke

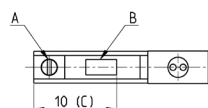
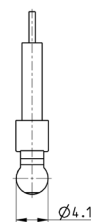
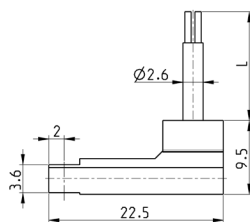
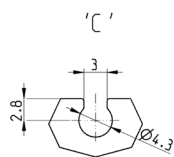
TWIN CYLINDERS
SERIES QX - DIMENSIONS

+ = add the stroke

++ = add the stroke 2 times

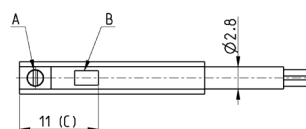
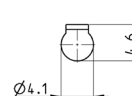
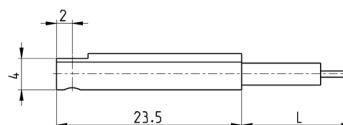
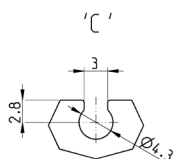
	Stroke [mm]	Ø 10	Ø 16	Ø 20	Ø 25	Ø 32
A		42	58	62	76	94
B		16	21	25	30	37
C		40	56	60	71	92
E		13	19	22	27	35
F		33	42	50	60	45
G		4	5	6	6	6
I		3,5	2,5	4,5	4,5	4
M		8	10	12	12	16
Q		9	11	16	16	16
R		13	13	18	18	18
L1+		72	86,6	98	104,2	115,6
L2++		95	111,6	131	137,2	155,6
L3		32,1	34	39,5	44	46,5
L5		16	20	25	30	30
L6	10	25	28,3	29,0	27,1	32,8
L6	20	30	33,3	34,0	32,1	37,8
L6	30	35	38,3	39,0	37,1	42,8
L6	40	40	43,3	44,0	42,1	47,8
L6	50	45	48,3	49,0	47,1	52,8
L6	75	57,3	60,8	61,5	59,6	65,3
L6	100	-	73,3	74,0	72,1	77,8
L7		13	13	20	20	20
L8		16	30	30	30	30
L9	10	49,6	36,6	48	54,2	65,6
L9	20	59,6	46,6	58	64,2	75,6
L9	30	69,6	56,6	68	74,2	85,6
L9	40	79,6	66,6	78	84,2	95,6
L9	50	89,6	76,6	88	94,2	105,6
L9	75	114,6	101,6	113	119,2	130,6
L9	100	-	126,6	138	144,2	155,6
L10	10	49,6	56,6	58,0	54,2	65,6
L10	20	59,6	66,6	68,0	64,2	75,6
L10	30	69,6	76,6	78,0	74,2	85,6
L10	40	79,6	86,6	88,0	84,2	95,6
L10	50	89,6	96,6	98,0	94,2	105,6
L10	75	114,6	121,6	123,0	119,2	130,6
L10	100	-	146,6	148,0	144,2	155,6
H2		6,3	4,5	5,50	6,5	6,5
H3		2,5	4,0	4,00	4	4
H4		4	5,0	4,50	5	7,5
H5		6,5	6,0	6,00	6	7,5
H6		8	6,0	8,00	8	8
H7		3	3,0	4,00	4	4
H8		6,3	-	-	-	-
D1		M4	M5	M6	M8	M8
D2		6	7,5	9,5	10,5	10,5
D3		2,5	2,5	4	4	4
D4		M3	M3	M4	M5	M5
D5		M3	M4	M4	M5	M5
D6		M3	M3	M4	M4	M4
D7		2,5	2,5	4	4	4
D8		6	-	-	-	-
D9		3,5	-	-	-	-
D10		M4	M5	M5	M6	M6
NN		6	8	10	12	16
EE		M5	M5	M5	M5	G1/8
K		7	7	8	8	10
P		20	25	29	35	40

For out of standard intermediate strokes (ex. stroke 37), you have to consider the dimensions referring to the immediately higher stroke (ex. stroke 40) with a maximum permitted reduction of 10 mm.

Magnetic proximity switch with 2-wire 90° cable for C-slot Mod. CSC-H-220


A = fixing screw
 B = Led indicator
 S = ideal position detection

Mod.	Operation	Connections	Voltage	Output	Max. current	Max Load	Protection	L = length cable
CSC-H-220	Reed	2 wires	10±110 V AC/DC	PNP	50 mA	8 W / 10 VA	Against polarity reversing and overvoltage	2 m

Magnetic proximity switch with 2-wire cable for C-slot Mod. CSC-D-220


A = fixing screw
 B = Led indicator
 S = ideal position detection

Mod.	Operation	Connections	Voltage	Output	Max. current	Max Load	Protection	L = length cable
CSC-D-220	Reed	2 wires	10±110 V AC/DC	PNP	50 mA	8 W / 10 VA	Against polarity reversing and overvoltage	2 m