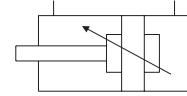


**Features:**

- ▶ Conforms to ISO:6430 standard.
- ▶ Double Acting, with adj. cushioning at both ends.
- ▶ Bore Sizes: Ø32, Ø40, Ø50, Ø63, Ø80, Ø100, Ø125, Ø160, Ø200 & Ø250.
: Other bore sizes on request
- ▶ Seamless Steel tube with hard chrome plated bore.
- ▶ High yield strength Carbon steel piston rod.
- ▶ Precision machined Solid steel Head & Cap.
- ▶ High strength carbon steel tie rods to hold the Head & Cap.
- ▶ High grade Cast iron piston & rod bearings.
- ▶ Nitrile seals. (High temp. resistant Viton / PTFE seals optional).
- ▶ Varieties of mounting possibilities & Accessories.


Technical Specifications :

Specification		Units	Technical Details
Standard strokes		mm	25, 50, 80, 100, 125, 160, 200, 320, 400, 500
Other strokes		—	With Stop tube upto 6000
Medium		—	Compressed, Filtered air
Testing pressure		bar	10
Materials		—	Steel, Cast iron, Nitrile & Teflon
Mountings		—	Extended tie rod, Side Lug, Rectangular flange, Cap clevis & Cap eye,
			Trunnion, Side tapped, Center line Lug, End Lug, Square flange & Square
Accessories	Std.	—	Rod clevis - ISO : 8140 & Rod end Spherical eye - ISO : 8139
	Non std.	—	Rod eye, Eye/Clevis Bracket & Pin, & Rod coupler

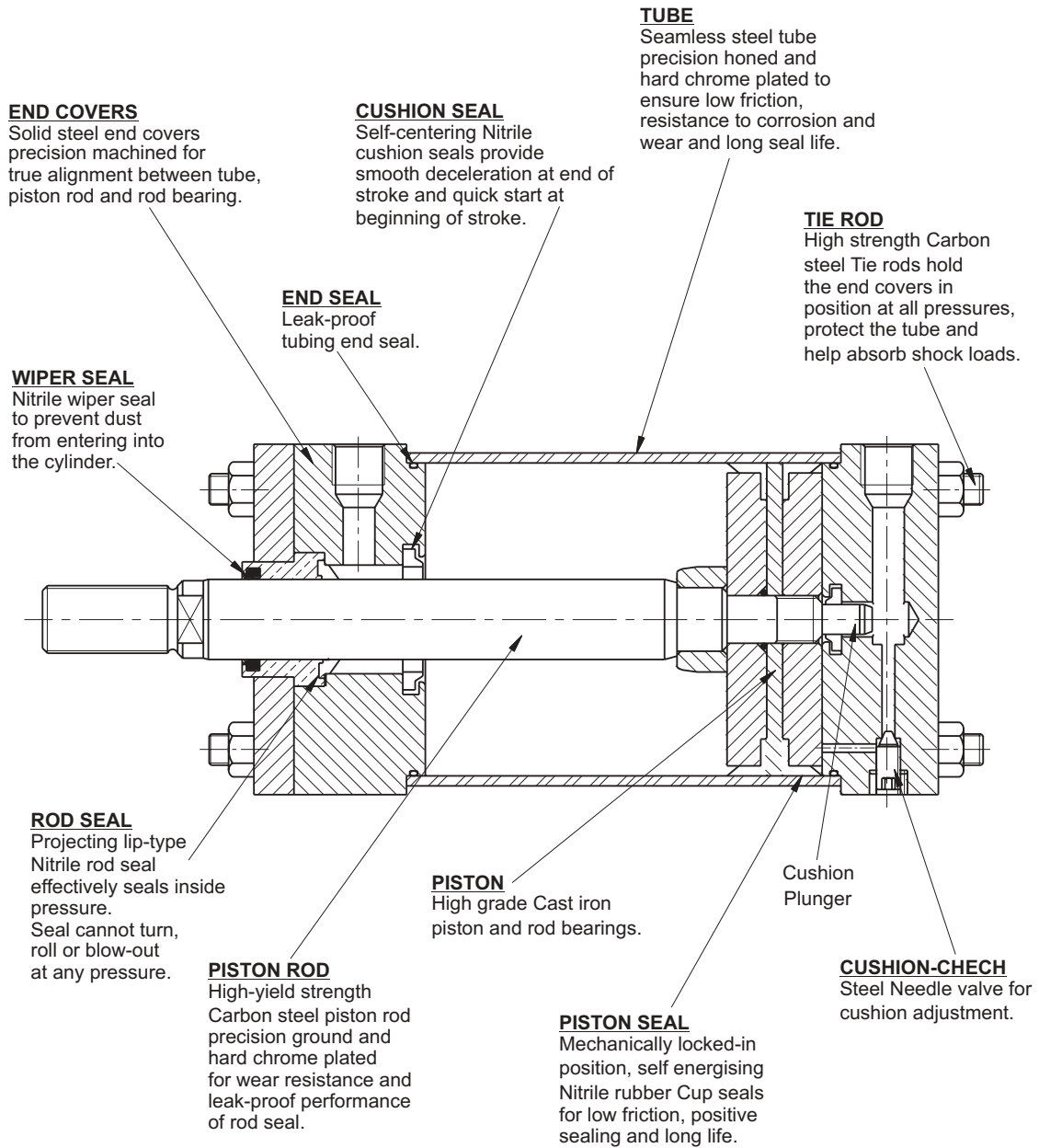
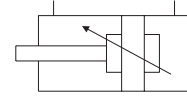
Effective Piston Area & Force Table

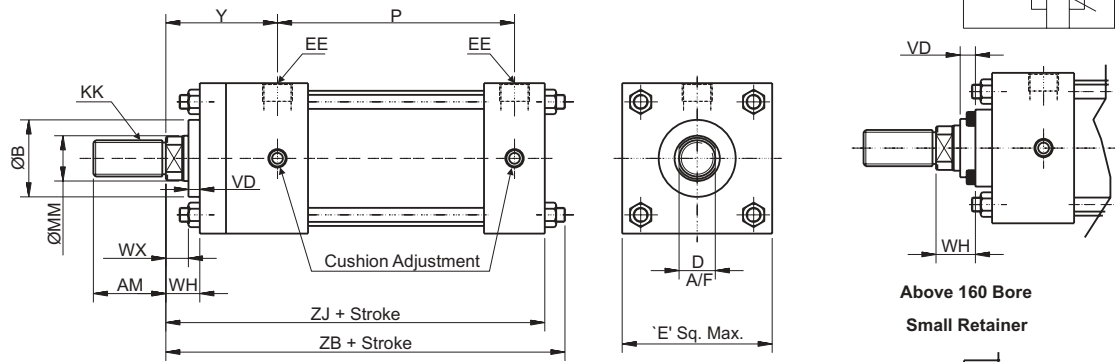
Cyl. Bore	Piston Rod	Piston Area (cm ²)		Thrust (F) Retraction (R) Force in Kgf												Air Consumption per cm. stroke @ 5kg/cm ² in Litres (Free Air)	
				Operating pressure in Kg/cm ²													
		Forward `F`	Retract `R`	1		2		3		4		5		10			
				F	R	F	R	F	R	F	R	F	R	F	R		
32	12	8.0	6.9	8.0	6.9	16.0	13.9	24.2	20.8	32.2	27.7	40.5	34.6	80.9	69.0	0.048	0.041
40	16	12.6	10.6	12.6	10.6	25.2	21.2	37.7	31.7	50.3	42.3	62.9	52.8	126	106	0.075	0.064
50	20	19.6	16.5	19.6	16.5	39.3	33.0	58.9	49.5	78.6	66.0	98.2	82.5	197	165	0.118	0.099
63	20	31.2	28.0	31.2	28.0	62.4	56.0	93.5	84.0	124.7	112.2	155.9	140.2	312	280.3	0.187	0.168
80	25	50.3	45.4	50.3	45.4	100.6	90.8	150.8	136	201	185.5	251.4	226.8	503	454	0.301	0.272
100	25	78.6	73.7	78.6	73.7	157	147.3	235.7	220.9	314.2	294.6	392.7	368.2	786	737	0.471	0.442
125	32	123	115	123	115	246	230	369	345	492	460	615	575	1230	1150	0.736	0.690
160	40	201	188	201	188	402	376	603	564	804	752	1005	940	2010	1880	1.205	1.128
200	40	314	301	314	301	628	602	942	903	1256	1204	1570	1505	3140	3010	1.884	1.806
250	45	491	475	491	475	982	950	1473	1425	1964	1900	2455	2375	4910	4750	2.944	2.850
320	56	804	779	804	779	1608	1558	2412	2337	3216	3116	4020	3895	8040	7790	4.823	4.674
400	63	1256	1225	1256	1225	2512	2450	3768	3675	5024	4900	6280	6125	12560	12250	7.536	7.350
500	80	1962	1912	1962	1912	3924	3824	5886	5736	7848	7648	9810	9560	19620	19120	11.775	11.472

Ordering Code

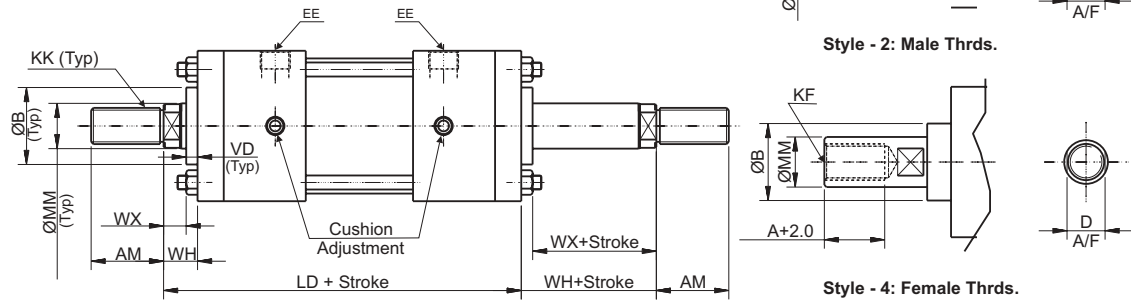
TA-S-	XXX-BORE	XX-ROD	XXXX-STROKE	XXX-MOUNTING	XX CUSHION	-X ROD THDS.	-XXXX ACCES-SORIES	XXXX SPECIAL
Series								
S-Single end rod D-Double end rod	32, 40, 50, 63, 80, 100, 125, 160, 200, 250, 320, 400, 500	12, 16, 20, 25, 32, 40, 45, 56, 63, 80	Stroke with stop tube in bracket upto 6000mm	Indicate code as per Mounting Data Sheets	CB - both ends CH - head end CC - cap end NC - non-cushioned	FT - female thrd. MT - male thrd.	Indicate code as per Mounting Data Sheets	(Give full detail in text)

Example: TAS-80-25-500-MP3-CB-MT-RS



Basic Cylinder


Above 160 Bore
Small Retainer

Double end rod


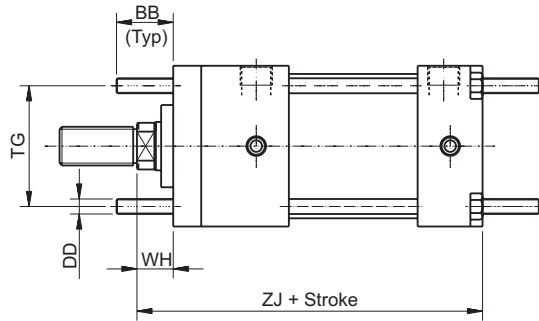
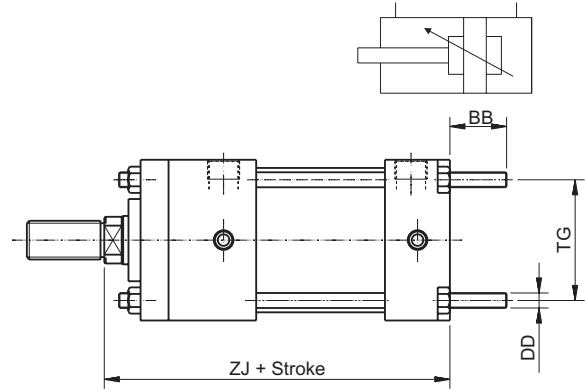
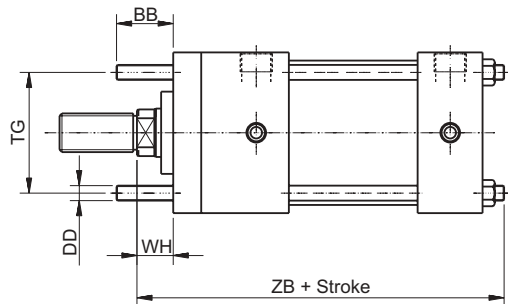
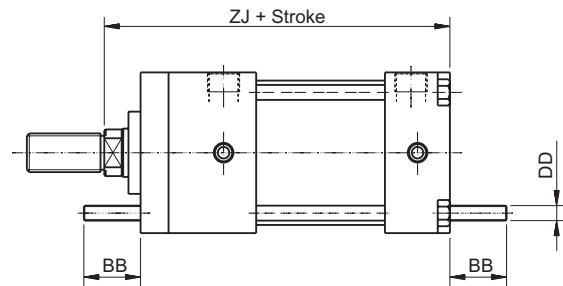
Style - 2: Male Thrds.

Style - 4: Female Thrds.

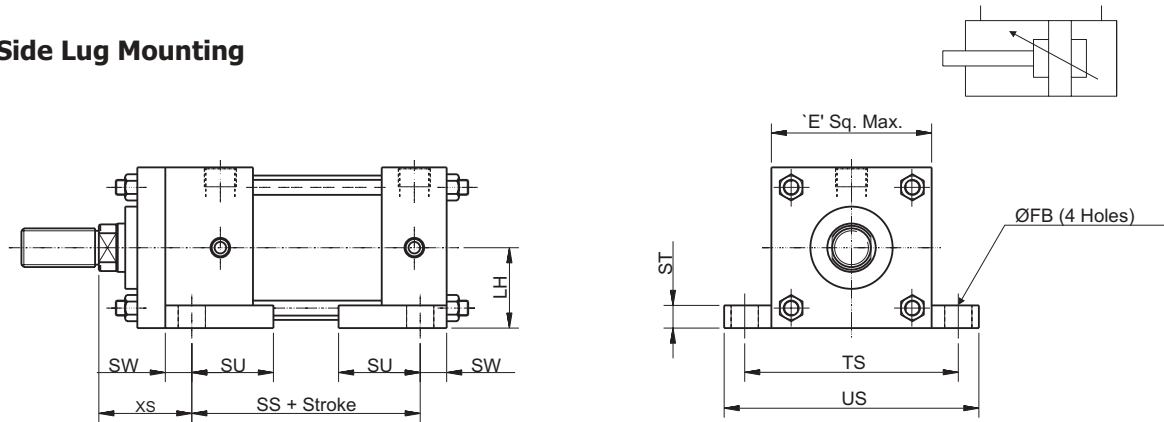
Bore dia	ØMM	'E' Sq.	ØB f9	WX Min.	VD Min.	WH		ZJ		ZB Max.	EE BSP	LD		Y	P	MALE THREADS				FEMALE THREADS		Pr. Rating Kg/cm²
						Nom.	Tol.	Nom.	Tol.			Nom.	Tol.			Nom.	Tol.	KK	AM	ØNA	D	
32	12	45	24	9	5	15	±1.6	118	±1.6	125	G 1/8"	126	±1.6	48.5	59	M10x1.25	22	11	10	M8x1.25	12	50
40	16	51	30	8	5	15	±1.6	118	±1.6	125	G 1/4"	126	±1.6	48.5	59	M12x1.25	24	15	13	M10x1.25	14	50
50	20	64	34	8	5	15	±1.6	118	±1.6	125	G 1/4"	126	±1.6	48.5	59	M16x1.5	32	19	16	M12x1.5	16	50
63	20	77	34	6	5	15	±2.0	121	±2.0	130	G 3/8"	128	±2.0	45	65							35
80	25	96	39	9	5	19	±2.0	143	±2.0	153	G 3/8"	152	±2.0	60.5	69	M20x1.5	40	24	21	M18x1.25	25	50
100	25	115	39	9	5	19	±2.0	143	±2.0	153	G 1/2"	152	±2.0	58.5	71							35
125	32	140	46	7	5	19	±2.5	149	±2.5	162	G 1/2"	158	±2.5	58.5	77	M27x2	54	31	27	M24x2	32	25
160	40	179	55	6	5	21	±2.5	172	±2.5	188	G 3/4"	182	±2.5	69	86	M36x2	72	39	36	M30x2	40	25
200	40	217	55	6	5	21	±2.5	172	±2.5	188	G 3/4"	181	±2.5	68	87							20
250	45	271	60	5	4	23	±3.0	210	±3.0	229	G 1"	218	±3.0	76	112	M42x2	84	44	41	M33x2	45	20
NON - ISO																						
320	56	366	72	34	8	32	±3.0	231	±3.0	250	G 1"	226	±3.0	81	128	M48x2	96	54	50	M42x2	56	20
400	63	456	80	36	8	32	±3.5	258	±3.5	280	G 1"	266	±3.5	98	134	M56x2	96	62	60	M56x2	75	20
500	80	556	105	32	8	32	±3.5	283	±3.5	310	G 1-1/4"	284	±3.5	94	160	M64x3	128	76	70	M64x3	85	20

Note: 1. Cylinder can work at pressures upto rating given above.

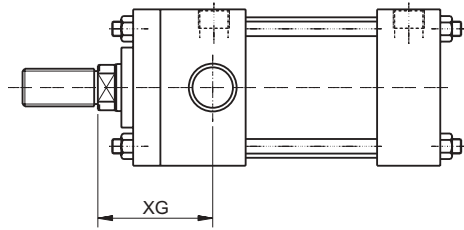
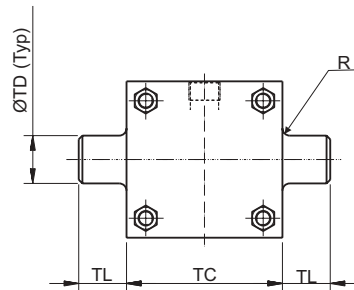
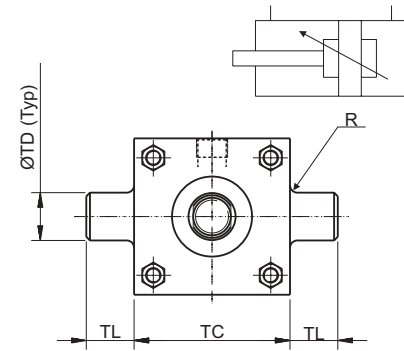
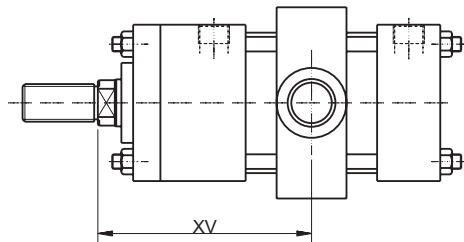
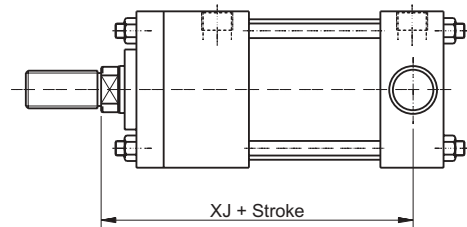
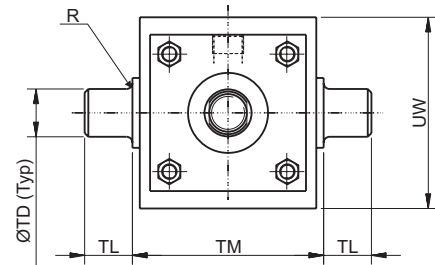
2. At rod end male threads 'KK' are provided as standard.

Extended Tie Rod Mounts

MX1 - Mounting with Tie rods extended at both ends.

MX2 - Cap Mounting with Tie rods extended.

MX3 - Head Mounting with Tie rods extended.

MX4 - Both ends 2 Tie rods extended.

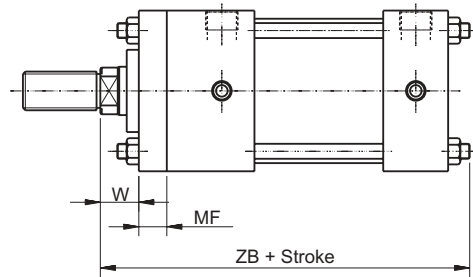
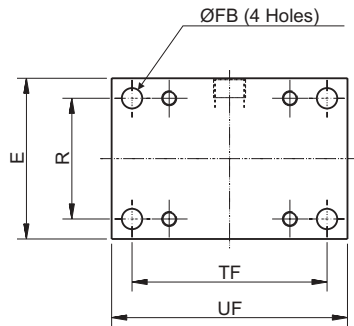
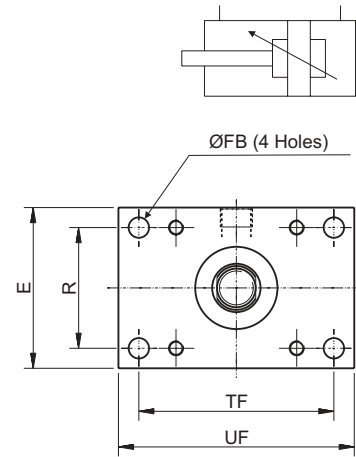
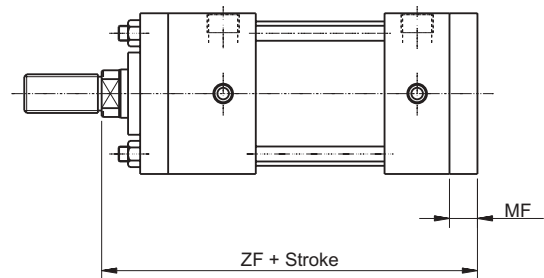
Bore dia	Piston Rod	BB		DD	TG js14	WH		ZJ		ZB
		Nom.	Tol.			Nom.	Tol.	Nom.	Tol.	
32	12	25	+3.0	M6	33	15	±1.6	118	±1.6	125
40	16	25	+3.0	M6	37	15	±1.6	118	±1.6	125
50	20	25	+3.0	M6	47	15	±1.6	118	±1.6	125
63	20	28	+3.0	M8	56	15	±2.0	121	±2.0	130
80	25	35	+3.0	M10	70	19	±2.0	143	±2.0	153
100	25	35	+3.0	M10	84	19	±2.0	143	±2.0	153
125	32	46	+5.0	M12	104	19	±2.5	149	±2.5	162
160	40	59	+5.0	M16	134	21	±2.5	172	±2.5	188
200	40	59	+5.0	M16	163	21	±2.5	172	±2.5	188
250	45	68	+5.0	M20	202	23	±3.0	210	±3.0	229
NON - ISO										
320	56	68	+5.0	M20	270	32	±4.0	231	±4.0	250
400	63	90	+5.0	M24	336	32	±4.0	258	±4.0	280
500	80	107	+5.0	M30	412	32	±4.0	283	±4.0	310

Side Lug Mounting

MS2 - Mounting with Side Lugs.

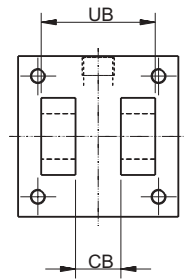
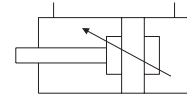
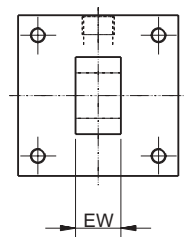
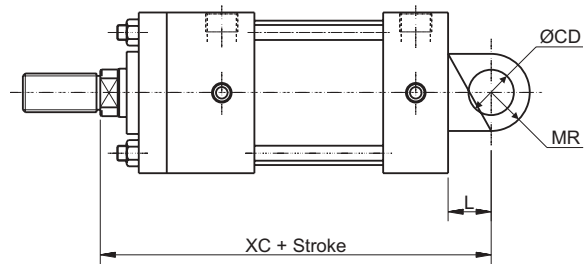
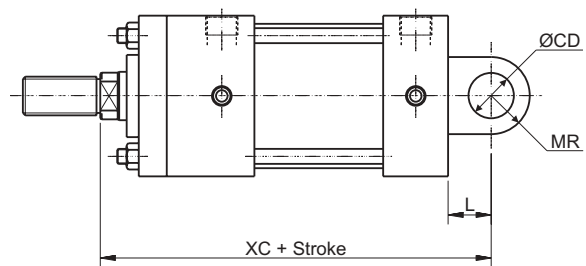
Bore dia	Piston Rod	'E' Sq.	ØSB H13	SS		ST Min.	SU	SW	TS JS14	US Max.	LH a10	XS	
				Nom.	Tol.							Nom.	Tol.
32	12	45	9	73	±1.2	10	24	10	63	81	22	35	±1.2
40	16	51	12	73	±1.2	10	24	10	70	94	25	35	±1.2
50	20	64	12	73	±1.2	10	24	10	83	107	31	35	±1.2
63	20	77	12	76	±1.6	10	24	10	95	119	38	35	±1.6
80	25	96	14	82	±1.6	16	32	13	121	149	47	48	±1.6
100	25	115	14	82	±1.6	16	32	13	140	168	57	48	±1.6
125	32	140	18	80	±2.0	16	40	17	175	211	69	52	±2.0
160	40	179	22	95	±2.0	20	40	18	213	257	89	59	±2.0
200	40	217	22	95	±2.0	20	40	18	251	295	108	59	±2.0
250	45	271	26	118	±2.5	25	50	22	314	366	135	70	±2.5
NON - ISO													
320	56	366	26	136	±3.0	32	50	22	420	466	180	73	±3.0
400	63	456	36	145	±3.0	76	63	28	524	586	225	85	±3.0
500	80	556	36	170	±3.0	76	63	28	624	688	275	85	±3.0

Trunnion Mounts

MT1 - Head Mounting, Integral Trunnion (Male)

MT2 - Cap Mounting, Integral Trunnion (Male)

MT4 - Mounting, with Intermediate fixed or movable Trunnion (Male)


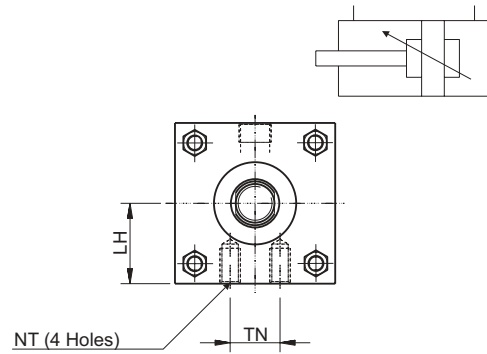
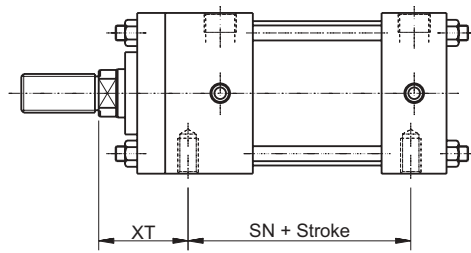
Bore dia	Piston Rod	ØD e9	TL h14	TM h14	R Max.	UW Max.	TC h14	XG		XJ		XV			Stroke Min.
								Nom.	Tol.	Nom.	Tol.	Min.	Max.	Tol.	
32	12	16	16	55	1	55	44	44	±1.6	105	±1.2	82	74	±2.0	8
40	16	25	25	63	1.6	63	50	44	±1.6	105	±1.2	89.5	66.5	±2.0	23
50	20	25	25	76	1.6	76	63	44	±1.6	105	±1.2	89.5	66.5	±2.0	23
63	20	25	25	88	1.6	88	76	44	±2.0	108	±1.6	87.5	68.5	±2.0	19
80	25	25	25	114	1.6	114	95	57	±2.0	127	±1.6	104.5	85.5	±2.0	19
100	25	25	25	132	2.0	132	114	57	±2.0	127	±1.6	104.5	85.5	±2.0	19
125	32	25	25	158	2.0	158	139	57	±2.5	133	±2.0	107	89	±2.5	18
160	40	36	36	200	2.5	200	178	66	±2.5	153	±2.0	126.5	97.5	±2.5	29
200	40	36	36	246	2.5	246	216	66	±2.5	153	±2.0	124.5	88.5	±2.5	36
250	45	45	45	304	3.2	304	270	76	±2.5	185	±2.5	143.5	120.5	±2.5	23
NON - ISO															
320	56	45	45	456	3.2	456	364	79	±3.0	203	±3.0	149.5	140.5	±3.0	9
400	63	50	50	577	5.0	577	454	92	±3.0	225	±3.0	181	149	±3.0	32
500	80	63	63	685	5.0	685	554	98	±3.0	248	±3.0	191	157	±3.0	34

Rectangular Flange Mounts

MF1 - Head Mounting, Rectangular Flange.

MF2 - Cap Mounting, Rectangular Flange.


Bore dia	Piston Rod	MF		ØFB H13	E Max.	R JS14	TS JS14	UF Max.	W		ZB Max.	ZF	
		Nom.	Tol.						Nom.	Tol.		Nom.	Tol.
32	12	10	±3.0	7	45	33	58	72	15	±1.6	125	128	±1.2
40	16	10	±3.0	7	51	36	70	84	15	±1.6	125	128	±1.2
50	20	10	±3.0	9	64	47	86	104	15	±1.6	125	128	±1.2
63	20	10	±3.0	9	77	56	98	116	15	±2.0	130	131	±1.6
80	25	16	±3.0	12	96	70	119	143	19	±2.0	153	159	±1.6
100	25	16	±3.0	12	115	84	138	162	19	±2.0	153	159	±1.6
125	32	16	±3.0	14	140	104	168	194	19	±2.5	162	165	±2.0
160	40	20	±5.0	18	179	134	212	248	21	±2.5	188	192	±2.0
200	40	20	±5.0	18	217	163	250	286	21	±2.5	188	192	±2.0
250	45	25	±5.0	22	271	201	312	356	23	±3.0	229	235	±2.5

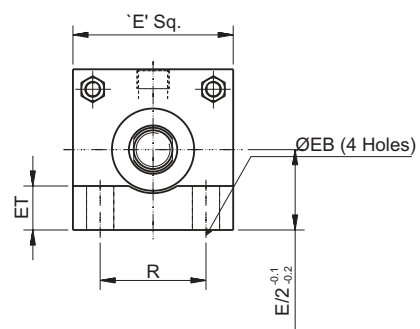
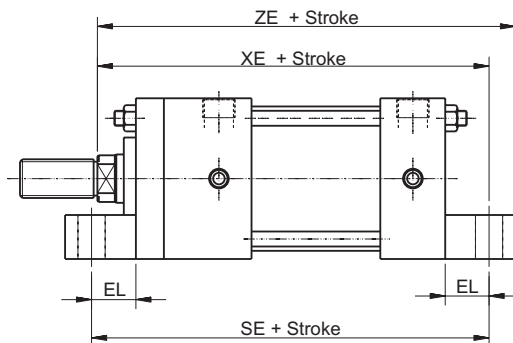
Cap clevis & Cap eye Mounts

MP1 - Cap Mounting, Fixed Clevis.

MP3 - Cap Mounting, Fixed Eye


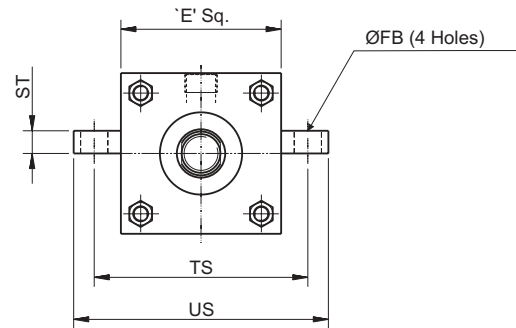
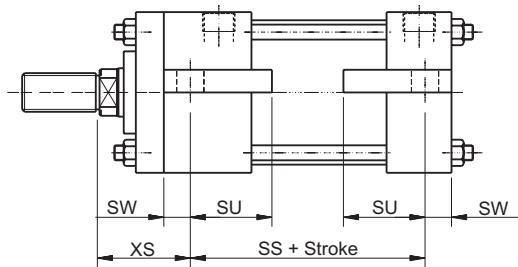
Bore dia	Piston Rod	CB A16	ØCD H9	L Min.	MR Max.	XC		UB Max.	EW h10
						Nom.	Tol.		
32	12	16	12	19	17	137	±1.2	38	16
40	16	20	14	19	17	137	±1.2	46	20
50	20	20	14	19	17	137	±1.2	52	20
63	20	20	14	19	17	140	±1.6	52	20
80	25	32	20	32	29	175	±1.6	65	32
100	25	32	20	32	29	175	±1.6	65	32
125	32	32	20	32	29	181	±2.0	65	32
160	40	40	28	38	34	210	±2.0	83	40
200	40	40	28	38	34	210	±2.0	83	40
250	45	50	36	54	50	264	±2.5	115	50
NON - ISO									
320	56	63	45	57	44	291	±3.0	127	63
400	63	63	50	63	50	322	±3.0	127	63
500	80	76	63	76	63	355	±3.0	152	76

Side Tapped Mounts

MX7 - Side Tapped Mounting.
End Lug Mounts

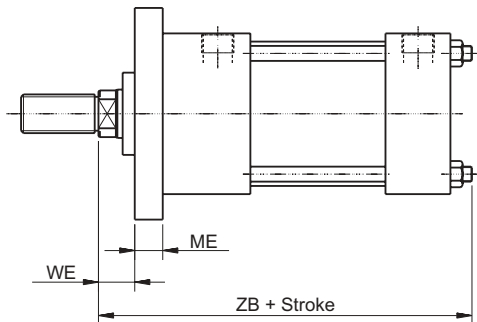
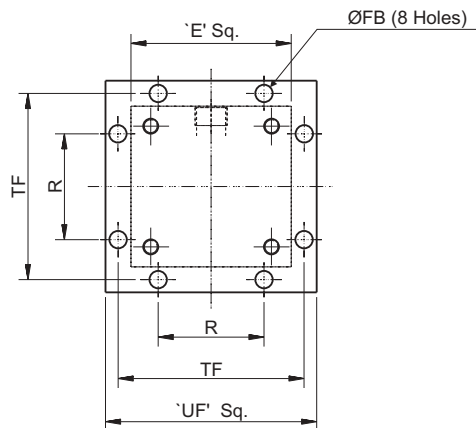
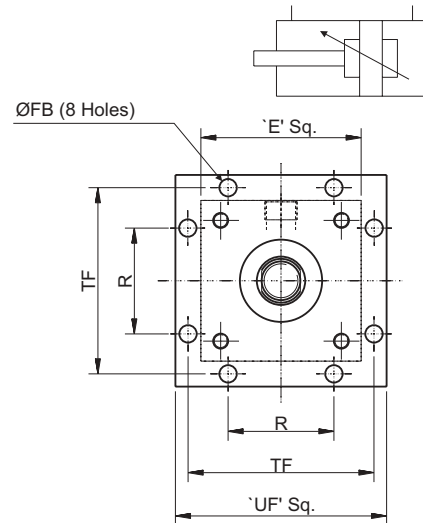
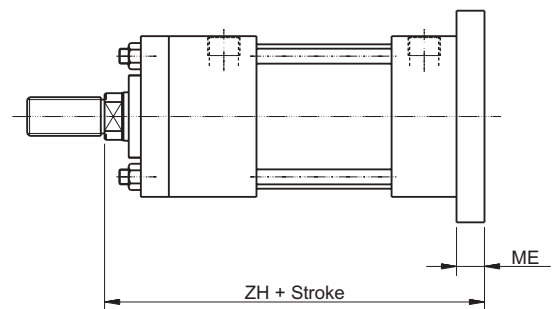
Bore dia	Piston Rod	'E' Sq.	ØSB H13	EL	ET	R	SE	XE	ZE
40	16	51	7	19	13	37	141	137	143
50	20	64	9	24	16	47	151	142	150
63	20	77	9	27	18	56	160	148	153
80	25	96	12	22	22	70	168	165	175
100	25	115	12	25	29	84	174	168	178
125	32	140	14	27	34	104	184	176	189
160	40	179	14	32	45	134	215	204	217
200	40	217	18	34	51	163	219	206	222
250	45	271	22	42	63	202	271	252	272
320	56	366	22	45	82	270	289	276	296
400	63	456	26	48	109	336	322	306	330
500	80	556	33	66	132	312	383	346	376

Bore dia	Piston Rod	LH	NT	TN	XT	XT
32	12	22	M6	16	46	46
40	16	25	M6	16	49	49
50	20	31	M8	22	49	49
63	20	38	M10	32	49	49
80	25	47	M12	38	62	62
100	25	57	M12	52	62	62
125	32	69	M16	68	62	62
160	40	89	M20	84	72	72
200	40	108	M20	114	70	70
250	45	135	M24	140	80	80
320	56	183	M24	184	83	83
400	63	228	M30	248	94	94
500	80	278	M30	321	97	97

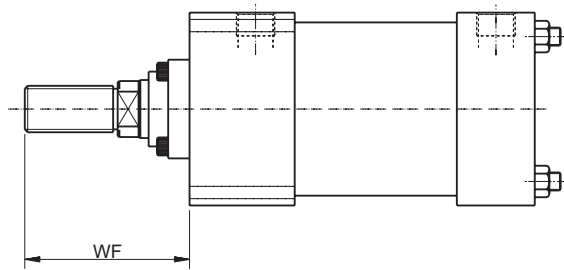
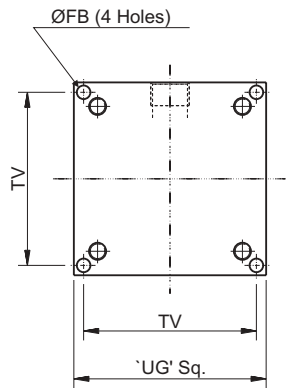
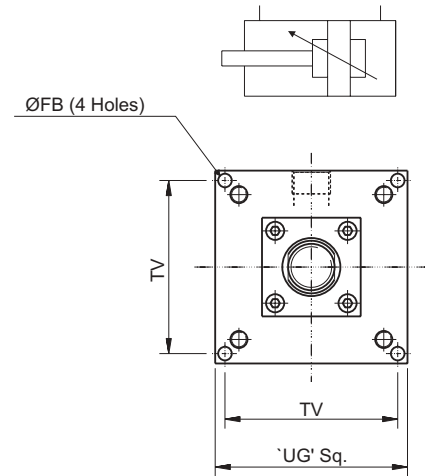
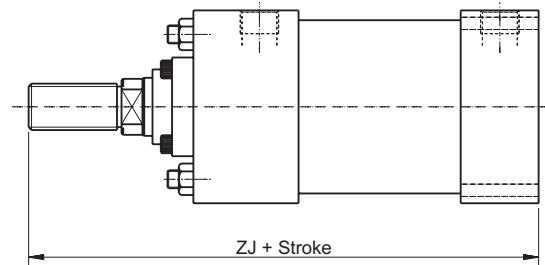
MS5 - End Lug Mounting.


Center line Lug Mounts

MS8 - Center line Lug Mounting.

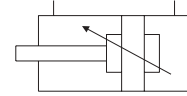
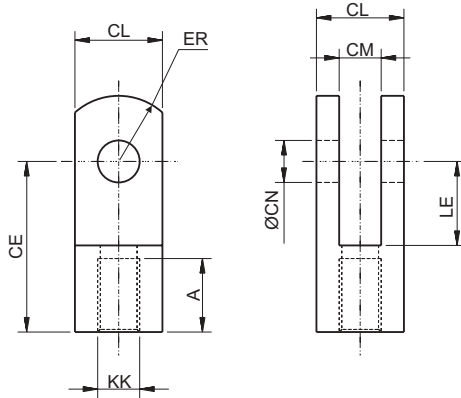
Bore dia	Piston Rod	'E' Sq.	ØSB H13	SS		ST Min.	SU	SW	TS JS14	US Max.	XS	
				Nom.	Tol.						Nom.	Tol.
32	12	45	9	73	±1.2	10	24	10	63	81	35	±1.2
40	16	51	12	73	±1.2	10	24	10	70	94	35	±1.2
50	20	64	12	73	±1.2	10	24	10	83	107	35	±1.2
63	20	77	12	76	±1.6	10	24	10	95	119	35	±1.6
80	25	96	14	82	±1.6	16	32	13	121	149	48	±1.6
100	25	115	14	82	±1.6	16	32	13	140	168	48	±1.6
125	32	140	18	80	±2.0	16	40	17	175	211	52	±2.0
160	40	179	22	95	±2.0	20	40	18	213	257	59	±2.0
200	40	217	22	95	±2.0	20	40	18	251	295	59	±2.0
250	45	271	26	118	±2.5	25	50	22	314	366	70	±2.5
320	56	366	26	136	±3.0	32	50	22	420	466	73	±3.0
400	63	456	36	145	±3.0	76	63	28	524	586	85	±3.0
500	80	556	36	170	±3.0	76	63	28	624	688	85	±3.0

Square Flange Mounts

MF5 - Head, Square Flange Mounting

MF5 - Cap, Square Flange Mounting


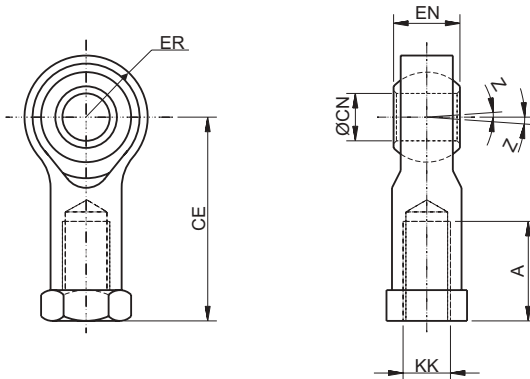
Bore dia	Piston Rod	ME	ØFB H13	'E' Sq.	R	TF	'UF' Sq.	WE	ZH	ZB Max.
32	12	10	7	45	33	58	72	15	128	125
40	16	10	7	51	36	70	84	15	128	125
50	20	10	9	64	47	86	104	15	128	125
63	20	10	9	77	56	98	116	15	131	130
80	25	16	12	96	70	119	143	19	159	153
100	25	16	12	115	84	138	162	19	159	153
125	32	16	14	140	104	168	194	19	165	162
160	40	20	18	179	134	212	248	21	192	188

Square Mounts

ME9 - Head, Square Mounting.

ME10 - Cap, Square Mounting.


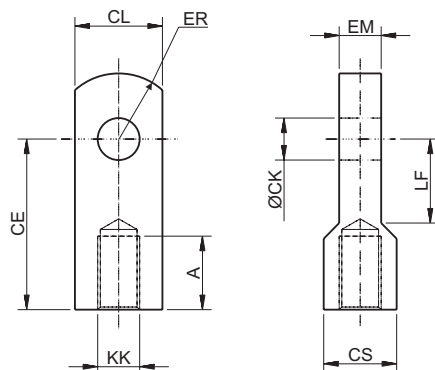
Bore dia	Piston Rod	'UG' Sq.	ØFB H13	TV	WF	ZJ
200	40	217	18	192	41	172
250	45	271	22	238	48	210
320	56	366	22	308	52	231
400	63	456	26	384	57	258
500	80	556	33	470	57	283

ACCESSORIES

RC - Rod clevis ISO: 8140


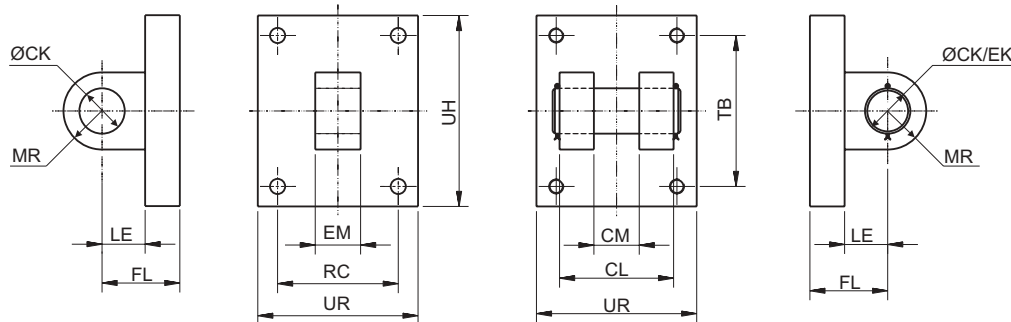
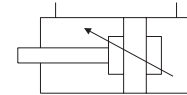
Bore dia	KK	ØCN H9	A min.	ER Max.	CL Max.	CE	CM		LE Min.
							Nom.	Tol.	
32	M10x1.25	10	20	16	20	40	10	+0.15 +0.50	20
40	M12x1.25	12	22	19	24	48	12	+0.15 +0.50	24
50 & 63	M16x1.5	16	28	25	32	64	16	+0.15 +0.50	32
80 & 100	M20x1.5	20	33	32	32	80	20	+0.15 +0.60	40
125	M27x2	30	51	45	55	110	30	+0.15 +0.60	54
160 & 200	M36x2	35	56	57	70	144	35	+0.15 +0.60	72
250	M42x2	40	60	77	85	168	40	+0.15 +0.60	84
320	M48x2	50	65	88	96	192	50	+0.15 +0.60	96
NON - ISO									
400	M56x2	63	75	75	125	175	63	+0.2 +1.0	100
500	M64x3	80	90	95	160	210	80	+0.2 +1.0	120

RS - Rod end Spherical eye ISO: 8139


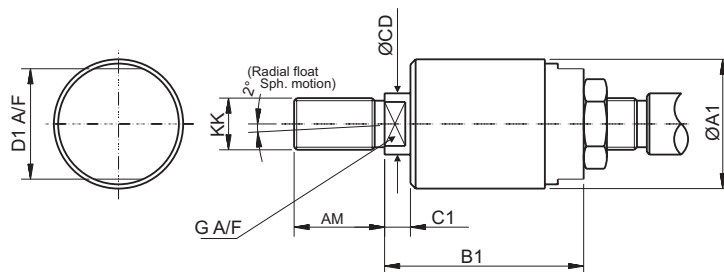
Bore dia	KK	ØCN H9	EN h12	CE Max	ER Max	A Min.	Tilting Angle Z min.
32	M10x1.25	10	14	43	14	20	4°
40	M12x1.25	12	16	50	16	22	
50 & 63	M16x1.5	16	21	64	21	28	
80 & 100	M20x1.5	20	25	77	25	33	
125	M27x2	30	37	110	35	51	
160 & 200	M36x2	35	43	125	40	51	
250	M42x2	40	49	142	45	60	
320	M48x2	50	60	160	58	65	

NON - ISO STANDARD ACCESSORIES
RE - Rod eye


Bore dia	KK	ØCK H9	A Min.	ER Max.	CL Max.	CE	EM Nom.	CS Min.	LF
32	M10x1.25	10	20	16	20	40	10	+0.15 +0.50	18
40	M12x1.25	12	22	19	24	48	12	+0.15 +0.50	21
50 & 63	M16x1.5	16	28	25	32	64	16	+0.15 +0.50	27
80 & 100	M20x1.5	20	33	32	40	80	20	+0.15 +0.60	34
125	M27x2	30	51	45	55	110	30	+0.15 +0.60	47
160 & 200	M36x2	35	51	57	70	144	35	+0.15 +0.60	60
250	M42x2	40	60	77	85	168	40	+0.15 +0.60	79
320	M48x2	50	65	88	96	192	50	+0.15 +0.60	90
400	M56x2	63	75	75	125	175	63	+0.2 +1.0	100
500	M64x3	80	90	95	160	210	80	+0.2 +1.0	120

ACCESSORIES
Eye/Clevis Bracket & Pin


Bore dia	ØCK H9 ØEK f8	LE Min.	MR Max.	EM h13	HB H13	FL js14	CM A16	CL Max.	TB js14	UH	RC js14	UR						
32	12	19	17	16	9	31	16	38	56	72	52	68						
40	14			20			11	20					46	52	60	80	56	76
50																		
63																		
80	20	32	29	32	14	50	32	65	90	112	84	96						
100																		
125																		
160	28	38	34	40	18	60	40	83	105	134	90	118						
200																		
250	36	54	50	50	22	79	50	115	146	182	120	156						
320	45	57	44	63	26	85	63	127					190	132	170			
400	50	62	50			90		156										
500	63	69	63	76	36	101	76	152	200	260	160	220						

RT - Rod coupler


Bore dia	Piston Rod	KK	ØA1	B1	C1	AM	ØD	G	D1
32	12	M10x1.25	22	32	6	22	12	10	19
40	16	M12x1.25	32	52	12	24	16	13	26
50	20	M16x1.5	32	52	12	32	20	16	26
63	20	M16x1.5	32	52	12	32	20	16	26
80	25	M20x1.5	45	60	12	40	25	21	38
100	25	M20x1.5	45	60	12	40	25	21	38
125	32	M27x2	64	75	14	54	32	30	60
160	40	M36x2	64	75	18	72	40	36	60
200	40	M36x2	64	75	18	72	40	36	60
250	45	M42x2	88	120	22	84	45	41	82
320	56	M48x2	95	143	24	96	56	50	90
400	63	M56x2	114	162	24	96	63	58	106
500	80	M64x3	127	175	24	128	80	70	120