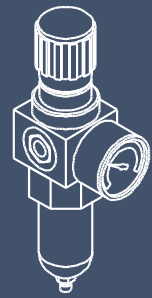
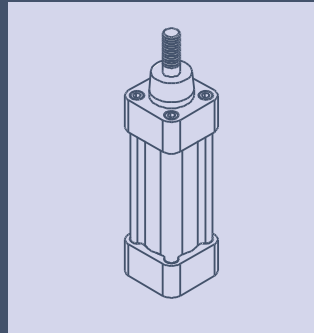
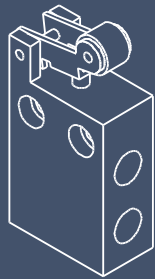


Cylinders



2008

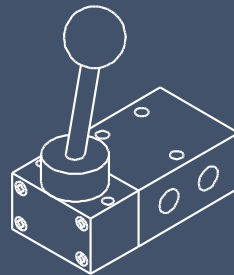
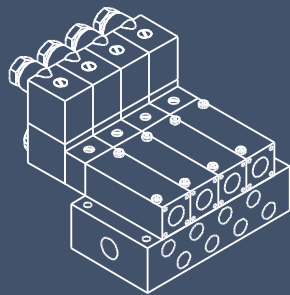
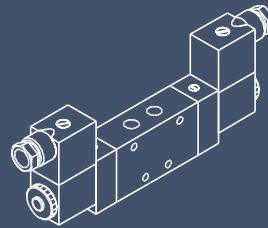


Table of Content

page 2

page

	1.1	Mini Cylinders ISO 6432
3	1.1.1	R Series Mini Cylinders DIN ISO 6432
4	1.1.2	R Series Mini Cylinders DIN ISO 6432
5	1.1.3	R Series Accessories
6	1.1.4	R Series Accessories
	1.2	Cylinders ISO 6431
7	1.2.1	H Series / T Series Cylinders DIN ISO 6431
8	1.2.2	H Series / T Series Cylinders DIN ISO 6431
9	1.2.3	H Series / T Series Cylinders DIN ISO 6431
10	1.2.4	H Series / T Series Accessories
11	1.2.5	H Series / T Series Accessories
12	1.2.6	H Series / T Series Accessories
	1.3	Compact Cylinders ISO 21287
13	1.3.1	K Series Compact Cylinders ISO 21287
14	1.3.2	K Series Compact Cylinders ISO 21287
15	1.3.3	K Series Compact Cylinders ISO 21287
16	1.3.4	K Series Compact Cylinders ISO 21287
17	1.3.5	K Series Accessories
18	1.3.6	K Series Accessories
	1.4	Short Stroke Cylinder
19	1.4.1	N Series Short Stroke Cylinders
20	1.4.2	N Series Short Stroke Cylinders
21	1.4.3	N Series Short Stroke Cylinders
	1.5	Sensors
22	1.5.1	Sensors
23	1.5.2	Sensors

Materials

Rod	Stainless steel
End Caps	Extruded anodized aluminium
Barrel	Stainless steel
Seals	NBR (on request polyurethane, viton)
Piston	Polyurethane
Magnet	Plastoferrite

General

Bore sizes	10, 12, 16, 20, 25
Strokes	As per table (on request specials)
Temperature	-20° / +70°
Pressure Range	1 – 10 bar
Operating Medium	Filtered compressed air, lubricated and non lubricated



Traction and Thrust Forces [6 BAR, Double-acting]

Ø [mm]	Standard Strokes [mm]	Thrust Force [N]	Traction Force [N]
10	10 - 25 - 40 - 50 - 80 - 100	42	35
12	10 - 25 - 40 - 50 - 80 - 100	60	45
16	10 - 25 - 40 - 50 - 80 - 100 - 125 - 160 - 200	106	91
20	10 - 25 - 40 - 50 - 80 - 100 - 125 - 160 - 200 - 250 - 300	166	140
25	10 - 25 - 40 - 50 - 80 - 100 - 125 - 160 - 200 - 250 - 300 - 320 - 400 - 500	260	218

R Series Mini Cylinder ISO 6432

Order Example	R	1	M	25	/	100
Series						
Type						
Magnetic						
Bore						
Stroke						

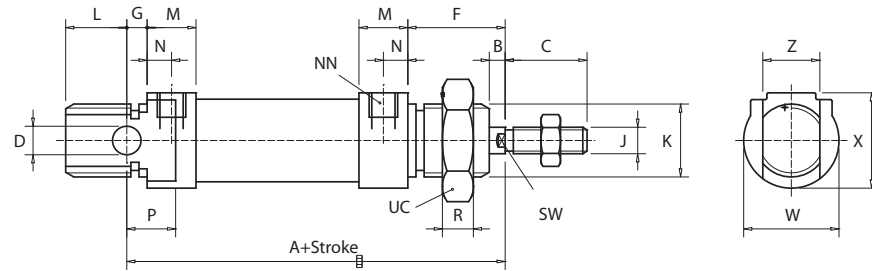
Type	1 Double-acting Adjustable Cushion 2 Single-acting Spring Return 3 Double-acting without Cushion 4 Single-acting Spring Extend 5 Double-acting Through-rod without Cushion 6 Double-acting Through-rod with Cushion (Ø20,25) 7 Single-acting Through-rod without Cushion
Magnetic	M Magnetic as standard Non-magnetic leave blank
Bore	Add Bore [mm]
Stroke	Add Stroke [mm]

R Series Accessories

Order Example	R	M	25	/	01
Series					
Mounting					
Bore					
Type					

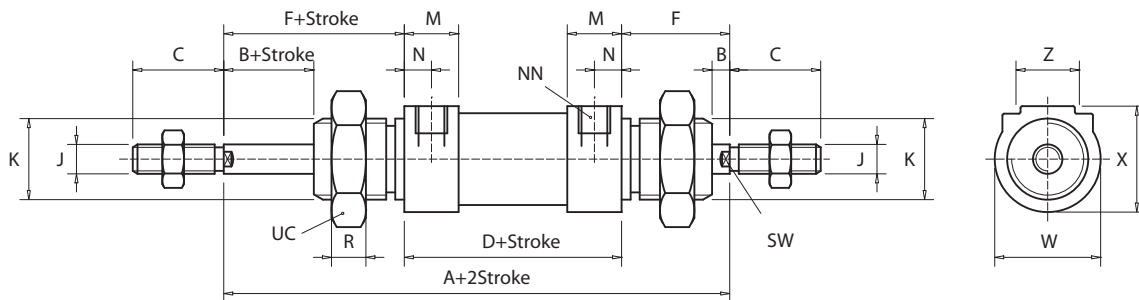
Bore	Add Bore [mm]
Type	01 Rear Hinge 02 Mounting Bracket 03 Flange Mounting 04 Clevis with Lockable Pin 05 Alignment Coupler 06 Rod Eye

ISO 6432 Mini Cylinder – R Series



Dimensions

Ø [mm]	ØRod	A+	B	C	D	F	G	L	M	N	J	K	X	W	Z	P	R	NN	UC	SW
10	4	64	4	12	4	16	2	10	11	5,5	M4	M12x1,25	15	16	8	6	7	M5	19	-
12	6	75	5	16	6	22	3	14	11	5,5	M6	M16x1,5	18	19	12	9	8	M5	24	5
16	6	82	5	16	6	22	4	13	14	7	M6	M16x1,5	20	20	12	9	8	M5	24	5
20	8	95	4	20	8	24	3	17	18	9	M8	M22x1,5	27	27	16	12	10	G1/8	32	7
25	10	104	6	22	8	28	7	15	18	9	M10x1,25	M22x1,5	27	27	16	12	10	G1/8	32	9

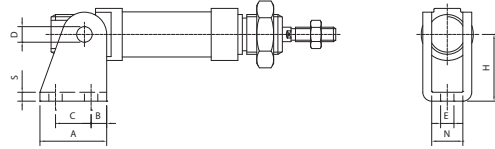


Dimensions

Ø [mm]	ØRod	A+	B	C	D+	F	M	N	J	K	X	W	Z	R	NN	UC	SW
10	4	78	4	12	46	16	11	5,5	M4	M12x1,25	15	16	8	7	M5	19	-
12	6	94	5	16	50	22	11	5,5	M6	M16x1,5	18	19	12	8	M5	24	5
16	6	100	5	16	56	22	14	7	M6	M16x1,5	20	20	12	8	M5	24	5
20	8	116	4	20	68	24	18	9	M8	M22x1,5	27	27	16	10	G1/8	32	7
25	10	125	6	22	69	28	18	9	M10x1,25	M22x1,5	27	27	16	10	G1/8	32	9

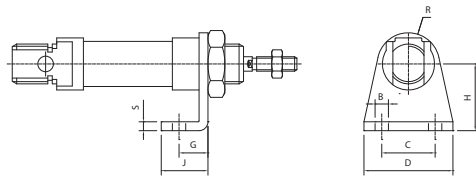
Rear Hinge

Part Number	Ø mm	A	B	C	D	E	H	N	S
RM10/01	10	20	3,5	12,5	4	4,5	24	8	2,5
RM12/01	12	25	5	15	6	5,5	27	12	3
RM16/01	16	25	5	15	6	5,5	27	12	3
RM20/01	20	30	6	20	8	6,6	30	16	4
RM25/01	25	30	6	20	8	6,6	30	16	4



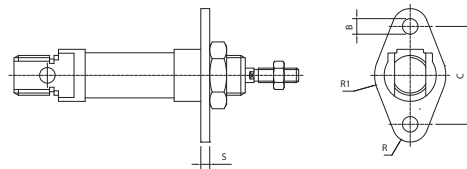
Mounting Bracket

Part Number	Ø mm	B	C	D	G	H	J	R	S
RM10/02	10	4,5	25	35	11	16	15	10	3
RM12/02	12	5,5	32	42	14	20	19	13	4
RM16/02	16	5,5	32	42	14	20	19	13	4
RM20/02	20	6,6	40	54	17	25	24	20	5
RM25/02	25	6,6	40	54	17	25	24	20	5



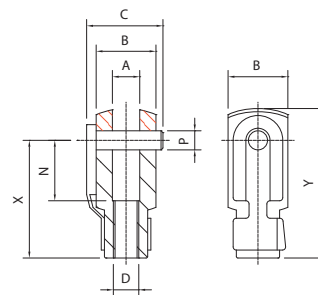
Flange Mounting

Part Number	Ø mm	B	C	R	R1	S
RM10/03	10	4,5	30	5	11	3
RM12/03	12	5,5	40	6	15	4
RM16/03	16	5,5	40	6	15	4
RM20/03	20	6,6	50	8	20	5
RM25/03	25	6,6	50	8	20	5

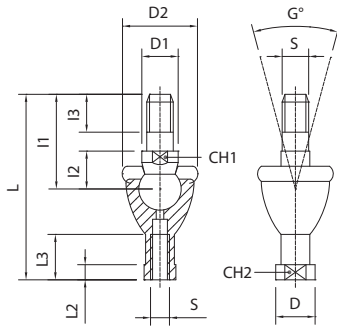


Clevis with Lockable Pin

Part Number	Ø	A	B	C	D	N	P	X	Y
RM10/04	10	4	8	12	M4	8	4	16	21
RM12/04	12	6	12	16	M6	12	6	24	31
RM16/04	16	6	12	16	M6	12	6	24	31
RM20/04	20	8	16	20	M8	16	8	32	42
RM25/04	25	10	20	26	M10x1,25	20	10	40	52

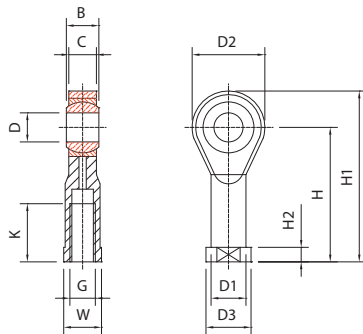


Accessories ISO 6432 Mini Cylinder – R Series



Alignment Coupler

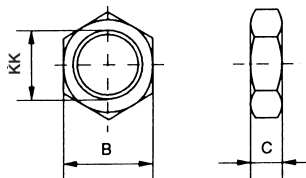
Part Number	Ø	S	D	D1	D2	L	L2	L3	I1	I2	I3	CH1	CH2	G°
RM12/05	12	M6	13	10	22	55	5	15	27	12	11	8	11	30°
RM16/05	16	M6	13	10	22	55	5	15	27	12	11	8	11	30°
RM20/05	20	M8	16	12	28	65	5	16	33	16	12	10	14	30°
RM25/05	25	M10x1,25	19	14	32	74	6,5	18	39	19	15	11	17	30°



Rod Eye

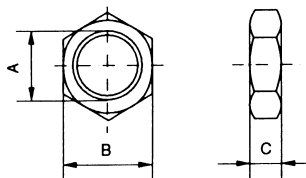
Part Number	Ø	B	C	D	D1	D2	D3	H	H1	H2	G	K	W
RM12/06	12	9	6,5	6	9	18	13	30	39	5	M6	14	11
RM16/06	16	9	6,5	6	9	18	13	30	39	5	M6	14	11
RM20/06	20	12	9	8	12	22	16	36	47	5	M8	17	14
RM25/06	25	14	10,5	10	15	28	19	43	57	6,5	M10x1,25	20	17

Piston Rod Nut



Ø mm	KK	B	C
10	M4	7	3,2
12	M6	10	4
16	M6	10	4
20	M8x1,25	13	5
25	M10x1,25	17	6

Mounting Nut



Ø mm	A	B	C
10	M12x1,25	19	7
12	M16x1,5	22	5
16	M16x1,5	22	5
20	M22x1,5	27	8
25	M22x1,5	27	8

ISO 6431 Cylinder – H Series / T Series

Materials

Rod	Chromed steel (on request stainless steel)
End Caps	Aluminium painted black
Barrel	Extruded anodized aluminium
Nuts	Galvanized steel (on request stainless steel)
Seals	NBR (on request polyurethane, viton)
Piston	Polyurethane
Magnet	Plastoferrite

General

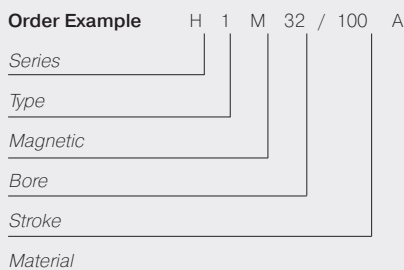
Bore sizes	32, 40, 50, 63, 80, 100, 125 (T series only 160, 200, 250, 320)
Strokes	As per table (on request specials)
Temperature	-20° / +70°
Pressure Range	1 – 10 bar
Operating Medium	Filtered compressed air, lubricated and non lubricated



Traction and Thrust Forces [6 BAR, Double-acting]

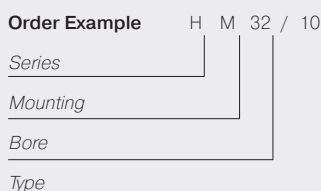
Ø [mm]	Standard Strokes [mm]	Thrust Force [N]	Traction Force [N]
32	25 - 50 - 75 - 80 - 100 - 125 - 150 - 160 - 200 - 250 - 300 - 320 - 400	425	365
40	25 - 50 - 75 - 80 - 100 - 125 - 150 - 160 - 200 - 250 - 300 - 320 - 400	664	559
50	25 - 50 - 75 - 80 - 100 - 125 - 150 - 160 - 200 - 250 - 300 - 320 - 400	1037	872
63	25 - 50 - 75 - 80 - 100 - 125 - 150 - 160 - 200 - 250 - 300 - 320 - 400	1650	1480
80	25 - 50 - 75 - 80 - 100 - 125 - 150 - 160 - 200 - 250 - 300 - 320 - 400	2660	2400
100	50 - 75 - 80 - 100 - 125 - 150 - 160 - 200 - 250 - 300 - 320 - 400	4154	3895
125	50 - 80 - 100 - 150 - 200 - 250 - 300 - 400	6540	6150

Cylinder ISO 6431



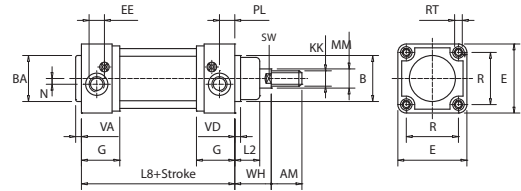
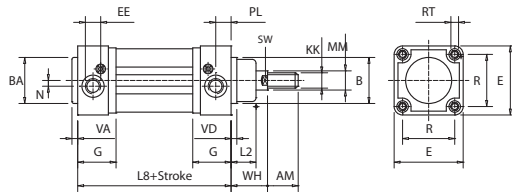
Series	H Profile barrel construction T Tie rod construction
Type	1 Double-acting with cushion 2 Single-acting spring return without cushion 3 Double-acting without cushion 4 Double-acting with rear cushion 5 Double-acting with front cushion 6 Double-acting through-rod with cushion 7 Single-acting through-rod without cushion 8 Double-acting tandem with opposed rods and cushion 9 Double-acting tandem with common rod and cushion
Magnetic	M Magnetic as standard Non-magnetic leave blank
Bore	Add Bore [mm]
Stroke	Add Stroke [mm]
Material	A Rod - Chromed steel / nuts - galvanized / seals - NBR B Rod - Stainless steel / nuts - galvanized / seals - NBR C Rod - Stainless steel / nuts - stainless steel / seals - NBR D Rod - Chromed steel / nuts - galvanized / seals - viton

Accessories



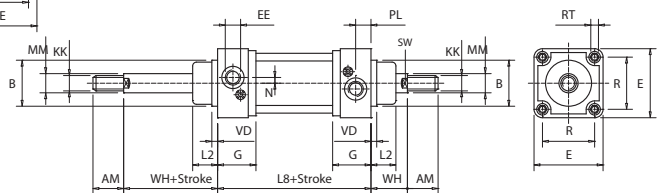
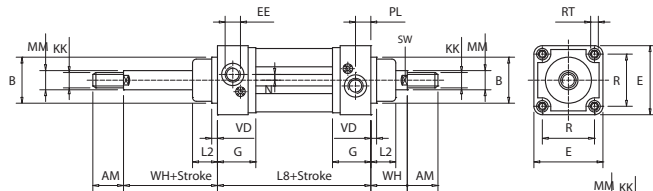
Series	H Profile barrel construction T Tie rod construction
Bore	Add Bore [mm]
Type	10 Front flange 12 Rear flange 14 Foot mount 16 Trunnion mount 18 Rear clevis female 20 Rear clevis male 22 Rear clevis female/male 24 Rear clevis with bracket 26 Clevis with lockable pin 28 Rod eye 30 Alignment coupler 32 Rear eye clevis

ISO 6431 Cylinder – H Series / T Series



Dimensions (Series H1, H2, H3, H4, H5)

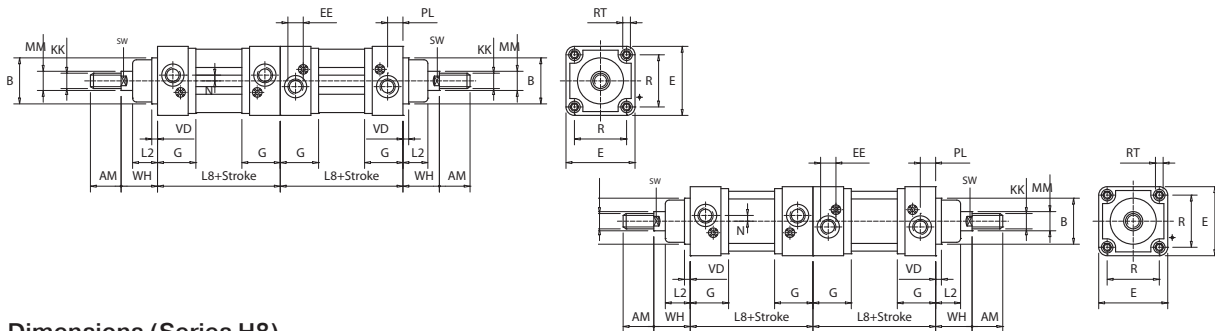
Ø [mm]	L2	AM	KK	WH	RT	L8+	EE	G	VA	E	R	MM	BA	SW	B	VD	PL	N
32	16	22	M10x1,25	26	M6	94	G1/8	31	4	47	32,5	12	30	10	30	5	11	5
40	20	24	M12x1,25	30	M6	105	G1/4	34	4	55	38	16	35	14	35	5	13	5
50	25	32	M16x1,5	37	M8	106	G1/4	36	4	65	46,5	20	40	18	40	5	14	7,5
63	25	32	M16x1,5	37	M8	121	G3/8	40	4	78	56,5	20	45	18	45	5	16	8
80	32	40	M20x1,5	46	M10	128	G3/8	42	4	95	72	25	45	23	45	5	16	9
100	35	40	M20x1,5	51	M10	138	G1/2	45	4	115	89	25	55	28	55	5	18	11
125	40	54	M27x2	65	M12	160	G1/2	52	6	140	110	30	60	28	60	6	20	-
160	50	72	M36x2	80	M16	180	G3/4	60	6	180	140	40	65	38	65	6	29	7
200	55	72	M36x2	95	M16	180	G3/4	60	6	220	175	40	75	38	75	6	28	-
250	65	84	M42x2	105	M20	200	G1	60	10	270	220	50	90	46	90	10	30	-
320	75	96	M48x2	120	M24	220	G1	63	10	350	270	60	110	55	110	10	31	-



Dimensions (Series H6, H7)

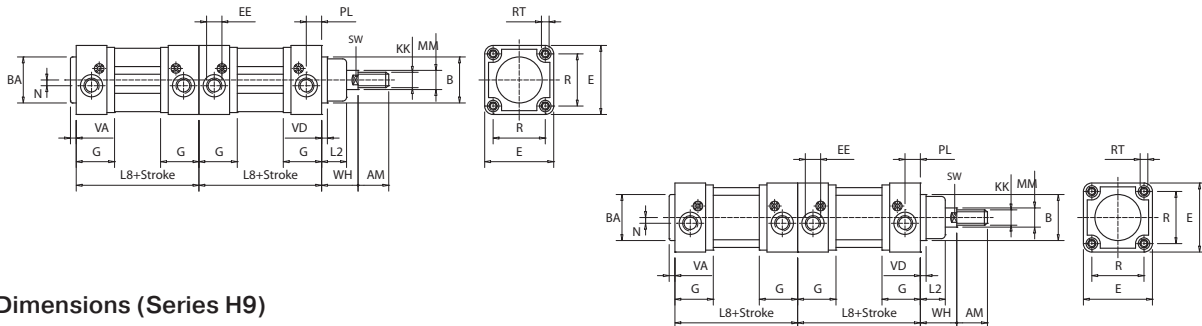
Ø [mm]	L2	AM	KK	WH	RT	L8+	EE	G	E	R	MM	SW	B	VD	PL	N
32	16	22	M10x1,25	26	M6	94	G1/8	31	47	32,5	12	10	30	5	11	5
40	20	24	M12x1,25	30	M6	105	G1/4	34	55	38	16	14	35	5	13	5
50	25	32	M16x1,5	37	M8	106	G1/4	36	65	46,5	20	18	40	5	14	7,5
63	25	32	M16x1,5	37	M8	121	G3/8	40	78	56,5	20	18	45	5	16	8
80	32	40	M20x1,5	46	M10	128	G3/8	42	95	72	25	23	45	5	16	9
100	35	40	M20x1,5	51	M10	138	G1/2	45	115	89	25	28	55	5	18	11
125	40	54	M27x2	65	M12	160	G1/2	52	140	110	30	28	60	6	20	-
160	50	72	M36x2	80	M16	180	G3/4	60	180	140	40	38	65	6	29	7
200	55	72	M36x2	95	M16	180	G3/4	60	220	175	40	38	75	6	28	-
250	65	84	M42x2	105	M20	200	G1	60	270	220	50	46	90	10	30	-
320	75	96	M48x2	120	M24	220	G1	63	350	270	60	55	110	10	31	-

ISO 6431 Cylinder – H Series / T Series



Dimensions (Series H8)

Ø [mm]	L2	AM	KK	WH	RT	L8+	EE	G	E	R	MM	SW	B	VD	PL	N
32	16	22	M10x1,25	26	M6	94	G1/8	31	47	32,5	12	10	30	5	11	5
40	20	24	M12x1,25	30	M6	105	G1/4	34	55	38	16	14	35	5	13	5
50	25	32	M16x1,5	37	M8	106	G1/4	36	65	46,5	20	18	40	5	14	7,5
63	25	32	M16x1,5	37	M8	121	G3/8	40	78	56,5	20	18	45	5	16	8
80	32	40	M20x1,5	46	M10	128	G3/8	42	95	72	25	23	45	5	16	9
100	35	40	M20x1,5	51	M10	138	G1/2	45	115	89	25	28	55	5	18	11
125	40	54	M27x2	65	M12	160	G1/2	52	140	110	30	28	60	6	20	-
160	50	72	M36x2	80	M16	180	G3/4	60	180	140	40	38	65	6	29	7
200	55	72	M36x2	95	M16	180	G3/4	60	220	175	40	38	75	6	28	-
250	65	84	M42x2	105	M20	200	G1	60	270	220	50	46	90	10	30	-
320	75	96	M48x2	120	M24	220	G1	63	350	270	60	55	110	10	31	-

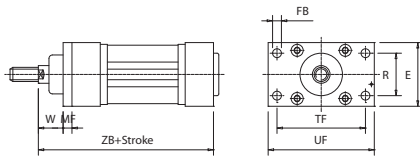


Dimensions (Series H9)

Ø [mm]	L2	AM	KK	WH	RT	L8+	EE	G	VA	E	R	MM	BA	SW	B	VD	PL	N
32	16	22	M10x1,25	26	M6	94	G1/8	31	4	47	32,5	12	30	10	30	5	11	5
40	20	24	M12x1,25	30	M6	105	G1/4	34	4	55	38	16	35	14	35	5	13	5
50	25	32	M16x1,5	37	M8	106	G1/4	36	4	65	46,5	20	40	18	40	5	14	7,5
63	25	32	M16x1,5	37	M8	121	G3/8	40	4	78	56,5	20	45	18	45	5	16	8
80	32	40	M20x1,5	46	M10	128	G3/8	42	4	95	72	25	45	23	45	5	16	9
100	35	40	M20x1,5	51	M10	138	G1/2	45	4	115	89	25	55	28	55	5	18	11
125	40	54	M27x2	65	M12	160	G1/2	52	6	140	110	30	60	28	60	6	20	-
160	50	72	M36x2	80	M16	180	G3/4	60	6	180	140	40	65	38	65	6	29	7
200	55	72	M36x2	95	M16	180	G3/4	60	6	220	175	40	75	38	75	6	28	-
250	65	84	M42x2	105	M20	200	G1	60	10	270	220	50	90	46	90	10	30	-
320	75	96	M48x2	120	M24	220	G1	63	10	350	270	60	110	55	110	10	31	-

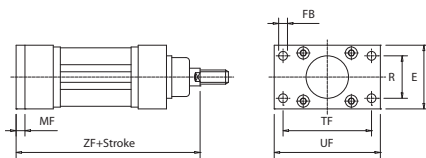
Accessories ISO 6431 Cylinder – H Series / T Series

Front Flange



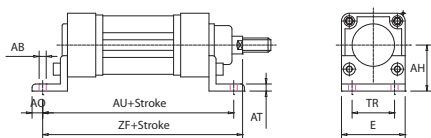
Part Number	Ø [mm]	FB	E	R	MF	TF	UF	W	ZB+
HM32/10	32	7	50	32	10	64	80	16	120
HM40/10	40	9	55	36	10	72	90	20	135
HM50/10	50	9	65	45	12	90	110	25	143
HM63/10	63	9	78	50	12	100	120	25	158
HM80/10	80	12	95	63	16	126	153	30	174
HM100/10	100	14	115	75	16	150	178	35	189
HM125/10	125	16	140	90	20	180	220	45	225

Rear Flange



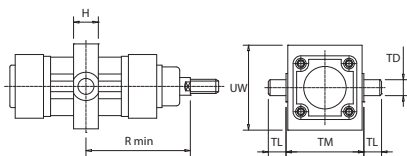
Part Number	Ø [mm]	FB	E	R	MF	TF	UF	W	ZF+
HM32/12	32	7	50	32	10	64	80	16	130
HM40/12	40	9	55	36	10	72	90	20	145
HM50/12	50	9	65	45	12	90	110	25	155
HM63/12	63	9	78	50	12	100	120	25	170
HM80/12	80	12	95	63	16	126	153	30	190
HM100/12	100	14	115	75	16	150	178	35	205
HM125/12	125	16	140	90	20	180	220	45	245

Foot Mount



Part Number	Ø [mm]	AB	E	TR	AO	AU+	AH	AT	ZF+
HM32/14	32	7	45	32	11	142	32	5	144
HM40/14	40	10	52	36	12	161	36	5	163
HM50/14	50	10	65	45	13	170	45	5	175
HM63/14	63	10	75	50	13	185	50	5	190
HM80/14	80	12	95	63	19	210	63	7	215
HM100/14	100	14,5	115	75	19	220	71	7	230
HM125/14	125	16,5	140	90	25	250	90	7	270

Trunnion Mount

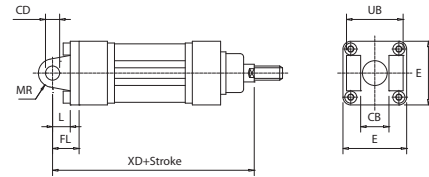


Part Number	Ø [mm]	TM	UW	TL	H	TD	R min
HM32/16	32	50	60	12	20	12	67
HM40/16	40	63	70	16	25	16	77
HM50/16	50	75	80	16	25	16	86
HM63/16	63	90	92	20	30	20	92
HM80/16	80	110	120	20	30	20	103
HM100/16	100	132	135	25	35	25	114
HM125/16	125	160	160	25	35	25	135

Accessories ISO 6431 Cylinder – H Series / T Series

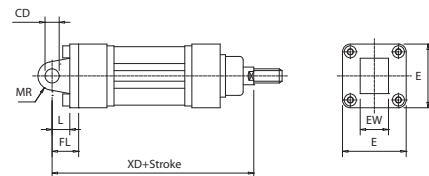
Rear Clevis Female

Part Number	Ø [mm]	E	UB	CB	FL	L	CD	MR	XD+
HM32/18	32	47	45	26	22	12	10	10	142
HM40/18	40	55	52	28	25	15	12	12	160
HM50/18	50	65	60	32	27	15	12	12	170
HM63/18	63	78	70	40	32	20	16	16	190
HM80/18	80	95	90	50	36	20	16	16	210
HM100/18	100	115	110	60	41	25	20	20	230
HM125/18	125	140	130	70	50	30	25	26	275



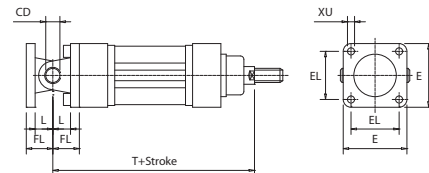
Rear Clevis Male

Part Number	Ø [mm]	E	EW	FL	L	CD	MR	XD+
HM32/20	32	47	26	22	12	10	10	142
HM40/20	40	55	28	25	15	12	12	160
HM50/20	50	65	32	27	15	12	12	170
HM63/20	63	78	40	32	20	16	16	190
HM80/20	80	95	50	36	20	16	16	210
HM100/20	100	115	60	41	25	20	20	230
HM125/20	125	140	70	50	30	25	26	275



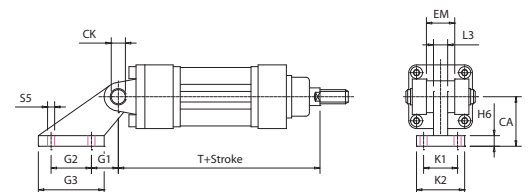
Rear Clevis Female/Male

Part Number	Ø [mm]	E	EL	FL	L	CD	XU	T+
HM32/22	32	47	32,5	22	12	10	6,5	142
HM40/22	40	55	38	25	15	12	6,5	160
HM50/22	50	65	46,5	27	15	12	8,5	170
HM63/22	63	78	56,5	32	20	16	8,5	190
HM80/22	80	95	72	36	20	16	10,5	210
HM100/22	100	115	89	41	25	20	10,5	230
HM125/22	125	140	110	50	30	25	12,5	275

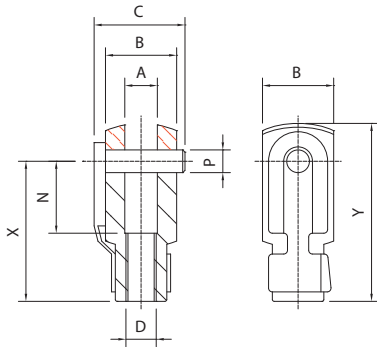


Rear Clevis with Bracket

Part Number	Ø [mm]	K1	K2	H6	CA	L3	EM	CK	T+	G1	G2	G3	S5
HM32/24	32	38	51	8	32	10	26	10	142	3	18	31	6,6
HM40/24	40	41	54	10	36	15	28	12	160	2	22	35	6,6
HM50/24	50	50	65	12	45	16	32	12	170	3	30	45	9
HM63/24	63	52	67	14	50	16	40	16	190	2	35	50	9
HM80/24	80	66	86	14	63	20	50	16	210	7	40	63	11
HM100/24	100	76	96	17	71	20	60	20	230	5	50	71	11
HM125/24	125	94	124	20	90	30	70	25	275	10	60	90	14

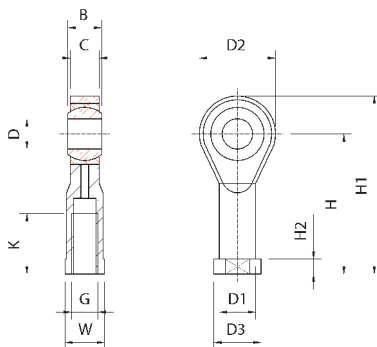


Accessories ISO 6431 Cylinder – H Series / T Series



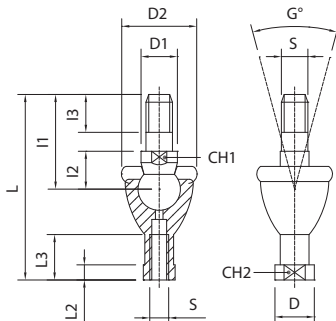
Clevis with Lockable Pin

Part Number	Ø [mm]	A	B	C	D	N	P	X	Y
HM32/26	32	10	20	26	M10x1,25	20	10	40	52
HM40/26	40	12	24	32	M12x1,25	24	12	48	62
HM50/26	50-63	16	32	40	M16x1,5	32	16	64	83
HM80/26	80-100	20	40	48	M20x1,5	40	20	80	105
HM125/26	125	30	55	-	M27x2	54	30	110	148
HM160/26	160-200	35	70	-	M36x2	72	35	144	201



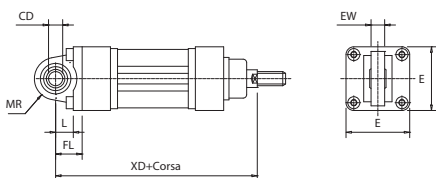
Rod Eye

Part Number	Ø [mm]	B	C	D	D1	D2	D3	H	H1	H2	G	K	W
HM32/28	32	14	10,5	10	15	28	19	43	57	6,5	M10x1,25	20	17
HM40/28	40	16	12	12	17	32	22	50	66	6,5	M12x1,25	22	19
HM50/28	50-63	21	15	16	22	42	28	64	85	8	M16x1,5	28	24
HM80/28	80-100	25	18	20	27,5	50	35	77	102	10	M20x1,5	33	30
HM125/28	125	35	25	28	37	67	46	109	137	12	M27x2	50	41



Alignment Coupler

Part Number	Ø [mm]	S	D	D1	D2	L	L2	L3	I1	I2	I3	CH1	CH2	G°
HM32/30	32	M10x1,25	19	14	32	74	6,5	18	39	19	15	11	17	30
HM40/30	40	M12x1,25	22	16	36	85	6,5	20	45	22	17	17	19	30
HM50/30	50-63	M16x1,5	27	21	47	114	8	27	64	27	23	19	22	22
HM80/30	80-100	M20x1,5	34	25	58	135	10	38	72	31	25	24	30	15



Rear Eye Clevis

Part Number	Ø [mm]	E	EW	FL	L	CD	MR	XD+
HM32/32	32	47	26	22	12	10	16	142
HM40/32	40	55	28	25	15	12	20	160
HM50/32	50	65	32	27	15	12	20	170
HM63/32	63	78	40	32	20	16	24	190
HM80/32	80	95	50	36	20	16	24	210
HM100/32	100	115	60	41	25	20	30	230

ISO 21287 Compact Cylinder – K Series

Materials

Rod	Stainless steel
End Caps	Aluminium painted black
Barrel	Extruded anodized aluminium
Seals	Polyurethane
Magnet	Plastoferrite

General

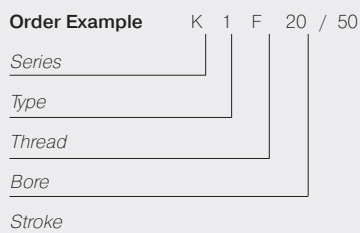
Bore sizes	20, 25, 32, 40, 50, 63, 80, 100
Strokes	As per table (on request specials)
Temperature	-20° / +70°
Pressure Range	1 – 10 bar
Operating Medium	Filtered compressed air, lubricated and non lubricated



Traction and Thrust Forces [6 BAR, Double-acting]

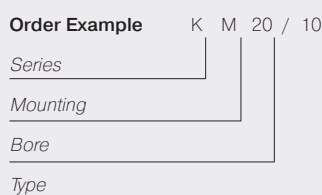
Ø [mm]	Standard Strokes [mm]	Thrust Force [N]	Traction Force [N]
20	5 - 10 - 15 - 20 - 25 - 30 - 40 - 50	168	126
25	5 - 10 - 15 - 20 - 25 - 30 - 40 - 50 - 60	258	216
32	5 - 10 - 15 - 20 - 25 - 30 - 40 - 50 - 60 - 75 - 80 - 100	425	365
40	5 - 10 - 15 - 20 - 25 - 30 - 40 - 50 - 60 - 75 - 80 - 100	664	606
50	5 - 10 - 15 - 20 - 25 - 30 - 40 - 50 - 60 - 75 - 80 - 100	1037	930
63	5 - 10 - 15 - 20 - 25 - 30 - 40 - 50 - 60 - 75 - 80 - 100	1650	1542
80	5 - 10 - 15 - 20 - 25 - 30 - 40 - 50 - 60 - 75 - 80 - 100	2660	2496
100	5 - 10 - 15 - 20 - 25 - 30 - 40 - 50 - 60 - 75 - 80 - 100	4154	3895

K Series Compact Cylinder ISO/VDMA



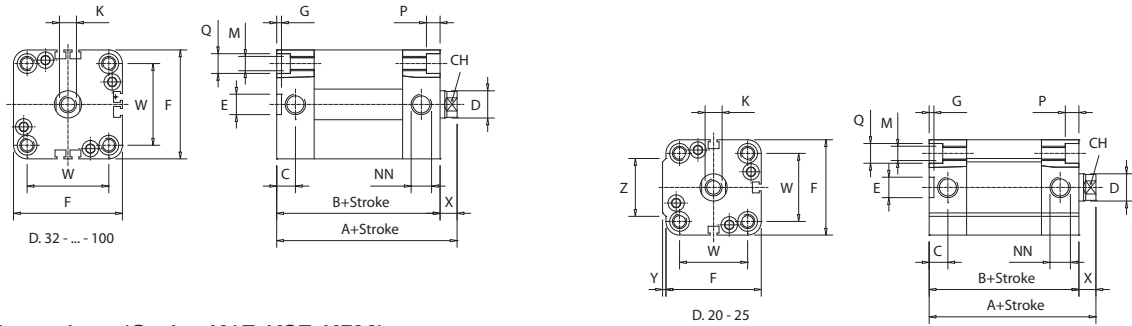
Type	1 Double-acting 2 Single-acting spring return 3 Double-acting through-rod 4 Double-acting anti-rotation 5 Single-acting spring extend
Thread	F Female Thread M Male Thread
Bore	Add Bore [mm]
Stroke	Add Stroke [mm]

R Series Accessories



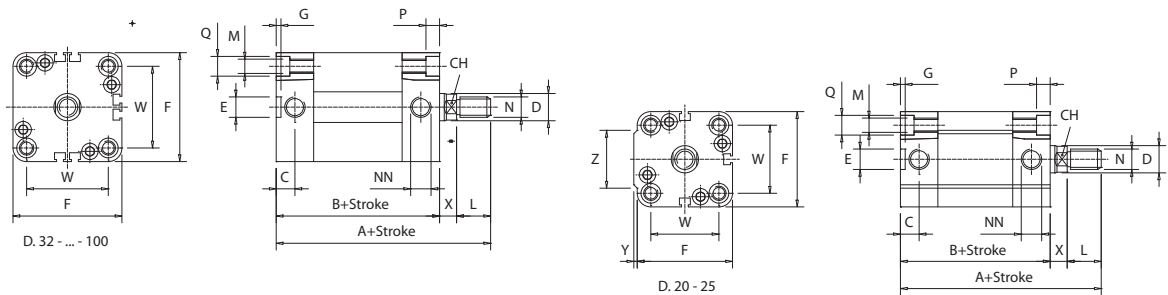
Bore	Add Bore [mm]
Type	01 Front flange 02 Rear flange 03 Foot mount 04 Rear clevis female 05 Rear clevis male 06 Rear clevis with bracket 07 Rear hinge 08 Clevis with lockable pin 09 Rod eye 10 Alignment coupler

ISO 21287 Compact Cylinder – K Series



Dimensions (Series K1F, K2F, K5M)

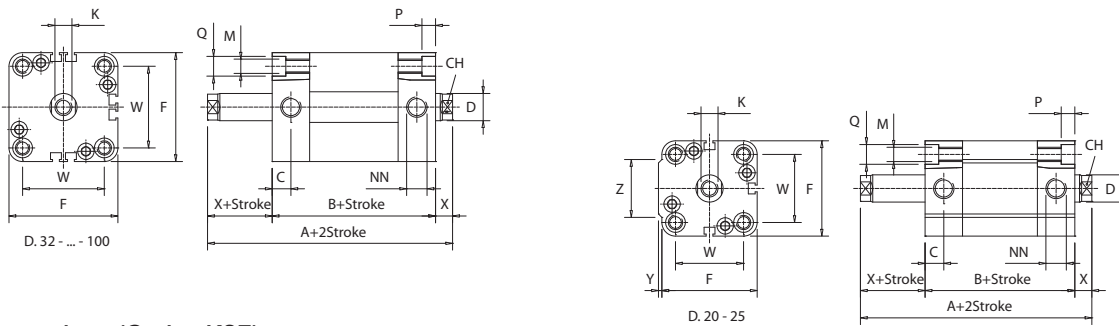
Ø [mm]	A+	B+	C	D	E	F	G	K	M	P	Q	W		X	CH	Y	Z	NN
												Unitop	ISO					
20	42,5	38	7,5	10	12	36	2,5	M5	M5	4,5	7,5	22	-	4,5	8	1	18	M5
25	45	39,5	7,5	10	12	40	2,5	M5	M5	4,5	7,5	26	-	5,5	8	1	18	M5
32	51	45	7,5	12	14	50	2,5	M6	M6	5,5	9	32	32,5	6	10	-	-	G1/8
40	52,5	46	7,5	12	14	60	2,5	M6	M6	5,5	9	42	38	6,5	10	-	-	G1/8
50	54	46,5	7,5	16	18	69	2,5	M8	M8	6,5	10,5	50	46,5	7,5	13	-	-	G1/8
63	57,5	50	7,5	16	18	85	2,5	M8	M8	6,5	10,5	62	56,5	7,5	13	-	-	G1/8
80	64	56	8,5	20	23	100	3	M10	M10	8,5	13,5	82	72	8	17	-	-	G1/8
100	76,5	66,5	10	25	28	120	3	M12	M10	8,5	13,5	103	89	10	22	-	-	G1/4



Dimensions (Series K1M, K2M, K5M)

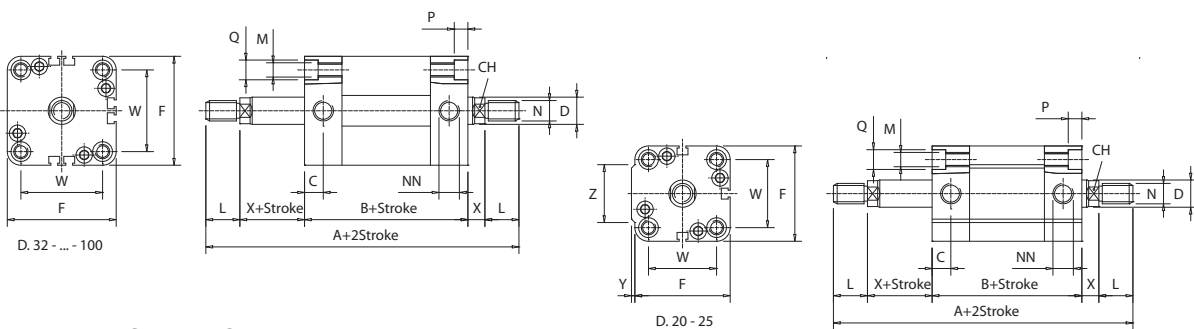
Ø [mm]	A+	B+	C	D	F	K	M	P	Q	W		X	CH	Y	Z	NN
										Unitop	ISO					
20	42,5	38	7,5	10	36	M5	M5	4,5	7,5	22	-	4,5	8	1	18	M5
25	45	39,5	7,5	10	40	M5	M5	4,5	7,5	26	-	5,5	8	1	18	M5
32	51	45	7,5	12	50	M6	M6	5,5	9	32	32,5	6	10	-	-	G1/8
40	52,5	46	7,5	12	60	M6	M6	5,5	9	42	38	6,5	10	-	-	G1/8
50	54	46,5	7,5	16	69	M8	M8	6,5	10,5	50	46,5	7,5	13	-	-	G1/8
63	57,5	50	7,5	16	85	M8	M8	6,5	10,5	62	56,5	7,5	13	-	-	G1/8
80	64	56	8,5	20	100	M10	M10	8,5	13,5	82	72	8	17	-	-	G1/8
100	76,5	66,5	10	25	120	M12	M10	8,5	13,5	103	89	10	22	-	-	G1/4

ISO 21287 Compact Cylinder – K Series



Dimensions (Series K3F)

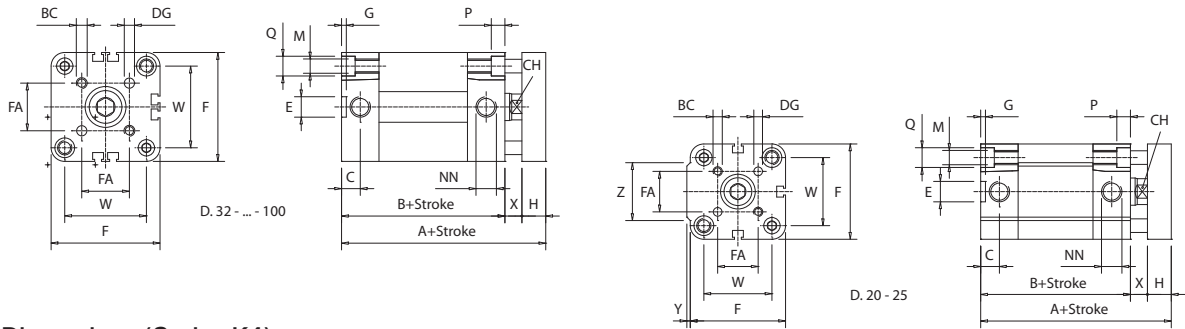
Ø [mm]	A+	B+	C	D	E	F	G	L	N	M	P	Q	W		X	CH	Y	Z	NN
													Unitop	ISO					
20	64,5	38	7,5	10	12	36	2,5	22	M10x1,25	M5	4,5	7,5	22	-	4,5	8	1	18	M5
25	67	39,5	7,5	10	12	40	2,5	22	M10x1,25	M5	4,5	7,5	26	-	5,5	8	1	18	M5
32	73	45	7,5	12	14	50	2,5	22	M10x1,25	M6	5,5	9	32	32,5	6	10	-	-	G1/8
40	74,5	46	7,5	12	14	60	2,5	22	M10x1,25	M6	5,5	9	42	38	6,5	10	-	-	G1/8
50	78	46,5	7,5	16	18	69	2,5	24	M12x1,25	M8	6,5	10,5	50	46,5	7,5	13	-	-	G1/8
63	81,5	50	7,5	16	18	85	2,5	24	M12x1,25	M8	6,5	10,5	62	56,5	7,5	13	-	-	G1/8
80	96	56	8,5	20	23	100	3	32	M16x1,5	M10	8,5	13,5	82	72	8	17	-	-	G1/8
100	116,5	66,5	10	25	28	120	3	40	M20x1,5	M10	8,5	13,5	103	89	10	22	-	-	G1/4



Dimensions (Series K3M)

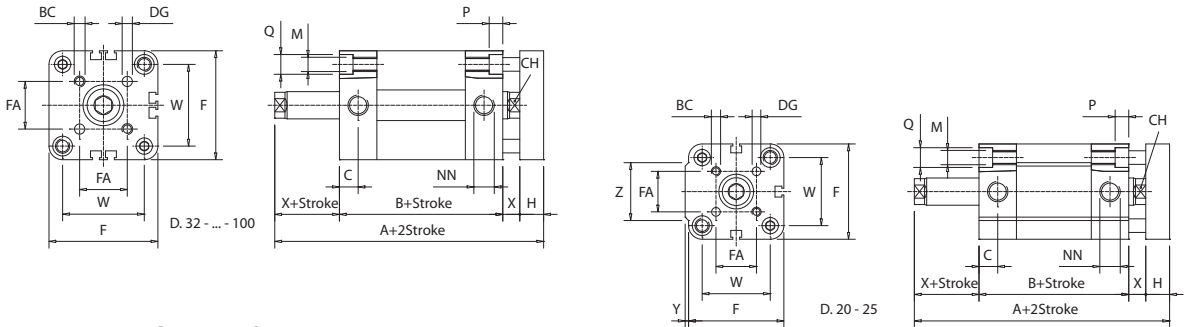
Ø [mm]	A+	B+	C	D	F	L	N	M	P	Q	W		X	CH	Y	Z	NN
											Unitop	ISO					
20	64,5	38	7,5	10	36	22	M10x1,25	M5	4,5	7,5	22	-	4,5	8	1	18	M5
25	67	39,5	7,5	10	40	22	M10x1,25	M5	4,5	7,5	26	-	5,5	8	1	18	M5
32	73	45	7,5	12	50	22	M10x1,25	M6	5,5	9	32	32,5	6	10	-	-	G1/8
40	74,5	46	7,5	12	60	22	M10x1,25	M6	5,5	9	42	38	6,5	10	-	-	G1/8
50	78	46,5	7,5	16	69	24	M12x1,25	M8	6,5	10,5	50	46,5	7,5	13	-	-	G1/8
63	81,5	50	7,5	16	85	24	M12x1,25	M8	6,5	10,5	62	56,5	7,5	13	-	-	G1/8
80	96	56	8,5	20	100	32	M16x1,5	M10	8,5	13,5	82	72	8	17	-	-	G1/8
100	116,5	66,5	10	25	120	40	M20x1,5	M10	8,5	13,5	103	89	10	22	-	-	G1/4

ISO 21287 Compact Cylinder – K Series



Dimensions (Series K4)

Ø [mm]	A+	B+	C	FA	E	F	G	H	M	P	Q	W	Unitop						
													BC	DG	X	CH	Y	Z	NN
20	50,5	38	7,5	12	12	36	2,5	8	M5	4,5	7,5	22	M4	4	4,5	8	1	18	M5
25	53	39,5	7,5	15,6	12	40	2,5	8	M5	4,5	7,5	26	M5	5	5,5	8	1	18	M5
32	61	45	7,5	19,8	14	50	2,5	10	M6	5,5	9	32	M5	5	6	10	-	-	G1/8
40	62,5	46	7,5	23,3	14	60	2,5	10	M6	5,5	9	42	M5	5	6,5	10	-	-	G1/8
50	66	46,5	7,5	29,7	18	69	2,5	12	M8	6,5	10,5	50	M6	6	7,5	13	-	-	G1/8
63	69,5	50	7,5	35,4	18	85	2,5	12	M8	6,5	10,5	62	M6	6	7,5	13	-	-	G1/8
80	78	56	8,5	46	23	100	3	14	M10	8,5	13,5	82	M8	8	8	17	-	-	G1/8
100	80,5	66,5	10	56,6	28	120	3	14	M10	8,5	13,5	103	M10	10	10	22	-	-	G1/4

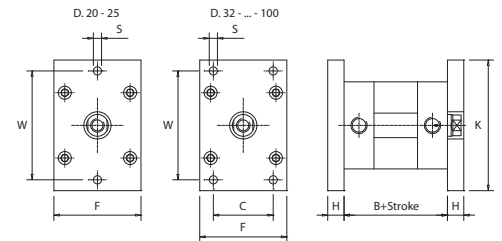


Dimensions (Series K6F)

Ø [mm]	A+	B+	C	FA	F	H	M	P	Q	W	Unitop						
											BC	DG	X	CH	Y	Z	NN
20	50,5	38	7,5	12	36	8	M5	4,5	7,5	22	M4	4	4,5	8	1	18	M5
25	53	39,5	7,5	15,6	40	8	M5	4,5	7,5	26	M5	5	5,5	8	1	18	M5
32	61	45	7,5	19,8	50	10	M6	5,5	9	32	M5	5	6	10	-	-	G1/8
40	62,5	46	7,5	23,3	60	10	M6	5,5	9	42	M5	5	6,5	10	-	-	G1/8
50	66	46,5	7,5	29,7	69	12	M8	6,5	10,5	50	M6	6	7,5	13	-	-	G1/8
63	69,5	50	7,5	35,4	85	12	M8	6,5	10,5	62	M6	6	7,5	13	-	-	G1/8
80	78	56	8,5	46	100	14	M10	8,5	13,5	82	M8	8	8	17	-	-	G1/8
100	80,5	66,5	10	56,6	120	14	M10	8,5	13,5	103	M10	10	10	22	-	-	G1/4

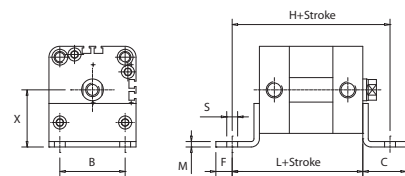
Flange Front/Rear

Part Number	Ø mm	B+	F	H	K	C	W	S
KM20/01 (Front) KM20/02 (Rear)	20	38	35	10	70	-	55	6,6
KM25/01 (Front) KN25/02 (Rear)	25	39,5	40	10	76	-	60	6,6
KM32/01 (Front) KN32/02 (Rear)	32	45	50	10	80	32	65	7
KM40/01 (Front) KN40/02 (Rear)	40	46	60	10	102	36	82	9
KM50/01 (Front) KN50/02 (Rear)	50	46,5	70	12	110	45	90	9
KM63/01 (Front) KN63/02 (Rear)	63	50	85	15	130	50	110	9
KM80/01 (Front) KN80/02 (Rear)	80	56	100	15	160	63	135	12
KM100/01 (Front) KN100/02 (Rear)	100	66,5	120	15	190	75	163	14



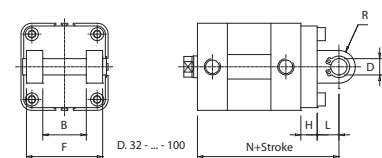
Foot Mount

Part Number	Ø mm	L+	B	C	F	H+	S	M	X
KM20/03	20	54	22	22	6	70	6,6	4	27
KM25/03	25	55,5	26	22	6	71,5	6,6	4	29
KM32/03	32	63	32	25	7	81	6,6	5	34
KM40/03	40	66	42	28	8	86	9	5	40,5
KM50/03	50	70,5	50	32	8	94,5	9	6	47
KM63/03	63	77	62	37	10	104	11	6	56,5
KM80/03	80	86	82	40	10	116	11	8	63,5
KM100/03	100	99,5	103	45	12	132,5	13,5	8	81



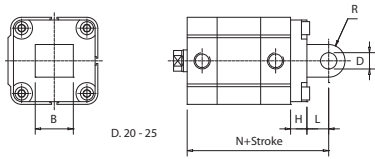
Rear Clevis Female

Part Number	Ø mm	N+	B	F	H	L	D	R
KM32/04	32	67	26	45	9	13	10	11
KM40/04	40	71	28	52	9	16	12	13
KM50/04	50	73,5	32	60	11	16	12	13
KM63/04	63	82	40	70	11	21	16	17
KM80/04	80	92	50	90	13	23	16	17
KM100/04	100	107,5	50	110	15	26	20	21



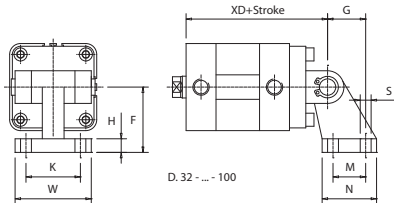
Accessories ISO 21287 Compact Cylinder – K Series

Rear Clevis Male



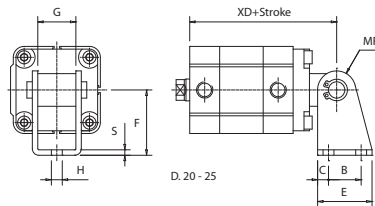
Part Number	Ø mm	N+	B	H	L	D	R
KM05/20	20	58	16	6	14	8	8
KM05/25	25	59,5	16	6	14	8	8

Rear Clevis with Bracket



Part Number	Ø mm	XD+	G	M	N	S	H	F	K	W
KM06/32	32	67	21	18	31	5,5	8	32	38	51
KM06/40	40	71	24	22	35	5,5	10	36	41	54
KM06/50	50	73,5	33	30	45	6,6	12	45	50	65
KM06/63	63	82	37	35	50	6,6	12	50	52	67
KM06/80	80	92	47	40	60	9	14	63	66	86
KM06/100	100	107,5	55	50	70	9	15	71	76	96

Rear Clevis with Bracket



Part Number	Ø mm	L+	B	C	E	MR	F	S	H	G
KM07/20	20	58	20	6	32	10	30	4	6	16,1
KM07/25	25	59,5	20	6	32	10	30	4	6	16,1

Short Stroke Cylinder – N Series

Materials

Rod	Stainless steel
Barrel	Extruded anodized aluminium
End covers	Brass / anodized aluminium
Seals	Polyurethane
Magnet	Plastoferrite

General

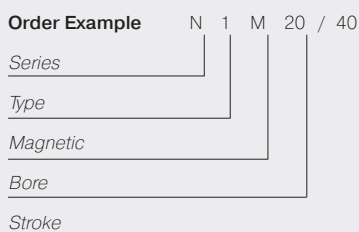
Bore sizes	20, 32, 40, 50, 63, 80, 100
Strokes	As per table (on request specials)
Temperature	-20° / +70°
Pressure Range	1 – 10 bar
Operating Medium	Filtered compressed air, lubricated and non lubricated



Traction and Thrust Forces [6 BAR, Double-acting]

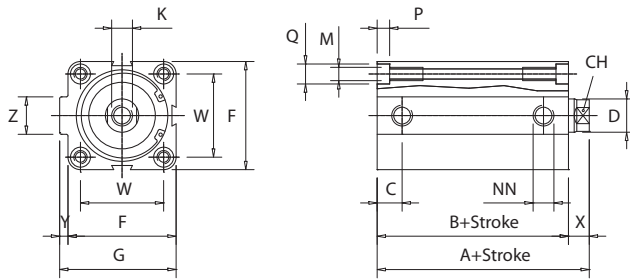
Ø [mm]	Standard Strokes [mm]	Thrust Force [N]	Traction Force [N]
20	5 - 10 - 15 - 20 - 25 - 30 - 40 - 50 - 60	166	125
32	5 - 10 - 15 - 20 - 25 - 30 - 40 - 50 - 60 - 75 - 80	425	317
40	5 - 10 - 15 - 20 - 25 - 30 - 40 - 50 - 60 - 75 - 80 - 100	664	559
50	5 - 10 - 15 - 20 - 25 - 30 - 40 - 50 - 60 - 75 - 80 - 100	1037	872
63	5 - 10 - 15 - 20 - 25 - 30 - 40 - 50 - 60 - 75 - 80 - 100	1650	1480
80	5 - 10 - 15 - 20 - 25 - 30 - 40 - 50 - 60 - 75 - 80 - 100	2660	2400
100	5 - 10 - 15 - 20 - 25 - 30 - 40 - 50 - 60 - 75 - 80 - 100	4154	3787

N Series Short Stroke Cylinder



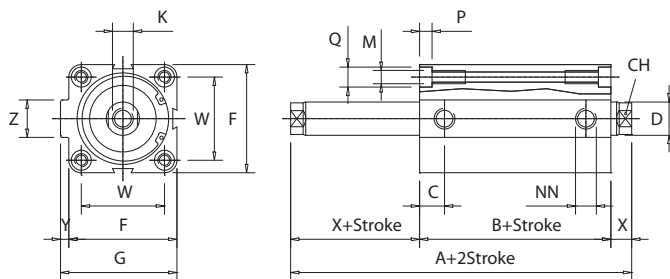
Type	1 Double-acting 2 Single-acting spring return 3 Double-acting through-rod 4 Double-acting anti-rotation
Magnetic	M Magnetic as standard Non-magnetic leave blank
Bore	Add Bore [mm]
Stroke	Add Stroke [mm]

Short Stroke Cylinder – N Series



Dimensions (Series N1, N2)

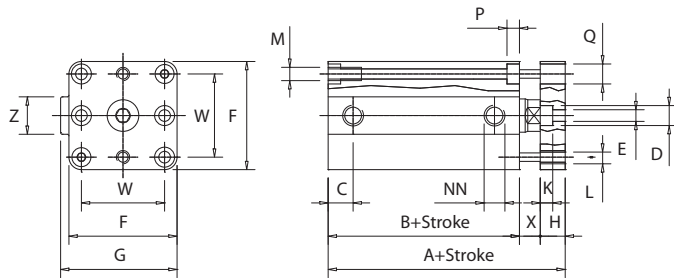
Ø	A+	A+	B+	B+	C	D	F	G	K	CH	M	NN	Q	P	W	X	Y	Z
[mm]	Normal	Magentic	Normal	Magentic														
20	28,5	35,5	24	31	8	10	36	38	M5x7	8	M6	M5	7,5	4,5	25,5	4,5	2	10
32	36	43	29	36	9	16	46	49,5	M8x13	14	M6	G1/8	7,5	4,5	34	7	3,5	16
40	41	48	34	41	11	16	54	57	M8x13	14	M8	G1/8	10,5	6,5	40	7	4	16
50	43	50	35	42	11,5	20	65	71	M10x15	17	M8	G1/4	10,5	6,5	50	8	6	20
63	48	55	40	47	13	20	79	85	M10x15	17	M10	G1/4	13,5	8,5	60	8	6	22
80	58	64	48	55	16,5	25	98	104	M16x21	22	M12	G3/8	16,5	10,5	77	10	6	26
100	69	76	57	64	19	30	118	123,5	M20x27	27	M12	G3/8	16,5	10,5	94	12	6	30



Dimensions (Series N3)

Ø	A+	A+	B+	B+	C	D	F	G	K	CH	M	NN	Q	P	W	X	Y	Z
[mm]	Normal	Magentic	Normal	Magentic														
20	33	40	24	31	8	10	36	38	M5x7	8	M6	M5	7,5	4,5	25,5	4,5	2	10
32	43	50	29	36	9	16	46	49,5	M8x13	14	M6	G1/8	7,5	4,5	34	7	3,5	16
40	48	55	34	41	11	16	54	57	M8x13	14	M8	G1/8	10,5	6,5	40	7	4	16
50	51	58	35	42	11,5	20	65	71	M10x15	17	M8	G1/4	10,5	6,5	50	8	6	20
63	56	63	40	47	13	20	79	85	M10x15	17	M10	G1/4	13,5	8,5	60	8	6	22
80	68	74	48	55	16,5	25	98	104	M16x21	22	M12	G3/8	16,5	10,5	77	10	6	26
100	81	88	57	64	19	30	118	123,5	M20x27	27	M12	G3/8	16,5	10,5	94	12	6	30

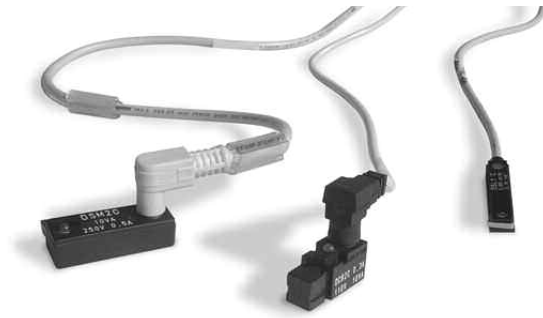
Short Stroke Cylinder – N Series



Dimensions (Series N4)

Ø	A+	A+	B+	B+	C	D	E	F	G	L	K	H	M	NN	Q	P	W	X	Z
[mm]	Normal	Magnetic	Normal	Magnetic															
32	53	60	29	36	9	9	5,5	45	49,5	M5	5,5	10	M6	G1/8	7,5	4,5	34	7	16
40	58	65	34	41	11	9	5,5	55	57	M5	5,5	10	M8	G1/8	10,5	6,5	40	7	16
50	63	70	35	42	11,5	11	6,5	65	71	M6	6,5	12	M8	G1/4	10,5	6,5	50	8	20
63	68	75	40	47	13	14	6,5	80	85	M6	8,5	12	M10	G1/4	13,5	8,5	60	8	22

Sensors



Reed switch type & bracket

Series	Ø	DSM	DCB	DSL
R Series	10	DXF11	-	-
R Series	12	DXF13	-	-
R Series	16	DXF17	-	-
R Series	20	DXF21	-	-
R Series	25	DXF26	-	-
T Series	32 - 100	DST10	-	-
T Series	125	DST11	-	-
T Series	160 - 200	DST51	-	-
T Series	250 - 320	DST52	-	-
H Series	32	-	-	Direct Mount
H Series	40	-	-	Direct Mount
H Series	50	-	-	Direct Mount
H Series	63	-	-	Direct Mount
H Series	80	-	-	Direct Mount
H Series	100	-	-	Direct Mount
H Series	125	-	-	Direct Mount
K Series	20	-	-	Direct Mount
K Series	25	-	-	Direct Mount
K Series	32	-	-	Direct Mount
K Series	40	-	-	Direct Mount
K Series	50	-	-	Direct Mount
K Series	63	-	-	Direct Mount
K Series	80	-	-	Direct Mount
K Series	100	-	-	Direct Mount
N Series	20	-	Direct Mount	-
N Series	32	-	Direct Mount	-
N Series	40	-	Direct Mount	-
N Series	50	-	Direct Mount	-
N Series	63	-	Direct Mount	-
N Series	80	-	Direct Mount	-
N Series	100	-	Direct Mount	-

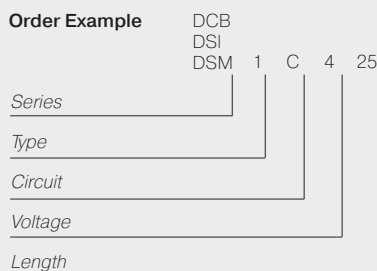
DCB Switch	D	C	M	N
			NPN	PNP
Voltage DC	24V	3÷110V	6÷30V	6÷30V
Voltage AC	24V	3÷110V	-	-
Current at 25°	1A	0,3A	0,25A	0,25A
Power	10 VA	10 VA	6 W	6 W
Time on	0,5mS	0,6mS	0,8µS	0,8µS
Time off	0,1mS	0,1mS	0,3µS	0,3µS
Contact resistance	0,1Ω	0,1Ω	-	-
Voltage drop	-	-	0,7V	0,7V
Protection against reverse polarity	Yes	Yes	Yes	Yes
Protection against short circuit	No	No	No	No

DSL	D	C	N
			PNP
Voltage DC	3 - 24V	3÷30V	6÷30V
Voltage AC	3 - 24V	3÷30V	-
Current at 25°	0,25A	0,1A	0,20A
Power	6 VA	6 VA	4 W
Time on	0,5mS	0,5mS	0,8 S
Time off	0,1mS	0,1mS	0,3µS
Contact resistance	0,1Ω	0,1Ω	-
Voltage drop	<3V	<3V	<3V
Normal working point	25 - 30 AT	25 - 30 AT	30 - 50 Gauss
Frequency	max 500Hz	max 500Hz	max 200Hz
Protection against reverse polarity	Yes	Yes	Yes
Protection against short circuit	No	No	No

DSM Switch	D	H	S	C	M	N
					NPN	PNP
Voltage DC	24V	3÷110V	3÷110V	3÷230V	6÷30V	6÷30V
Voltage AC	24V	3÷110V	3÷110V	3÷230V	-	-
Current at 25°	1A	0,5A	0,3A	0,5A	0,25A	0,25A
Power	10 VA	20 VA	20 VA	10 VA	6 W	6 W
Time on	0,8mS	0,5mS	0,5mS	0,5mS	0,8mS	0,8mS
Time off	0,1mS	0,02mS	0,02mS	0,01mS	0,3mS	0,3mS
Contact resistance	0,1Ω	0,1Ω	0,1Ω	0,1Ω	-	-

DCB – DSL – DSM

Order Example



- Type
- Sensor 2 wire
 - Sensor with connector 2 wire
 - Sensor 3 wire
 - Sensor with connector 3 wire
 - Sensor with M12 connector 2 wire
 - Sensor with M12 connector 3 wire
 - Sensor 3 wire
 - Sensor with M8 connector 3 wire
 - Sensor with M12 connector 3 wire

Circuit Code as per table

- Voltage
- 24 V – DCB, DSL, DSM
 - 110 V – DCB, DSM
 - 220 V – DSM

Length 25 2,5 m cable (other lengths on request)
03 30 cm (only with connector)

Hafner (UK)
Unit 4 Forest Row Business Park,
Station Road
Forest Row, East Sussex. RH18 5DW

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Fax +44 (0) 13 42 82 64 89

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