Series QX twin cylinders

Double-acting, magnetic, guided
0 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.

STANDARD STROKES FOR TWIN CYLINDERS SERIES QX

■ = Double-acting

STANDARD STROKES							
Ø	10	20	30	40	50	75	100
10	■	■	■	■	■	■	
16	■	■	■	■	■	■	■
20	■	■	■	■	■	■	■
25	■	■	■	■	■	■	■
32	■	■	■	■	■	■	■

CODING EXAMPLE

Q **020** **050**

Q SERIES

VERSION
T = sintered bronze bushes B = linear ball bearings

OPERATION
2 = double-acting (1 flange) radial / axial pressure supply 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

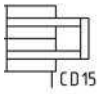
020 BORE
010 = 10 mm - 016 = 16 mm - 020 = 20 mm - 025 = 25 mm - 032 = 32 mm

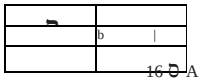
TYPE OF DESIGN A
= standard

050 STROKE (see the table)

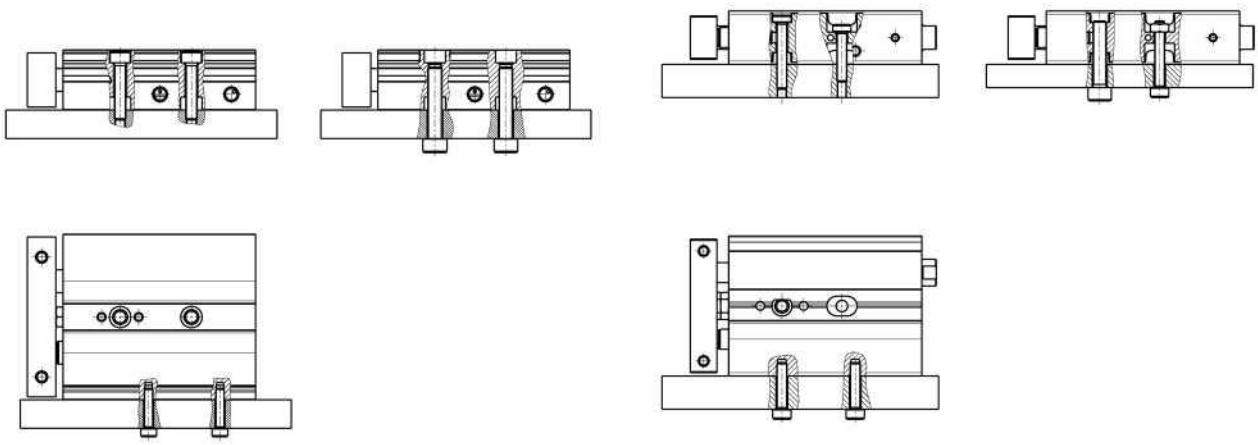
PNEUMATIC SYMBOLS

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





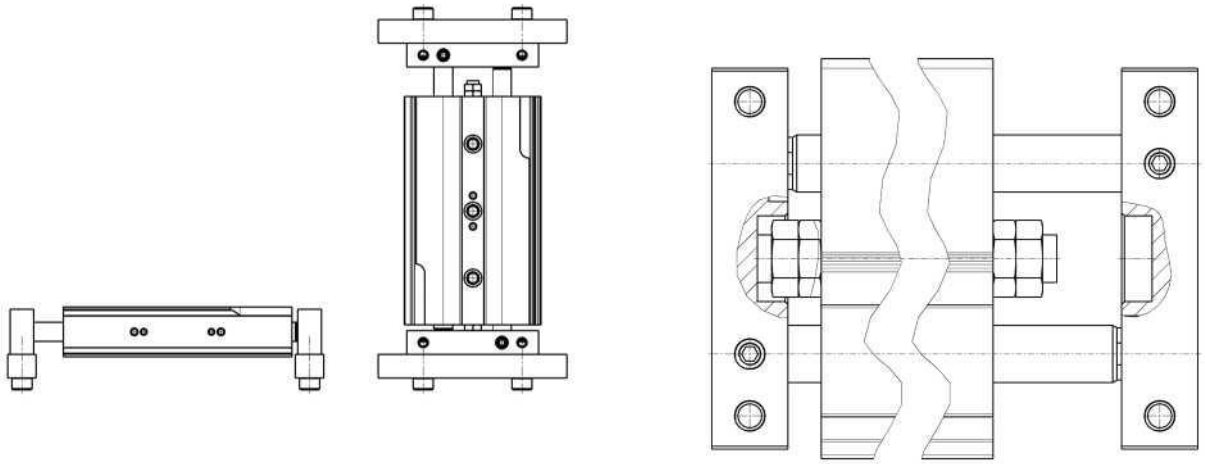
Fixing examples with flange in motion



For diameters from 16 to 32

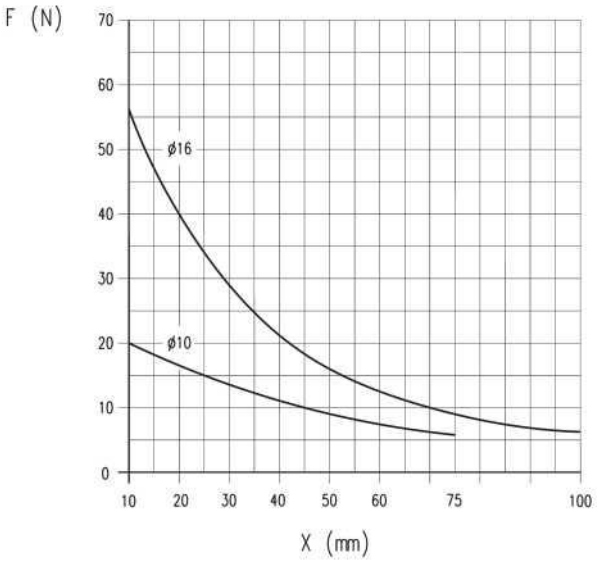
To mount the sensors of QX cylinders 0 10 in the middle grooves, it is advisable to use M3 screws UNI 9327 and nuts M3 UNI 5589.

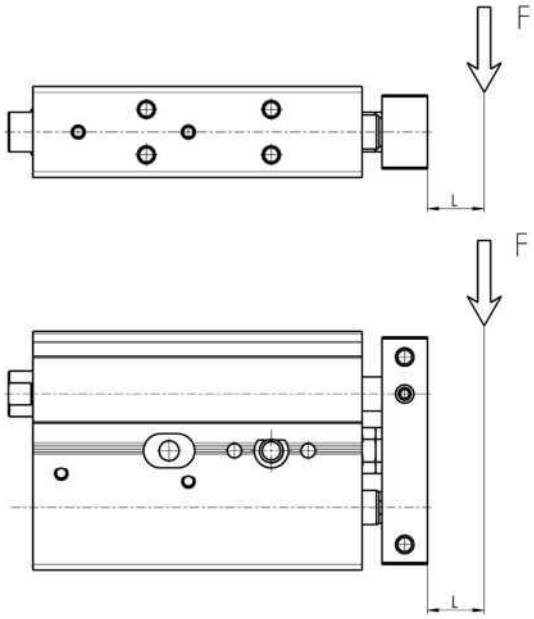
Fixing examples with cylinder body in motion



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)



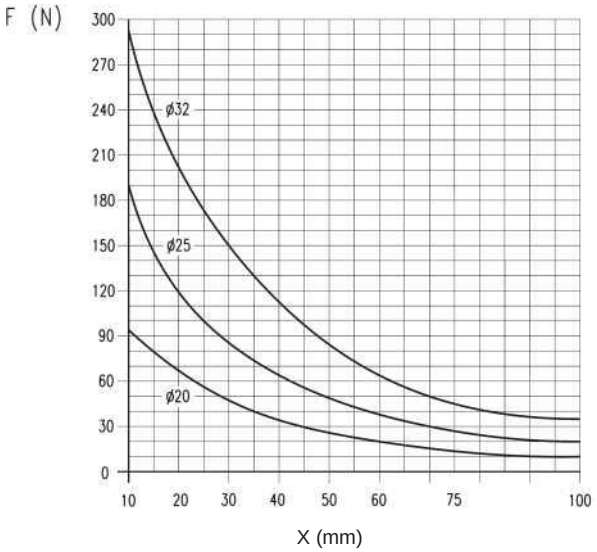


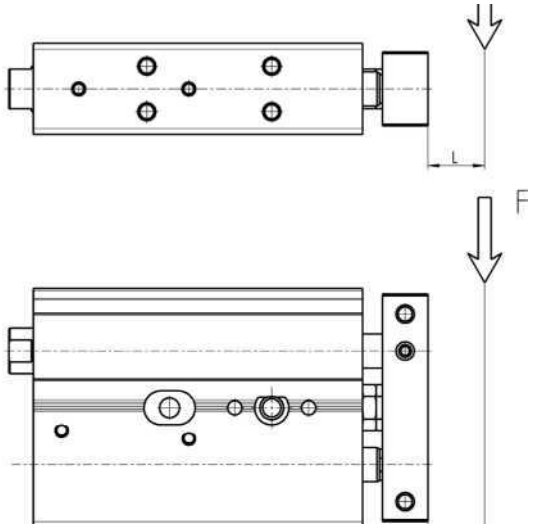
X = cylinder stroke mm.
F = load applied on the flange in N

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

DIAGRAM OF MAX APPLICABLE LOADS DEPENDING ON THE STROKE (X)

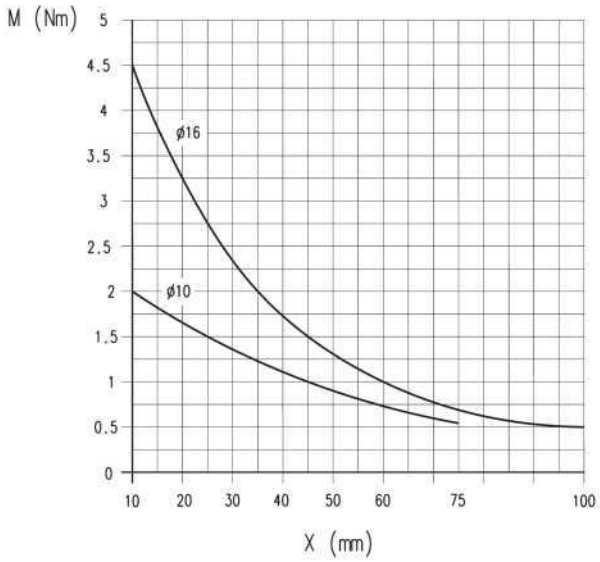
X = cylinder stroke mm.
F = load applied on the flange in N.

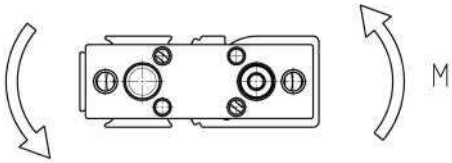




Load " F " should be considered fixed on the flange of the cylinder and with a theorical projection of L = 0 mm.

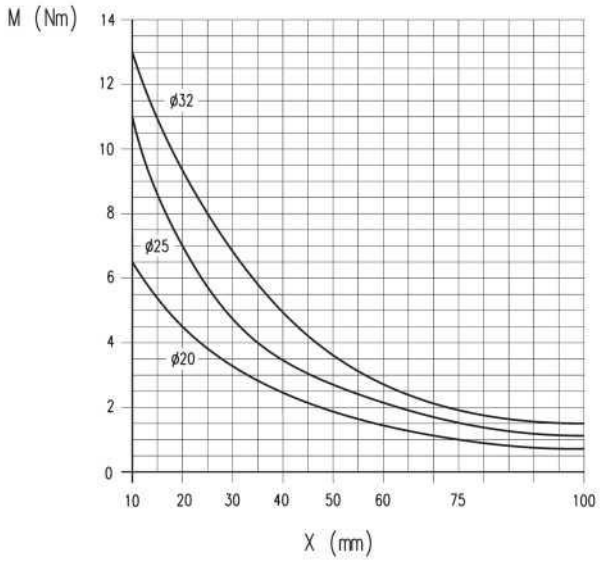
DIAGRAM OF MAX TORQUE MOMENT DEPENDING ON THE STROKE (X)

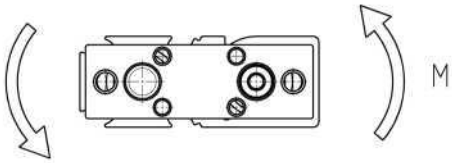




X = cylinder stroke in mm.
M = torque moment applied on the flange in Nm.

DIAGRAM OF MAX TORQUE MOMENT DEPENDING ON THE STROKE (X)



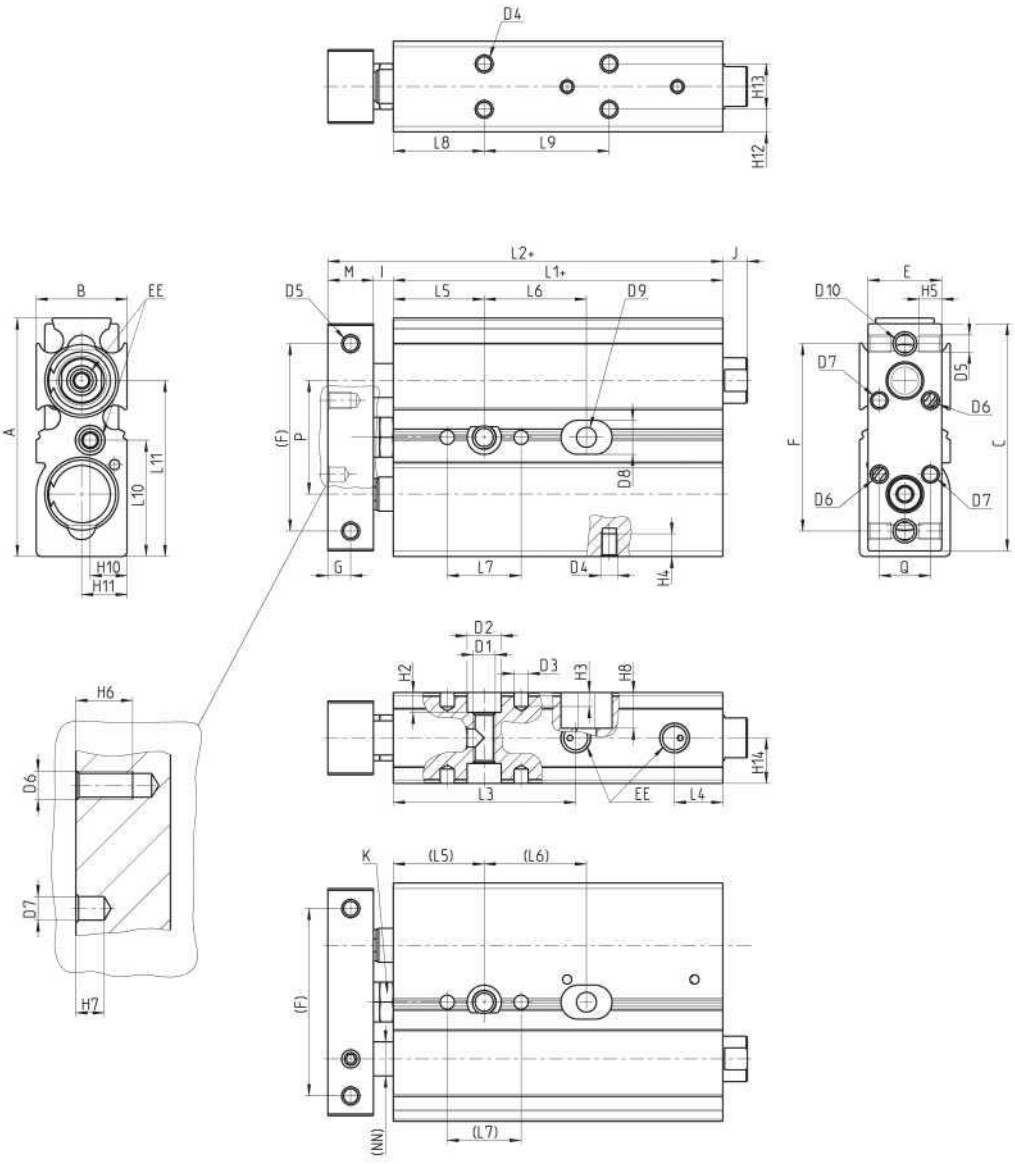


X = cylinder stroke in mm.
M = torque moment applied on the flange in Nm.

Cylinders Series QX (single flange)

NOTE: 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.

+ = add the stroke



Dimensions for Series QX with single flange

+ = add the stroke

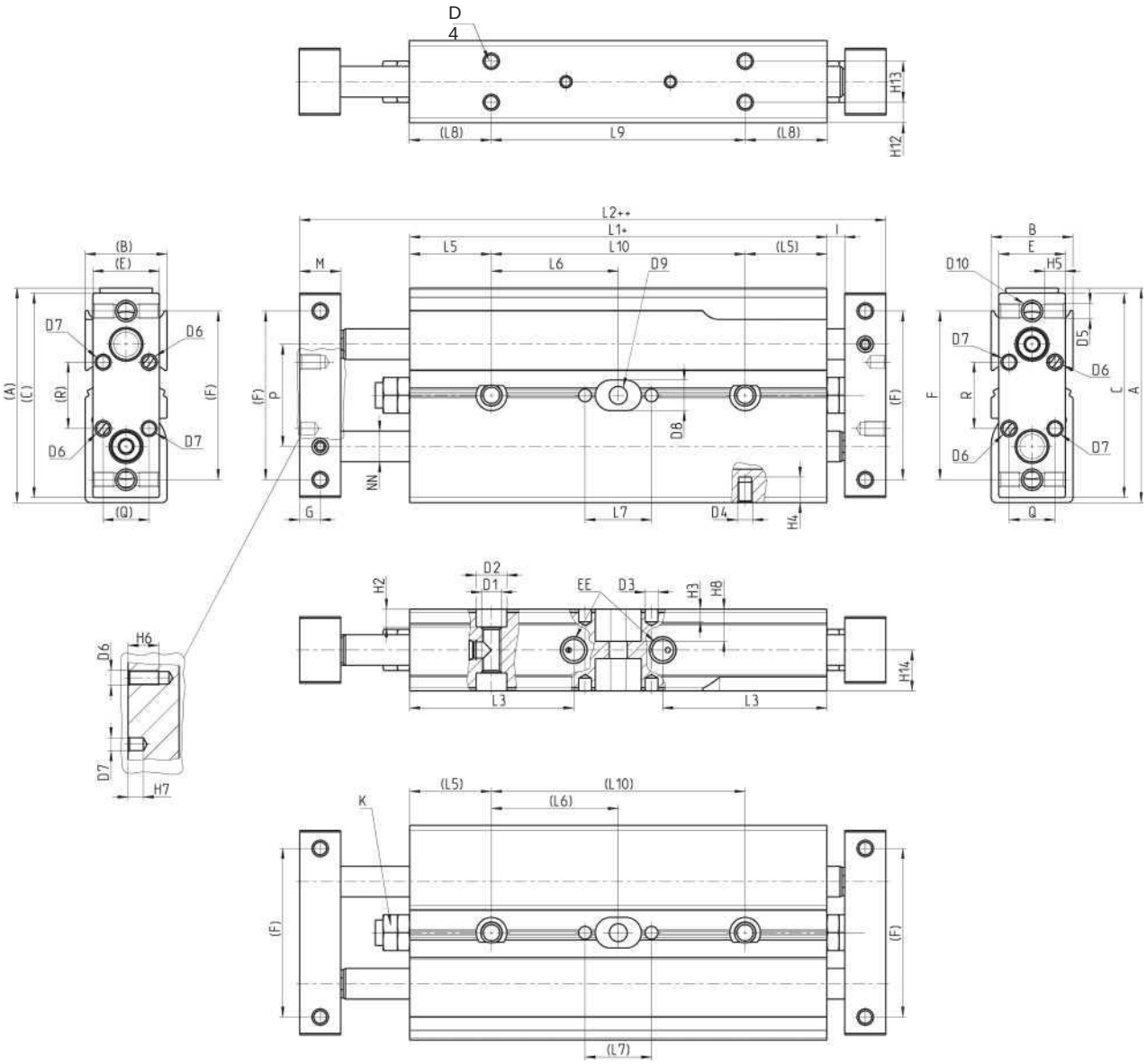
DIMENSIONS

Stroke (mm)		0 10	0 16	0 20	0 25	0 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	30	40
L6	20	28	25	30	30	40
L6	30	38	35	40	40	50
L6	40	48	35	40	40	50
L6	50	58	35	40	40	50
L6	75	83	45	60	60	70
L6	100	-	55	60	60	70
L7		13	13	20	20	20
L8		16	30	30	30	30
L9	10	22	25	30	30	40
L9	20	32	25	30	30	40
L9	30	42	35	40	40	50
L9	40	52	35	40	40	50
L9	50	62	35	40	40	50
L9	75	87	45	60	60	70
L9	100	-	55	60	60	70
L10		20,5	29	31	38	47
L11		31	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		6,5	10,5	10,5	15	8,5
H11		8	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
J 4,3						
K		7	7	8	8	10
P		20	25	29	35	45

Cylinders Series QX (double flange)

NOTE: 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.

+ = add the stroke



Dimensions for Series QX with double flange

+ = add the stroke
++ = add the stroke 2 times

DIMENSIONS

Stroke (mm)		0 10	0 16	0 20	0 25	0 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