



Series 1370 - 1371 - 1372 - 1373 - ECOFLAT

**General**

Profiled tube has two "T" slots on the side hosting sensors 1580.\_, MRS.\_, MHS.\_. without adaptors.  
Two additional connections are also available on rear cover for cylinder feeding.

**Construction characteristics**

End caps	aluminium anodised
Rod	C43 chromed steel or stainless steel
Barrel	aluminium alloy anodised
Piston	acetal resin, aluminium on request
Piston-seal	PUR
Rod-seal	PUR (FPM upon request)
Adjusting screw	zinc plated steel
Shock absorber	NBR

**Operational characteristics**

Fluid	Filtered air. No lubrication needed, if applied it shall be continuous.
Max. pressure	10 bar
Operating temperature	-5°C - +70°C

Please follow the suggestions below to ensure a long life for these cylinders:

- use clean and lubricated air
- correct alignment during assembly with regard to the applied load so as to avoid radial components or bending the rod;
- avoid high speeds together with long strokes and heavy loads: this would produce kinetic energy which the cylinder cannot absorb, especially if used as a limit stop (in this case use mechanical stop device and aluminium piston);
- evaluate the environmental characteristics of cylinder used (high temperature, hard atmosphere, dust, humidity etc.)

**Please note: air must be dried for applications with lower temperature.**

Use hydraulic oils H class (ISO VG32) for correct continued lubrication.  
Our Technical Department will be glad to help.

**Maximum standard strokes**

Size 25	200 mm
Size 32 - 63	320 mm

**Sections (cm<sup>2</sup>)**

Size	25	32	40	50	63
Out stroke (cm <sup>2</sup> )	5,28	8,09	13,09	20,28	32,68
In stroke (cm <sup>2</sup> )	4,49	6,96	11,08	17,14	29,54

In order to calculate the theoretical force generated by the unit, both outstroke and instroke, it is necessary to use the following equation

$$\text{FORCE(Kg)} = \text{Surface (cm}^2\text{)} \times \text{Pressure(bar)}$$

It is also necessary to remember that the theoretical force must be reduced by 10-15% in order to account for the unit internal friction.

**Maximum rod radial movement (°)**

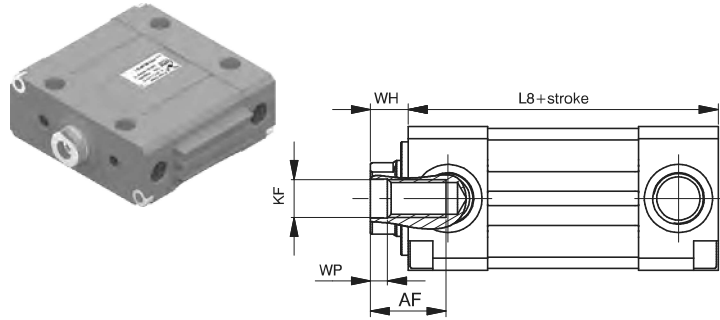
Size	25	32	40	50	63
Rod radial movement	±0.8	±0.7	±0.6	±0.5	±0.4

**Maximum torque applicable on the piston rod (Nm):**

Size	25	32	40	50	63
Maximum torque	0.8	1	1.3	1.8	2.1

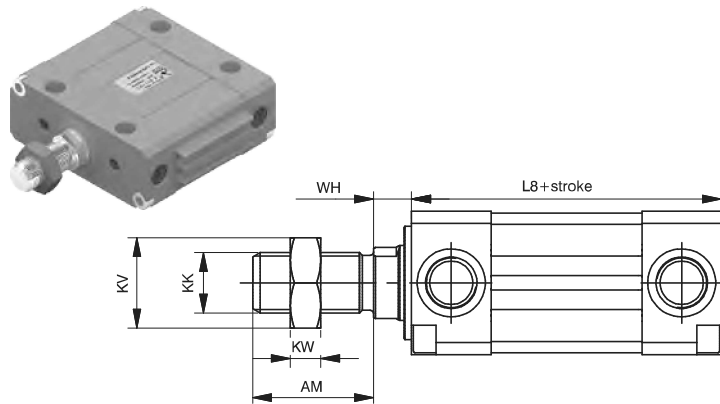
► Basic version “1” female rod

Ordering code
<b>SIDE CONNECTION</b>
1370.size.stroke.1 Magnetic chrome plated rod
1371.size.stroke.1 Magnetic stainless steel rod
1372.size.stroke.1 Non magnetic chrome plated rod
1373.size.stroke.1 Non magnetic stainless steel rod
<b>REAR CONNECTION</b>
1370.size.stroke.1.P Magnetic chrome plated rod
1371.size.stroke.1.P Magnetic stainless steel rod
1372.size.stroke.1.P Non magnetic chrome plated rod
1373.size.stroke.1.P Non magnetic stainless steel rod



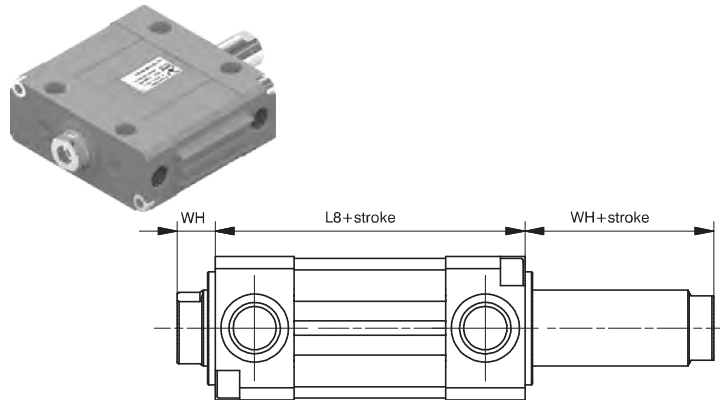
► Basic version “2” male rod

Ordering code
<b>SIDE CONNECTION</b>
1370.size.stroke.2 Magnetic chrome plated rod
1371.size.stroke.2 Magnetic stainless steel rod
1372.size.stroke.2 Non magnetic chrome plated rod
1373.size.stroke.2 Non magnetic stainless steel rod
<b>REAR CONNECTION</b>
1370.size.stroke.2.P Magnetic chrome plated rod
1371.size.stroke.2.P Magnetic stainless steel rod
1372.size.stroke.2.P Non magnetic chrome plated rod
1373.size.stroke.2.P Non magnetic stainless steel rod



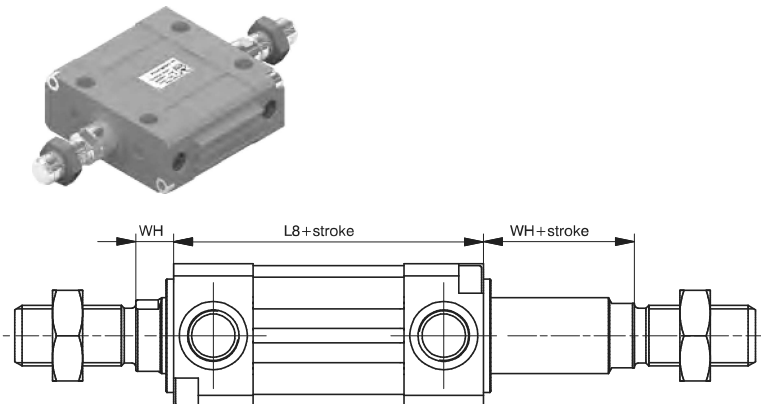
► Female through rod cylinder version “3”

Ordering code
1370.size.stroke.3 Magnetic chrome plated rod
1371.size.stroke.3 Magnetic stainless steel rod
1372.size.stroke.3 Non magnetic chrome plated rod
1373.size.stroke.3 Non magnetic stainless steel rod



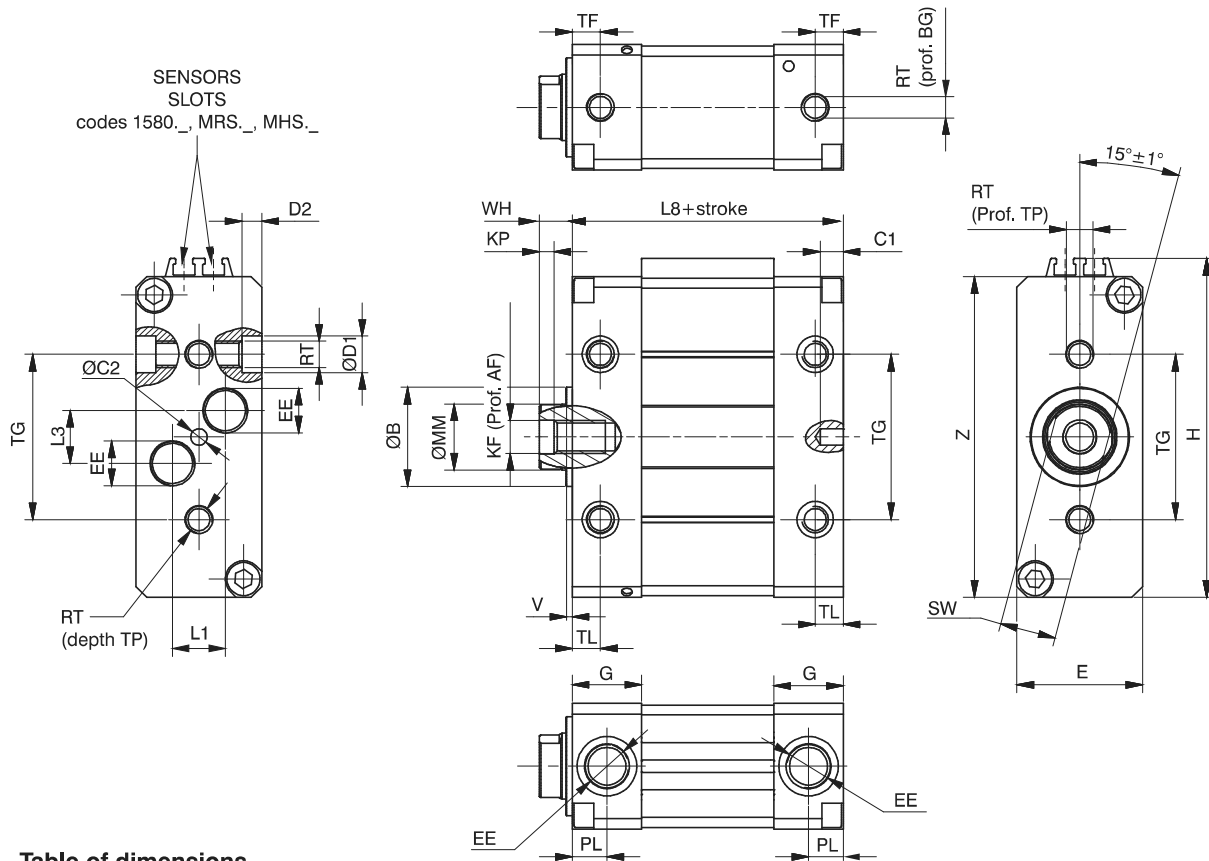
► Male through rod cylinder version “4”

Ordering code
1370.Size.stroke.4 Magnetic stelo cromato
1371.Size.stroke.4 Magnetic stelo inox
1372.Size.stroke.4 Non magnetico stelo cromato
1373.Size.stroke.4 Non magnetico stelo inox



► Variants

Ordering code
137_size.stroke._K = Version with aluminium piston



**Table of dimensions**

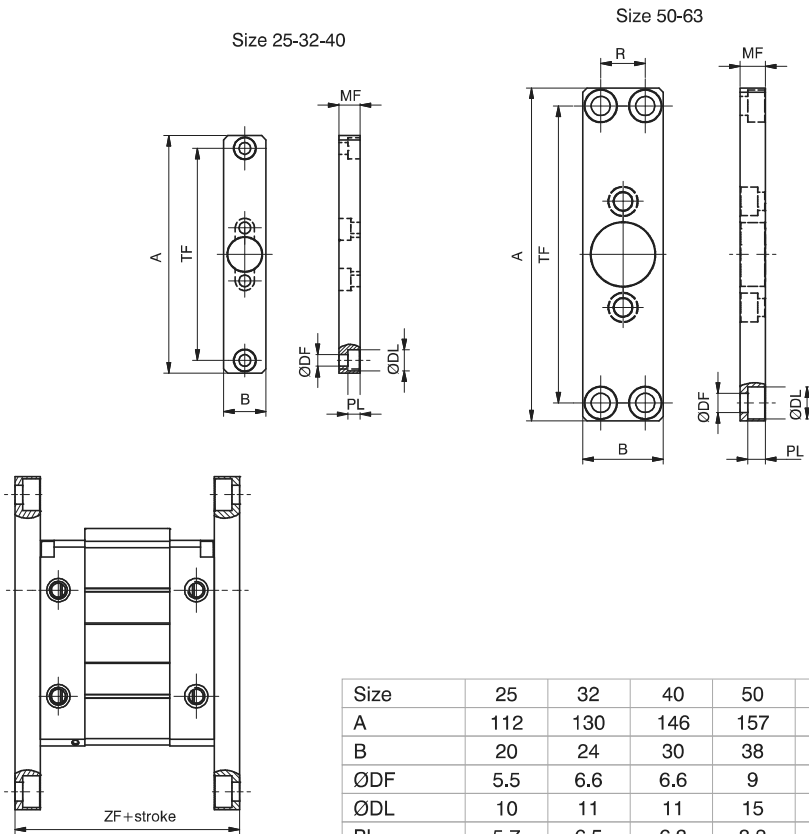
Size	25	32	40	50	63		
AM	22	22	24	32	32		
AF	12	14	16	20	20		
Ø B (h9)	16	20	25	30	30		
BG	8	9	9	12	14		
C1	7	7	7	7	7		
C2 (H9)	4	4	4	5	5		
Ø D1	8	10	10	11	15		
D2	4	4	5	6	6		
E	20	24	30	38	50		
EE	M5	G1/8"	G1/8"	G1/4"	G1/4"		
G	12	17	17	21	21		
H	56,5	65,5	82,5	102,5	127		
KF	M5	M6	M8	M10	M10		
KK	M10x1,25	M10x1,25	M12x1,25	M16x1,5	M16x1,5		
KP	2	2,5	3	4,5	4,5		
KV	17	17	19	24	24		
KW	6	6	7	8	8		
L1	6	7,5	7,5	16	19		
L3	10	14,5	14,5	16	21		
L8	62	72	76	82	82		
Ø MM	10	12	16	20	20		
PL	6,5	8,5	8,5	10,5	10,5		
RT	M5	M6	M6	M8	M10		
SW (H13)	8	10	13	17	17		
TF	5	8,5	8,5	8,5	8,5		
TG	25	32	40	50	60		
TL	5	8,5	8,5	8,5	8,5		
TP	8	9	9	12	14		
V	2	2	2	2	2		
VG	30	30	33	42	42		
WH	8	8	9	10	10		
Z	51	60	77	97	1215		
Weight g	Versions	1 stroke 0	180	285	482	848	1350
		2 stroke 0	203	309	520	929	1431
	every 10 mm		22	29	49	79	118
Versions	3 stroke 0	195	314	534	959	1478	

► Front and rear flange

Ordering code
<b>1370.Size.03</b>



Plate which allows anchorage of the cylinder at a right angle to the plane. Mounted to the cylinder by screws.



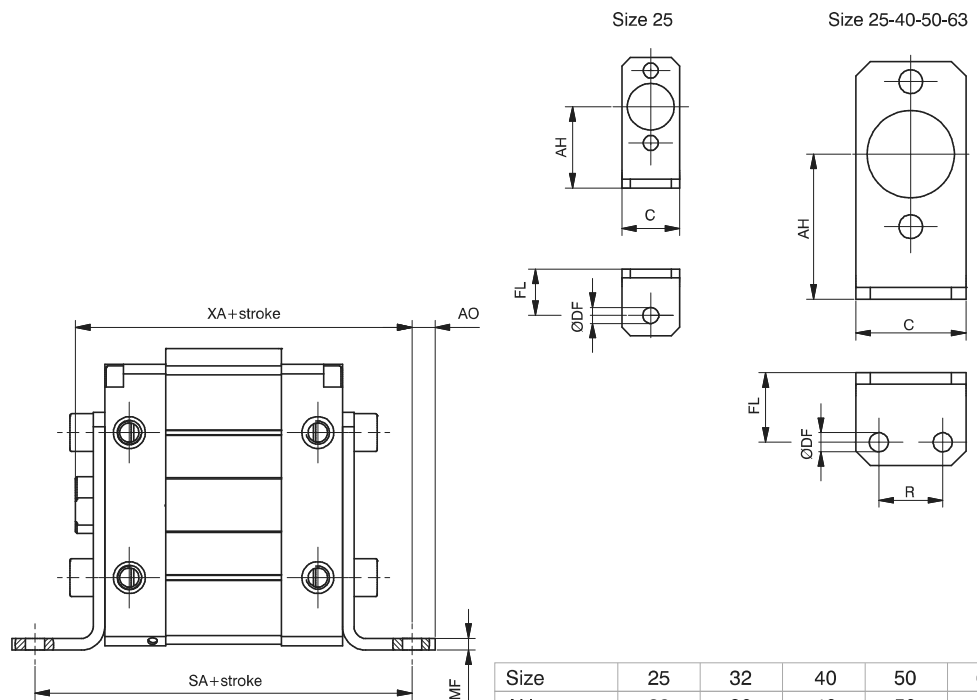
Size	25	32	40	50	63
A	112	130	146	157	157
B	20	24	30	38	50
ØDF	5.5	6.6	6.6	9	9
ØDL	10	11	11	15	15
PL	5.7	6.5	6.3	8.3	8.3
MF	10	10	10	12	15
R	/	/	/	21	33
TF	100	115	132	140	140
ZF	82	92	96	106	112

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PNEUMATIC ACTUATION

► Foot bracket

Ordering code
<b>1370.Size.05/1F</b> (n° 1 piece)



Size	25	32	40	50	63
AH	28	32	40	50	63
AO	7	5.5	7	8	10
C	20	24	30	38	50
ØDF	5.5	5.5	5.5	6.6	9
FL	16	18	20	24	27
MF	3	3	4	4	4
R	/	13	16	22	30

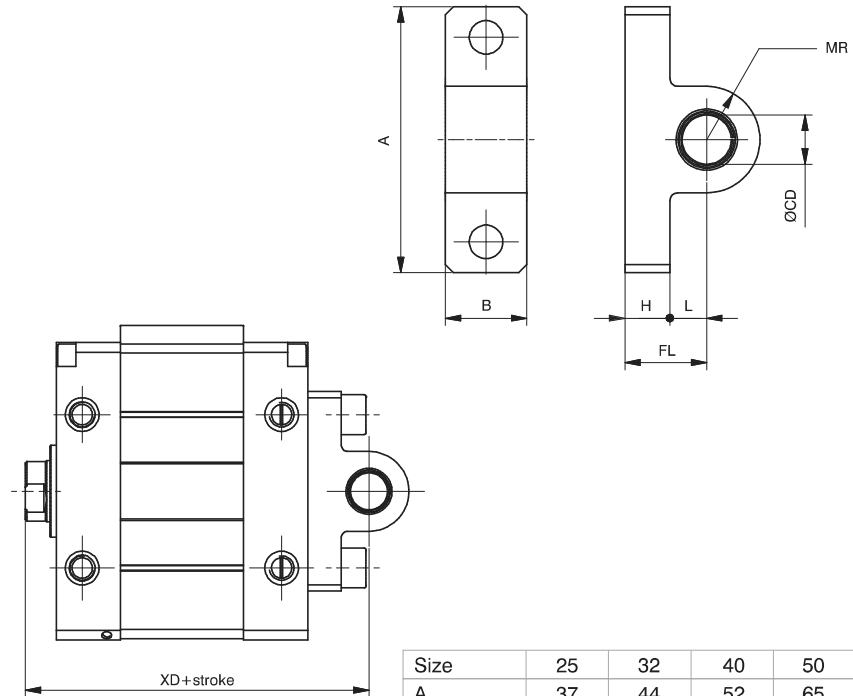
Brackets used to anchor the cylinder parallel to the mounting plane. Manufactured from steel with a rust proof protective treatment. Mounted to the cylinder end caps with bolts.



**Rear male clevis**

Ordering code

**1370.Size.09/1F**



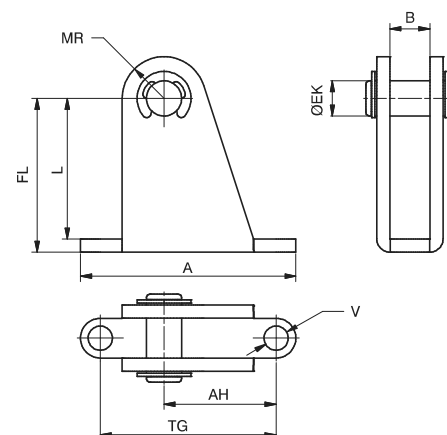
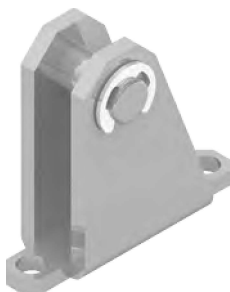
Size	25	32	40	50	63
A	37	44	52	65	78
B	9	10.5	10.5	20	25
ØCD (H7)	8	10	12	12	16
FL	14	15	18	20	24
H	6	9	9	11	11
L	8	6	9	9	13
MR	7.5	10	13	13	17
XD	84	95	103	112	116

This type of mounting allows anchorage of the cylinder either parallel or right angle to plane; the cylinder rod can oscillate and self-align as necessary when under load.

**Rear clevis**

Ordering code

**1370.Size.09F**

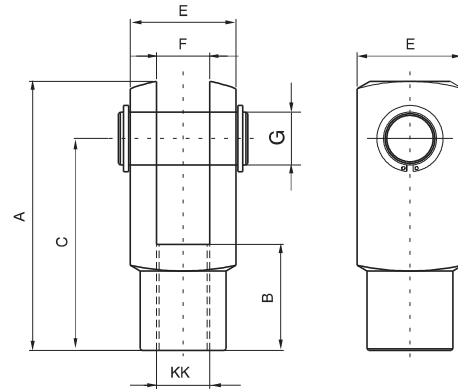


Size	25	32	40	50	63
A	49	60	60	46	60
AH	25.5	33	29.5	24	32
B	9.1	10.6	10.6	20.1	25.1
ØEK	8	10	12	12	16
FL	35	42	51	55	68
L	32	38	47	50	63
MR	9.5	11	14	14	18

To be used in conjunction with 09/1 clevis. Similar to type 08 but includes a hinge pin. This type of mounting allows anchorage of the cylinder either parallel or right angle to plane; the cylinder rod can oscillate and self-align as necessary when under load. Manufactured from sheet metal with rust proof protective treatment.

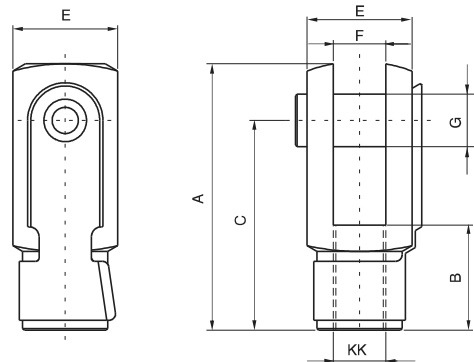
**Fork**

Ordering code
<b>1320.32.13F</b> (for $\varnothing 25$ and $\varnothing 32$ )
<b>1320.40.13F</b> (for $\varnothing 40$ )
<b>1320.50.13F</b> (for $\varnothing 50$ )
<b>1320.63.13F</b> (for $\varnothing 63$ )



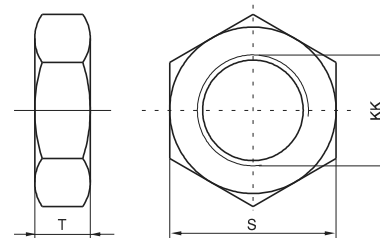
**Fork with clips**

Ordering code
<b>1320.32.13/1F</b> (for $\varnothing 25$ and $\varnothing 32$ )
<b>1320.40.13/1F</b> (for $\varnothing 40$ )
<b>1320.50.13/1F</b> (for $\varnothing 50$ )
<b>1320.63.13/1F</b> (for $\varnothing 63$ )



**Nut**

Ordering code
<b>1320.32.18F</b> (for $\varnothing 25$ and $\varnothing 32$ )
<b>1320.40.18F</b> (for $\varnothing 40$ )
<b>1320.50.18F</b> (for $\varnothing 50$ )
<b>1320.63.18F</b> (for $\varnothing 63$ )



*Fork:*

Element that when screwed to the rod consents a regular functioning even when there are significant lateral forces as the connection point. Made of zinc-plated steel.

*Nut:*

Used to block the position of the fork.

Bore	25	32	40	50	63
A	52	52	62	83	83
B	20	20	24	32	32
C	40	40	48	64	64
E	20	20	24	32	32
F(B12)	10	10	12	16	16
G	10	10	12	16	16
S	17	17	19	24	24
T	6	6	7	8	8
KK	M10X1,25	M10X1,25	M12X1,25	M16X1,5	M16X1,5