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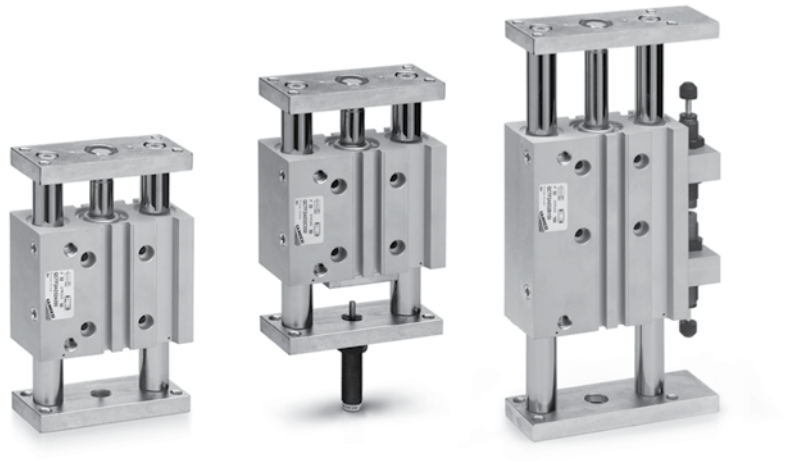
MOVEMENT

Cylinders with integrated guide Series QCTF - QCBF

Double -acting , magnetic piston, with double bearings and flanges ø20, 25, 32, 40



- Magnetic sensors can be mounted on both sides
- Two versions: Ball bearing guide and bronze bushings
- Movement and guidance in one unit

The Slide Units Series QCTF - QCBF have been designed to be used in applications where space is limited. Regarding the bearings, the Slide Units are available in two versions, one with double sintered bronze bushes (Mod. QCTF) and the other with double linear ball bearings (Mod. QCBF). The QCTF version would normally be selected when the side loads applied to the slide unit are high. Mod. QCBF is suitable for fast cycles (less side load) and higher precision.

The end cushioning is available in three different variants:
A. fixed mechanical cushion (standard),
B. with two shock absorbers located on the body and C. with one shock absorber located central on the rear flange.
Accordingly, the variant B and C are suitable for handling of higher mass forces and / or when it is necessary to adjust the stroke.

GENERAL DATA

Type of construction	compact guided with extended guide rods and double bearings/flanges QCTF = sintered bronze bushes QCBF = linear ball bearings
Operation	double-acting
Materials	- anodized AL body - flanges in zinc-plated steel - piston rod in rolled stainless steel AISI - rolled stainless steel 420B columns (QCT) - hardened steel C50 columns (QCB) - PU seals
Mounting	threaded and non threaded holes in the body
Strokes min. max	(see table)
Operating temperature	0°C ÷ 80°C (with dry air -20°C)
Speed	50 ÷ 500 mm/s
Stroke end cushioning Type A	extended stroke - fixed mechanical cushioning retracted stroke - fixed mechanical cushioning we recommend preventing the piston from striking against the end covers
Stroke end cushioning Type B	extended stroke - shock absorber retracted stroke - shock absorber
Stroke end cushioning Type C	extended stroke - shock absorber retracted stroke - fixed mechanical cushioning we recommend preventing the piston from striking against the end covers
Operating pressure	1 ÷ 10 bar
Fluid	clean air, non lubricated If lubricated air is used, it is recommended to use oil ISOVG32. Once applied the lubrication should never be interrupted.

TABLE SHOWING STANDARD STROKES FOR SERIES QCTF AND QCBF

■ = Type A and C
✖ = Type B

Ø	20	25	30	40	50	75	100	125	150	175	200
20	■		■	■	■	■ ✖	■ ✖	■ ✖	■ ✖	■ ✖	■ ✖
25	■		■	■	■	■ ✖	■ ✖	■ ✖	■ ✖	■ ✖	■ ✖
32		■			■	■	■ ✖	■ ✖	■ ✖	■ ✖	■ ✖
40		■			■	■	■ ✖	■ ✖	■ ✖	■ ✖	■ ✖

CODING EXAMPLE

QC	T	F	2	A	020	A	050

QC	SERIES
T	TYPE OF BEARING T = sintered bronze bushes B = linear ball bearings
F	INSTALLATION TYPE F = body mounted with moving flanges
2	OPERATIONS 2 = double acting
A	MATERIALS A = anodized aluminium body rolled stainless steel piston rod 303 rolled stainless steel 420B colums QCT hardened steel C50 colums QCB
020	BORE 20 mm 25 mm 32 mm 40 mm
A	CUSHION A = fixed mechanical cushion (standard) B = two shock absorbers located on the body C = one shock absorber located on the rear flange
050	STROKE see table

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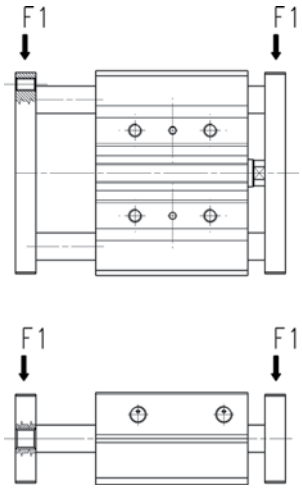
MOVEMENT

TABLE OF PERMISSABLE LOADS (F1) FROM ONE FLANGE

FOR SINTERED BRONZE BUSHES (QCTF) - FOR LINEAR BALL BEARINGS (QCBF)

F1 (N) 1N = 0.102 kgf

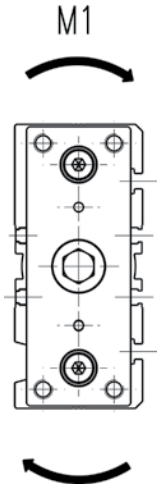


STROKE												
Ø		20	25	30	40	50	75	100	125	150	175	200
20	**QCTF**	136	-	124	124	123	122	122	121	121	120	120
	QCBF	146	-	142	140	139	137	136	134	94	70	53
25	**QCTF**	181	-	167	165	164	163	162	161	160	159	158
	QCBF	171	-	167	165	163	161	160	160	159	142	109
32	**QCTF**	-	174	-	-	166	162	160	158	156	155	153
	QCBF	-	220	-	-	214	211	211	210	210	209	209
40	**QCTF**	-	189	-	-	175	168	164	161	159	157	155
	QCBF	-	228	-	-	219	214	214	212	212	211	210

TABLE OF PERMISSABLE MOMENTS (M1) FROM ONE FLANGE

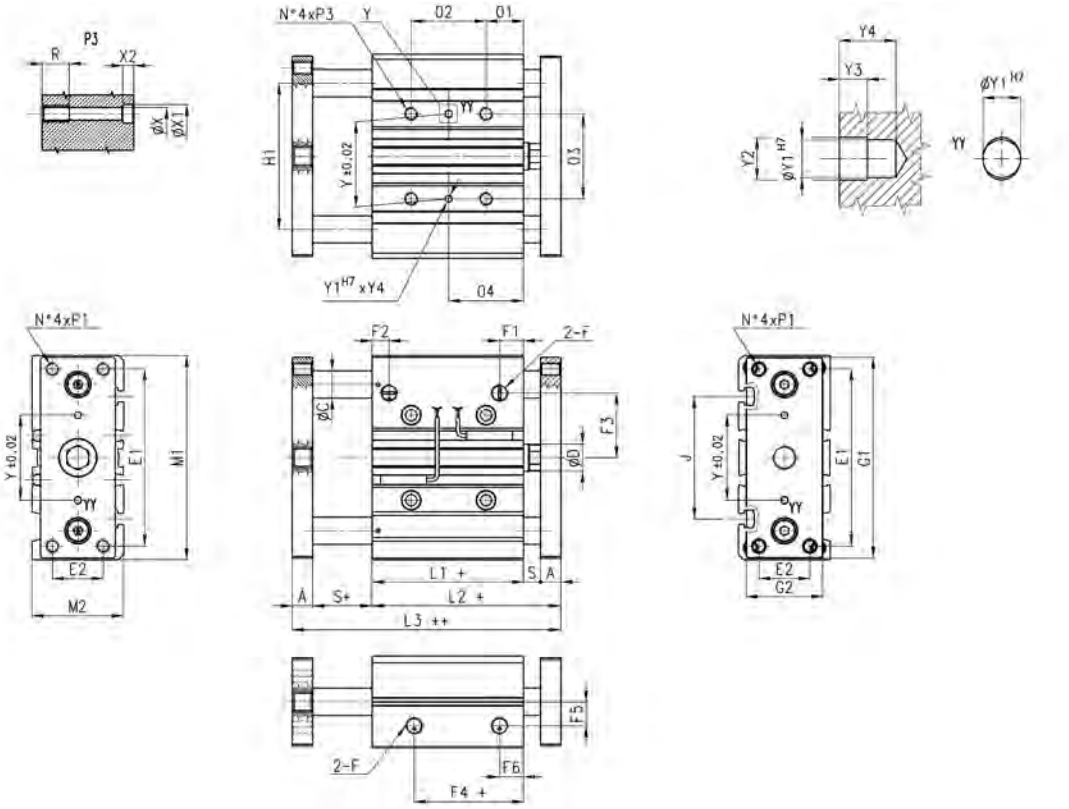
FOR SINTERED BRONZE BUSHES (QCTF) - FOR LINEAR BALL BEARINGS (QCBF)

M1 (N*m) 1N*m = 0,102 kgf *m



STROKE												
Ø	Mod.	20	25	30	40	50	75	100	125	150	175	200
20	**QCTF**	3,6	-	3,3	3'3	3,3	3,2	3,2	3,2	3,2	3,2	3,2
	QCBF	3,9	-	3,7	3,7	3,7	3,6	3,6	3,6	2,5	1,89	1,4
25	**QCTF**	5,7	-	5,2	5,2	5,2	5,2	5,1	5,1	5,1	5	5
	QCBF	5,4	-	5,2	5,2	5,2	5,1	5,1	5,1	5	4,5	3,4
32	**QCTF**	-	6,7	-	-	6,4	6,3	6,2	6,1	6	6	5,9
	QCBF	-	8,5	-	-	8,3	8,2	8,2	8,1	8,1	8,1	8,1
40	**QCTF**	-	8,1	-	-	7,5	7,2	7	6,9	6,8	6,7	6,6
	QCBF	-	9,8	-	-	9,4	9,2	9,2	9,1	9,1	9	9

Mod. QCTF and QCBF type “A”



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

DIMENSIONS

Ø	P1	P3	Y1	Y2	Y3	Y4	X	X1	X2	J	K
20	M5x0,8	M6x1	3	3,5	3	6	5,5	9,5	5,5	44	M5
25	M6x1	M6x1	4	4,5	3	6	5,5	9,5	5,5	50	M5
32	M8x1,25	M8x1,25	4	4,5	3	6	6,5	11	7,5	63	M6
40	M8x1,25	M8x1,25	4	4,5	3	6	6,5	11	7,5	72	M6

	02 stroke 20-30	02 stroke 40-100	02 stroke 125-200	04 stroke 20-30	04 stroke 40-100	04 stroke 125-200	QCBF ØC	QCTF ØC
20	24	44	120	29	39	77	10	12
25	24	44	120	29	39	77	12	16
32	24	48	124	33	45	83	16	20
40	24	48	124	34	46	84	16	20

DIMENSIONS

Ø	A	øD	E1	E2	F	F1	F2	F3	F4	F5	F6	G1	G2	H1	L1	L2	L3	M1	M2	01	03	R	S	Y
20	10	10	70	18	1/8	10,5	10,5	25	12,5	11,5	10,5	81	30	54	37	53	69	83	36	17	28	12	6	28
25	10	12	78	26	1/8	11,5	8	28,5	12,5	13,5	11,5	91	40	64	37,5	53,5	69,5	93	42	17	34	12	6	34
32	12	16	96	30	1/8	12,5	9.5	34	7	15	12,5	110	45	78	37,5	59,5	81,5	112	48	21	42	16	10	42
40	12	16	104	30	1/8	13	12	38	13	18	13	118	45	86	44	66	88	120	54	22	50	16	10	50

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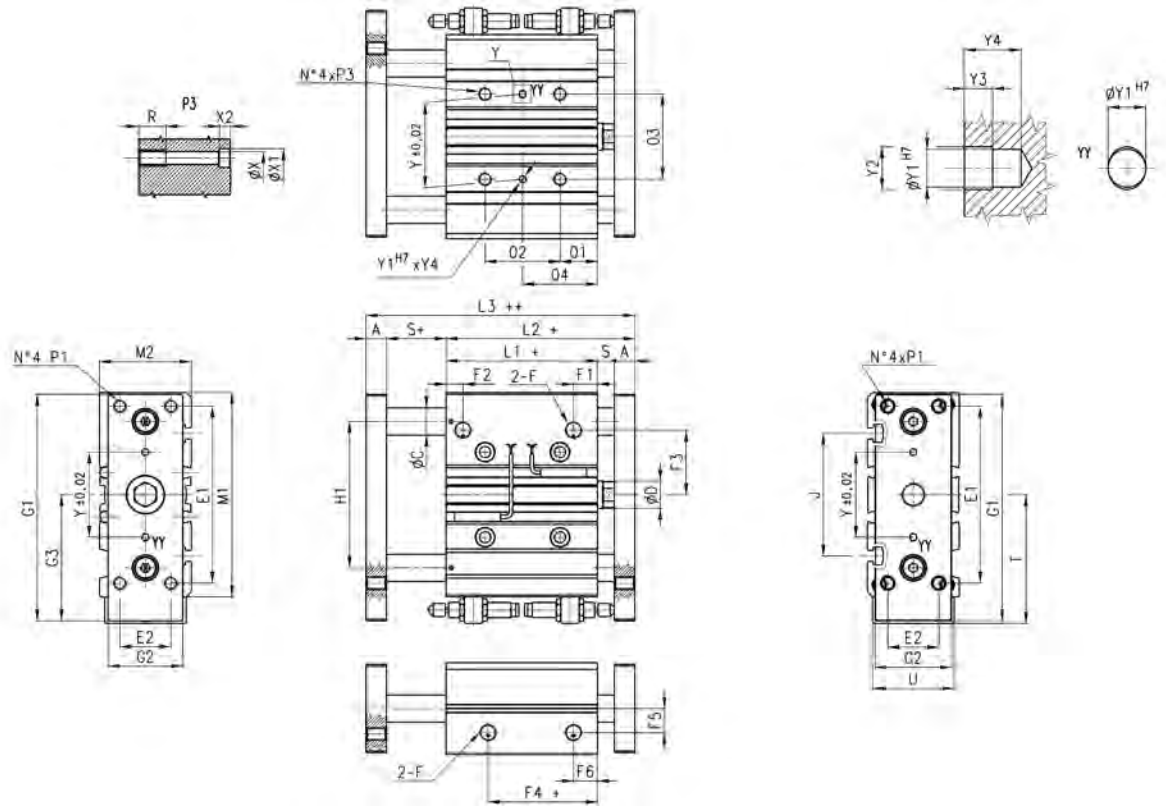
MOVEMENT

Mod. QCTF and QCBF type “B”



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

DIMENSIONS

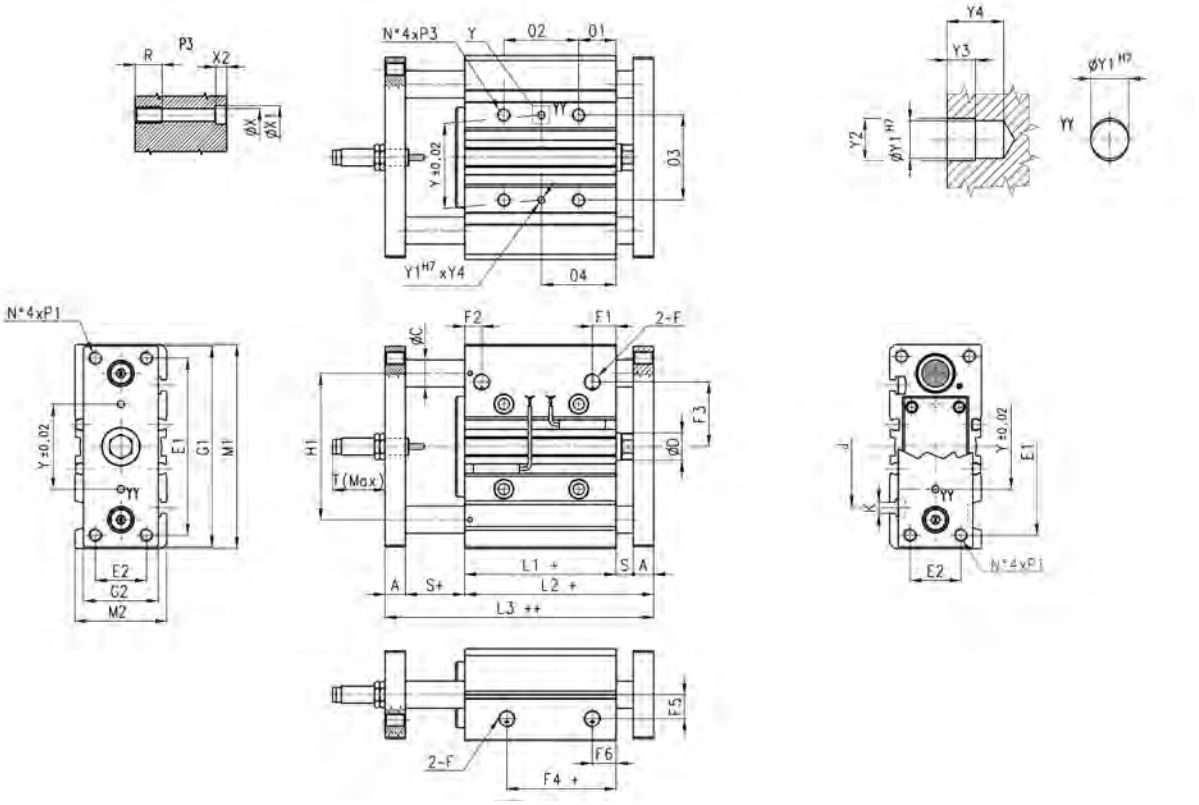
Ø	P1	P3	T	U	Y	Y1	Y2	Y3	Y4	X	X1	X2	J	K	Shock absorber	Δ stroke mm	adjustment range cyl. stroke mm
20	M5x0,8	M6x1	57,5	32	28	3	3,5	3	6	5,5	9,5	5,5	44	M5	SA-1007	0 ÷ 15	0 ÷ +12
25	M6x1	M6x1	62,5	38	34	4	4,5	3	6	5,5	9,5	5,5	50	M5	SA-1007	0 ÷ 15	0 ÷ +8
32	M8x1,25	M8x1,25	81	44	42	4	4,5	3	6	6,5	11	7,5	63	M6	SA-1412	0 ÷ 20	0 ÷ +10
40	M8x1,25	M8x1,25	85	44	50	4	4,5	3	6	6,5	11	7,5	72	M6	SA-1412	0 ÷ 20	0 ÷ +11

	02 stroke 20-30	02 stroke 40-100	02 stroke 125-200	04 stroke 20-30	04 stroke 40-100	04 stroke 125-200	QCBF ØC	QCTF ØC
20	24	44	120	29	39	77	10	12
25	24	44	120	29	39	77	12	16
32	24	48	124	33	45	83	16	20
40	24	48	124	34	46	84	16	20

DIMENSIONS

Ø	A	øD	E1	E2	F	F1	F2	F3	F4+	F5	F6	G1	G2	G3	H1	L1+	L2+	L3++	M1	M2	01	03	R	S
20	10	10	70	18	1/8	10,5	10,5	25	12,5	11,5	10,5	97	30	56,5	54	37	53	69	83	36	17	28	12	6
25	10	12	78	26	1/8	11,5	8	28,5	12,5	13,5	11,5	107	40	61,5	64	37,5	53,5	69	93	42	17	34	12	6
32	12	16	96	30	1/8	12,5	9,5	34	7	15	12,5	134	45	79	78	37,5	59,5	81,5	112	48	21	42	16	10
40	12	16	104	30	1/8	13	12	38	13	18	13	141	45	82	86	44	66	88	120	54	22	50	16	10

Mod. QCTF and QCBF type “C”



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

DIMENSIONS

Ø	P1	P3	T_{Max}	Y	Y1	Y2	Y3	Y4	X	X1	X2	J	K	Shock absorber	Δ stroke mm	adjustment range cyl. stroke mm.
20	M5x0,8	M6x1	37	28	3	3,5	3	6	5,5	9,5	5,5	44	M5	SA-1007 W	0 ÷ 25	-15 ÷ -25
25	M6x1	M6x1	37	34	4	4,5	3	6	5,5	9,5	5,5	50	M5	SA-1007 W	0 ÷ 25	-15 ÷ -25
32	M8x1,25	M8x1,25	55	42	4	4,5	3	6	6,5	11	7,5	63	M6	SA-1412 W	0 ÷ 35	-18 ÷ -35
40	M8x1,25	M8x1,25	55	50	4	4,5	3	6	6,5	11	7,5	72	M6	SA-1412 W	0 ÷ 35	-18 ÷ -35

	02 stroke 20-30	02 stroke 40-100	02 stroke 125-200	04 stroke 20-30	04 stroke 40-100	04 stroke 125-200	QCBF ØC	QCTF ØC
20	24	44	120	29	39	77	10	12
25	24	44	120	29	39	77	12	16
32	24	48	124	33	45	83	16	20
40	24	48	124	34	46	84	16	20

DIMENSIONS

Ø	A	øD	E1	E2	F	F1	F2	F3	F4+	F5	F6	G1	G2	H1	L1+	L2+	L3++	M1	M2	01	03	R	S
20	10	10	70	18	1/8	10,5	10,5	25	12,5	11,5	10,5	81	30	54	37	53	69	83	36	17	28	12	6
25	10	12	78	26	1/8	11,5	8	28,5	12,5	13,5	11,5	91	40	64	37,5	53,5	69,5	93	42	17	34	12	6
32	12	16	96	30	1/8	12,5	9,5	34	7	15	12,5	110	45	78	37,5	59,5	81,5	112	48	21	42	16	10
40	12	16	104	30	1/8	13	12	38	13	18	13	118	45	86	44	66	88	120	54	22	50	16	10