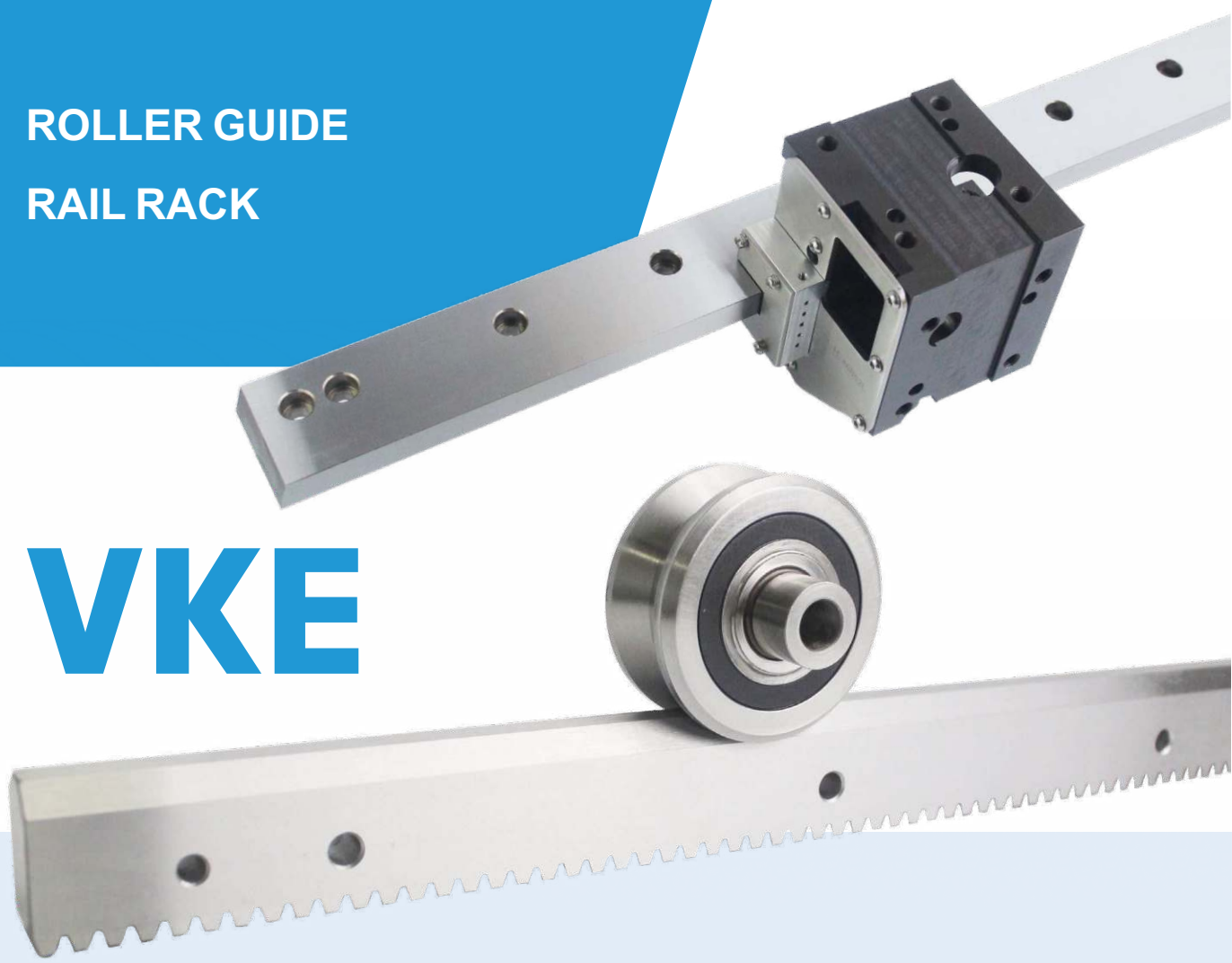
ROLLER GUIDE

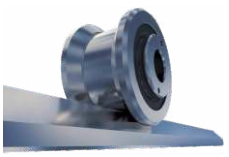
RAIL RACK

VKE



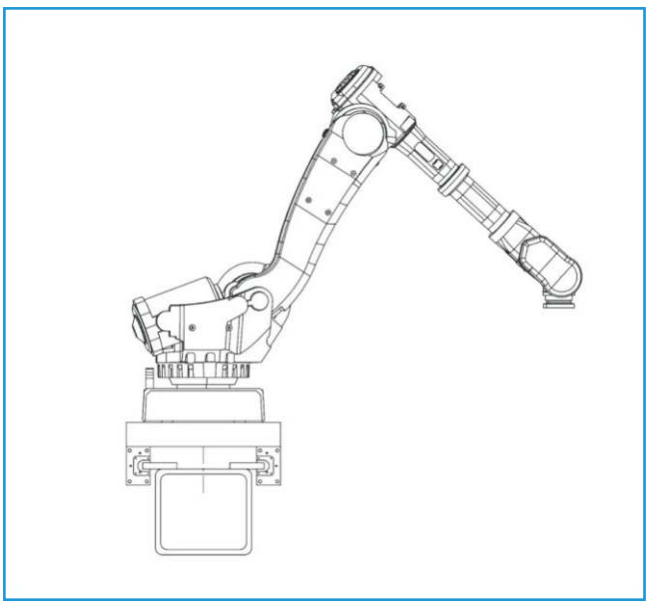
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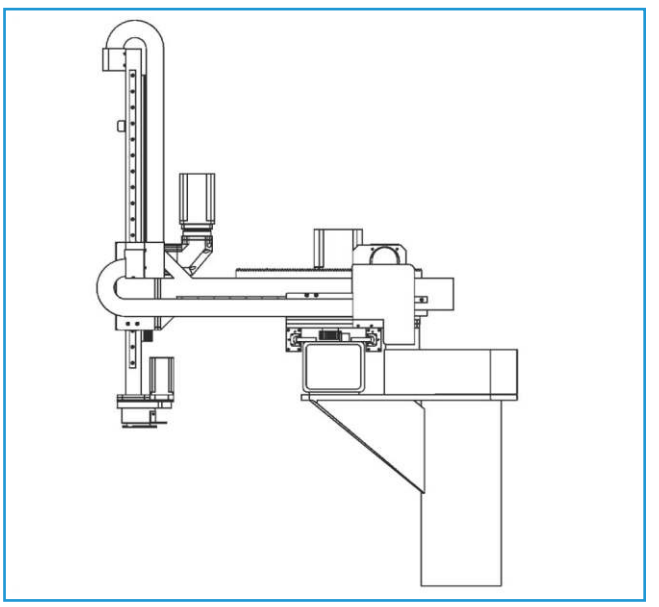


APPLICATIONS



The seventh axis of the robot

Truss robot mobile platform



GUIDEWAY SYSTEM

FOR MEDIUM DUTY APPLICATIONS



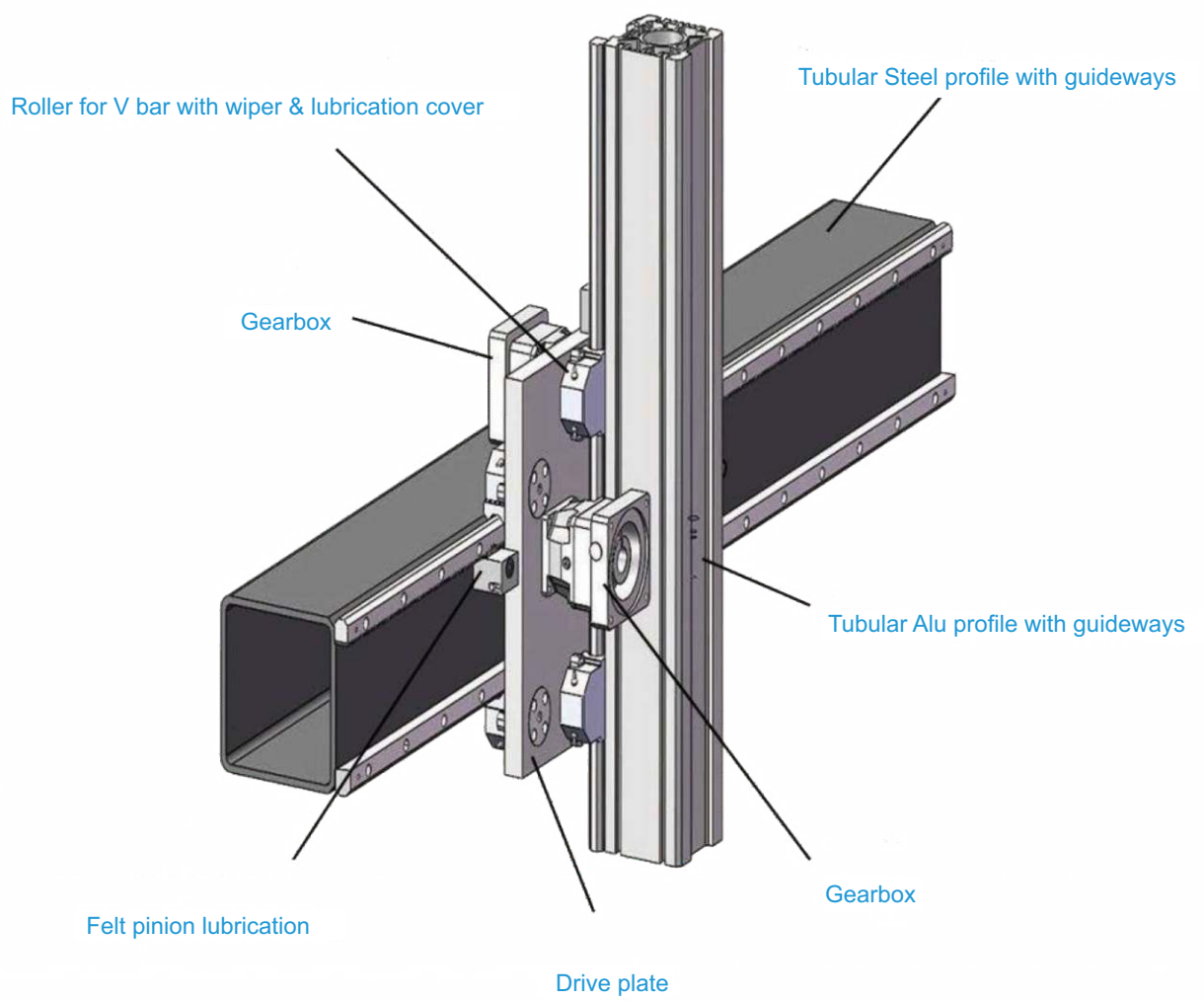
V-shaped guide rail & roller

V type guide rail transmission system module system

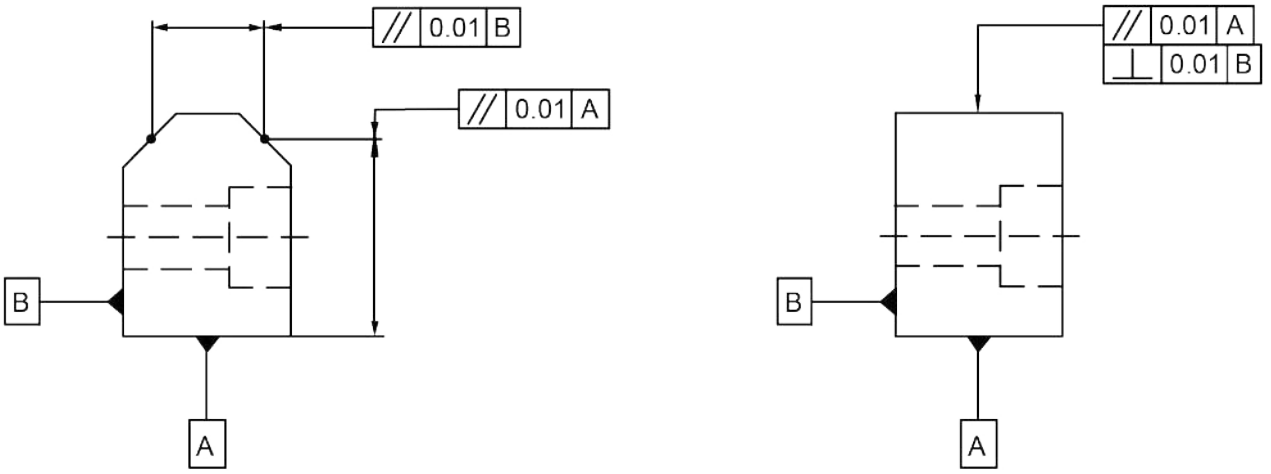
Guideway V bar rack drive system (medium duty)

The guideway V bar rack drive system includes guideway V bar, guideway V bar rack, roller etc. The contact between the roller and guideway is linear,ensuring high speed,low noise and precise positioning.

Now our standard code include 15, 20, 25, 35 sizes. To avoid cumulative pitch tolerance due to π, we use CP racks, the guideways are induction hardened to HRC50-55.



V type guide rack transmission system precision



Linear guideway

The accuracy of the guideway system is built up from the basic quality of the guide,roller and drive elements.The guiding surfaces of carbon steel guideways are hardened to 50-55HRC.

Rollers

The rollers are dual-row angular contact ball-bearings with a 25 degree pressure angle with RSR seals and sealed for life.The rollers are manufactured to the PN tolerance class.The rollers can be supplied with normal or pre-loaded bearing clearances with concentrica or eccentric centers.

Code	Ga(μm)①	Ga(μm)②
15	+6/+23	-3/+5
20	+6/+23	-3/+5
25	+8/+27	-3/+5
35	+11/+33	-3/+5

① Ordinary bearing clearance
② Preload bearing clearance

Drive elements

Racks are supplied in various sizes to meet the required applicaition.For high precision and high torque applications.the racks are hardened and ground.

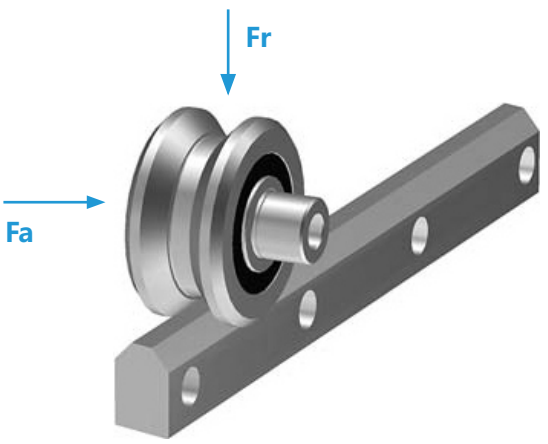
Precision grade	fp(mm)	Fp(mm)	p(mm)	
DIN7h25	0.008	0.05	0/-0.02	Grinding
DIN6h23	0.006	0.03	0/-0.01	Cutting

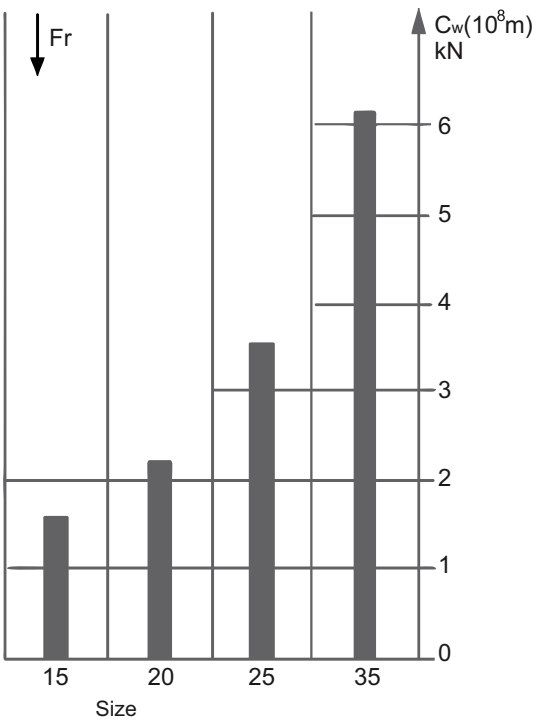
V rail system load capacity and service life

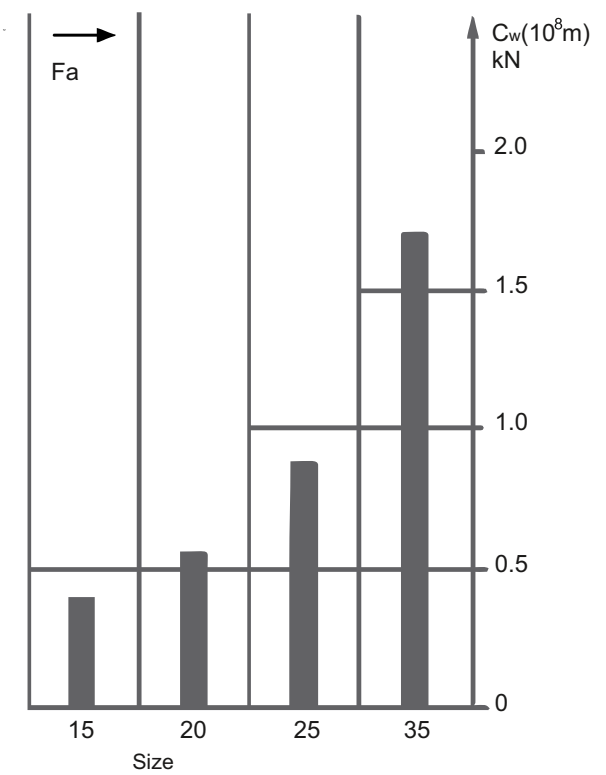
Size selection

The data allows for a rough selection of the size of the required guideway system. The C_w value are listed in this table for a nominal service life of 10^8 m (100 000km),and refer to a roller with pure radial or axial loading.

In cases of combined loading and shock,the calculation data on page 5 must be consulted or a calculation verification can be requested from the manufacturer.







V type guide rail transmission system driving force and torque

Size selection

After selecting the rack, the gear teeth of the guideway system must be checked for compatibility with the required drive forces and torques.

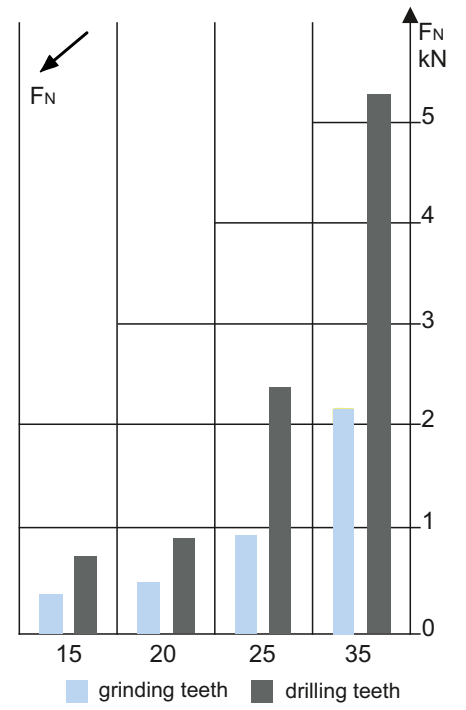
The rack can be supplied precision cut or hardened and ground.

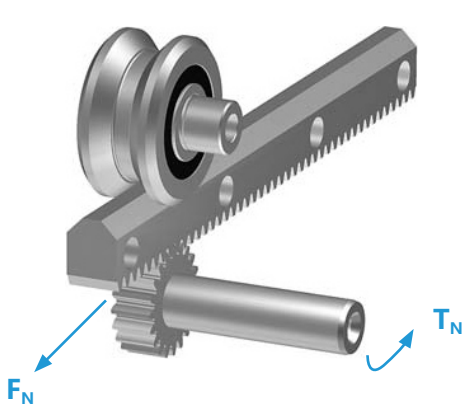
The values given are values for shock-free operation, good lubrication and stiff arrangement of the pinion.

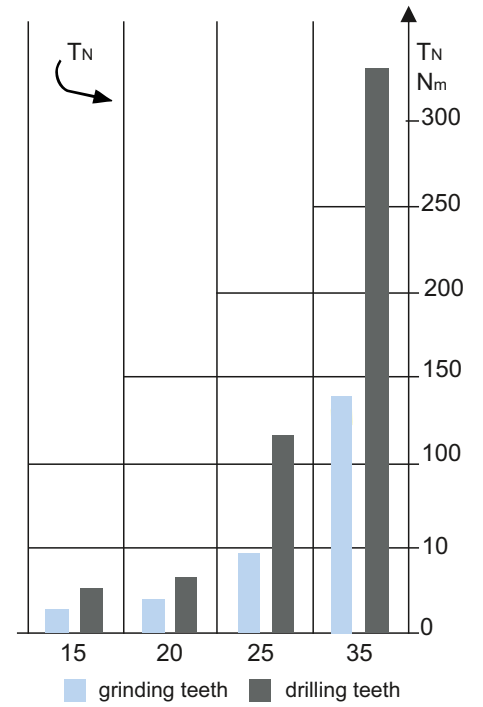
A safety factor for tooth root stress $S_F \geq 1.4$ and a safety factor for Hertzian stress $S_H \geq 1.0$ is taken in account.

Depending on your experience and application a safety factor $S_B \approx 1.0...4.0$ has to be considered.

The tracking force FN is related to the number of teeth Z of the pinion.







V type guide rail transmission system selection confirmation

Size verification

The calculation must be done for the roller under the highest load.The life time values calculated are nominal. 90% of all rollers reach these values.

Fa: External axial force per roller (KN)

Fr: External radial force per roller (KN)

P: Equivalent dynamic load (KN)

CW: Effective basic dynamic load rating (KN)

Lh: Nominal life time (m)

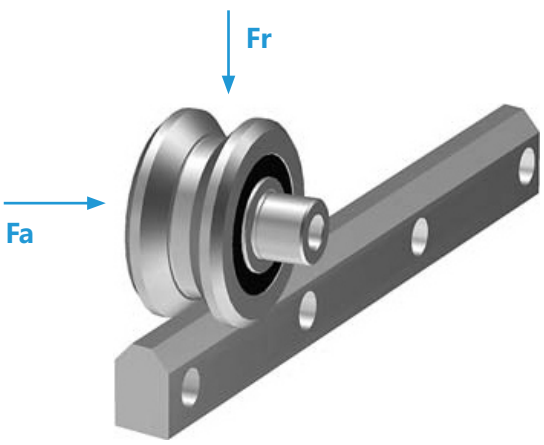
Kr: Size factor

f: Load factor
Uniform shocks: 1.0...1.2
Moderate shocks:1.2...1.5
Heavy shocks:1.5... 2.5

Fs: Static loading factor

C_{0w}: Max. admissible static radial force (KN)

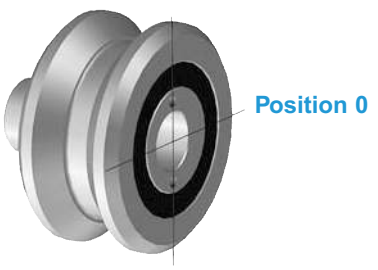
$P=Fr+3\cdot Fa$	(KN)
$P_w=f\cdot P$	(KN)
$L=Kr\cdot\frac{C_w^3}{P_w}\cdot 10^5$	(m)
$fs=0.7\cdot\frac{C_{0w}}{f\cdot(Fr+3\cdot Fa)}$	fs ≥ 1

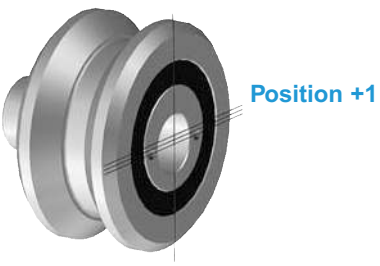


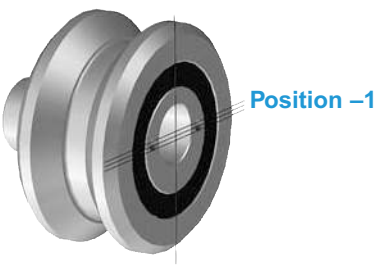
VR	Kr	FR	Kr	VR	Cw(KN)	FR	Cw(KN)	VR/FR	C_{0w}(KN)
15	1.555	15	1.447	15	13.4	15	13.1	15	6.8
20	1.882	20	2.262	20	18	20	18	20	9.5
25	2.199	25	2.670	25	27	25	27	25	15
35	3.075	35	3.142	35	42	35	43	35	32

V type guide rail transmission system installation

Assembly







The backlash setting and the pre-tensioning of the rollers takes place via the eccentric hub of the rollers of the series.

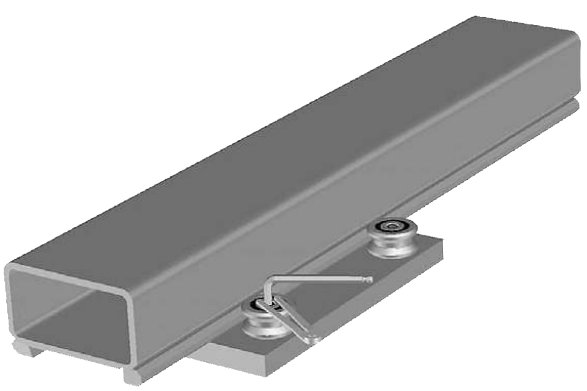
If a roller is located in its zero position, the gear teeth backlash will be the standard value of 0.05 mm flank clearance.

The service lif of the system will be reduced by excessive tensioning.

With too little tension the rollers will not run,or will wear due to the poor meshing.

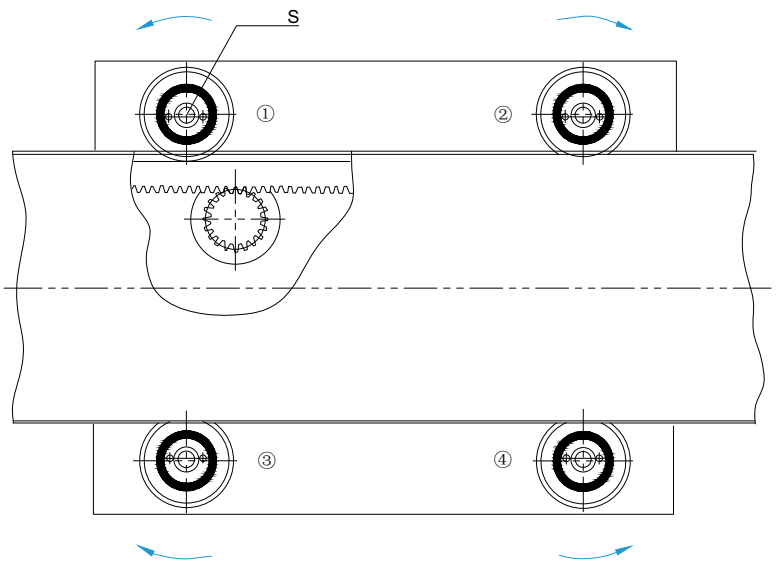
By using a face spanner the eccentric of the roller can be turned and preloaded.

A correct preload means that the non-load-carrying roller can still be rotated manually using moderate force.



V type guide rail transmission system roller preload adjustment

Adjustment of preload of rollers



Code	Bolt size	MA
15	M8×35	24Nm
20	M10*50	48Nm
25	M12*60	83Nm
35	M16*80	200Nm

1. Loosen the fixing screws S,with the eccentric hub in Position I, push the drive carriage onto the beam.

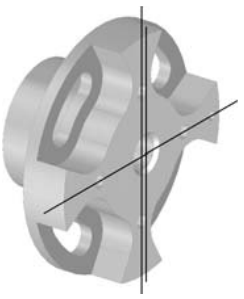
2. Turn the eccentric hubs of rollers I and 2 evenly in the direction of the arrow until the tooth flank clearnaceis at a minimum.With the eccentric set at the minimum distance in the vertical direction,the backlash measured is 0.05mm. The service lif of the system will be reduced by excessive tensioning.

3. Turn eccentric of roller 3 and 4 evenly in the direction of arrow and the rollers will become slightly pre-tensioned. By using a face spanner the eccentric of the roller can be turned and preloaded.

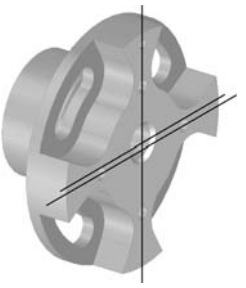
4. Tighten fixing screw S:see above table for tightenting torques.

5. Check the backlash of the pinion to the rack.The pinion must not bind.Otherwise,loosen the roller and repeat point 2.

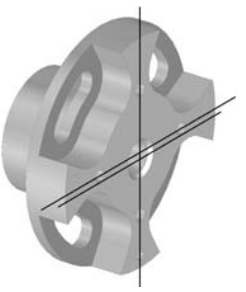
6. Check the pre-tensioning: Rollers that are not under load must be able to turn using moderate force. If not free loosen rollers 3 and 4 and repeat point 3.



Position 0



Position +1



Position –1

Eccentric mounting flanges KEP together with centric rollers VR..B fulfil the same function as eccentric rollers VR..A. If a roller is located in its zero position,the gear teeth backlash will be the standard value of 0.05 mm flank clearance.

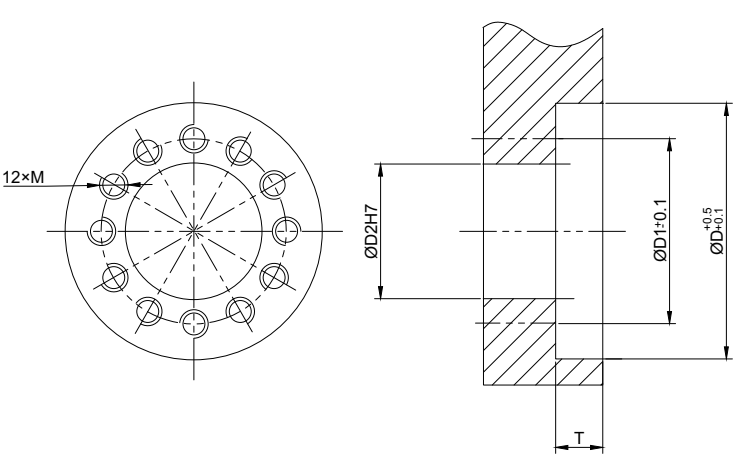
The backlash is adjusted by turning the mounting flange KEP. The eccentric positioned roler therefore moves radially towards the rail and the roller becomes adjusted.

The backlash is adjusted by turning the mounting flange KEP. The eccentric positioned roler therefore moves radially towards the rail and the roller becomes adjusted.

To do the adjustment of the eccentric mounting flanges KEP the same tools as for the adjustment of the eccentric rollers VR..A can be used.

Eccentric mounting flanges KEP have the same dimensions as centric mounting flanges KSP. In order to be able to use the full range of +1 mm of the eccentric there have to be drilled 12 threads in the carriage instead of 4 on the centric mounting flanges.

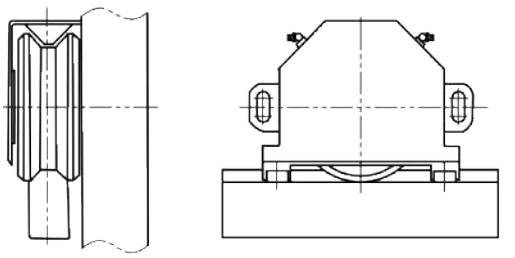
After a rotation of 30° the 4 screws have to be moved to the next pattern.



Code	D	D1	D2	T	M
KEP15	49	36	26	9.5	5
KEP20	58	42	30	11	6
KEP25	72	52	38	13.5	8
KEP35	98	75	59	17	10

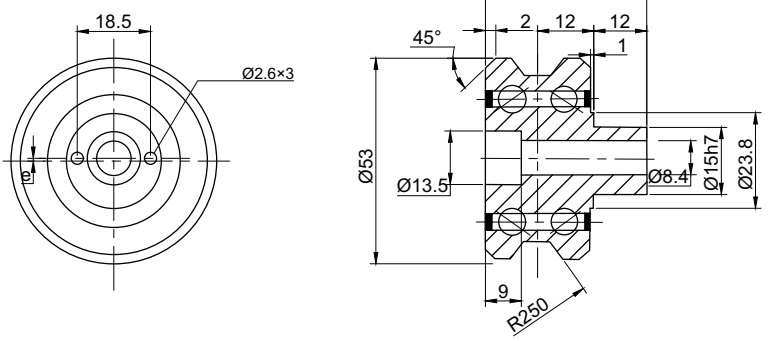
15 type

Size 15 roller for guideway V bars, Mounting flange, Wiper&lubrication unit



Roller for guideway V bars



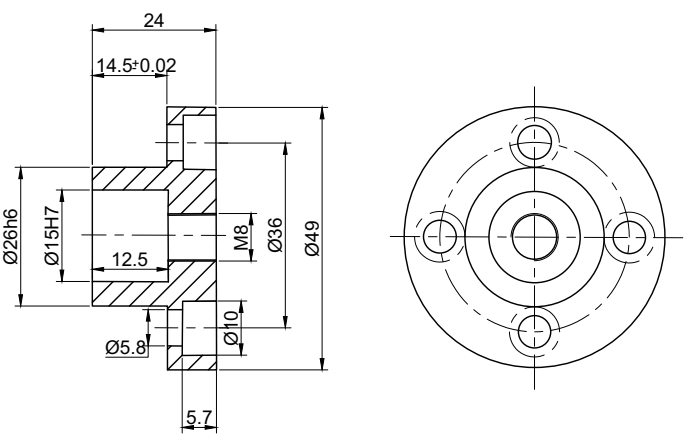


Code	Excenter	Ga (μm)	C_{0w} (N)	C_w ① (N)	C_w ② (N)	Nmax (min^{-1})	Boltsize
VR15A	1mm	-3/+5	6100	6500	1400	9000	M8*35 8.8 class
VR15B	0	-3/+5	6100	6500	1400	9000	M8*35 8.8 class

CW①: Normal service life 10^6m CW②: Normal service life 10^8m

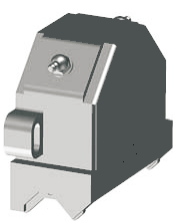
Mounting flange

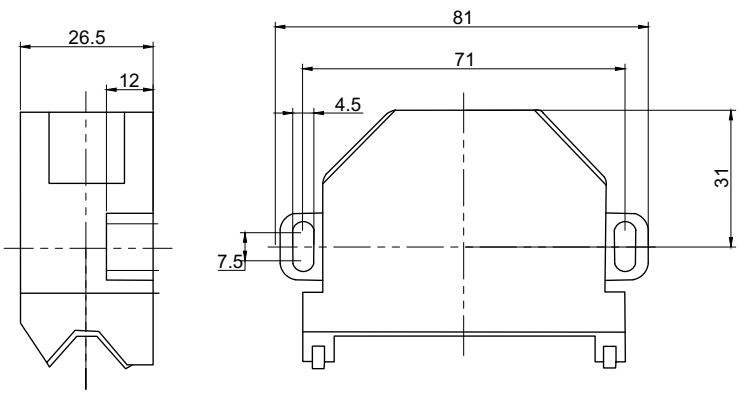




Code	Weight (kg)	Bolt size
KSP15	0.15	M8*16 8.8 class

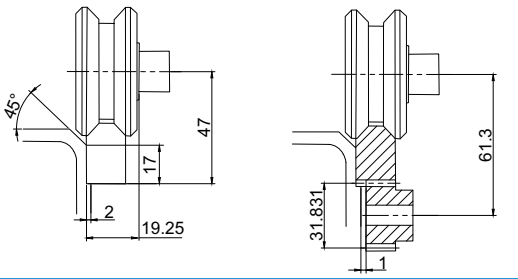
Wiper&lubrication unit



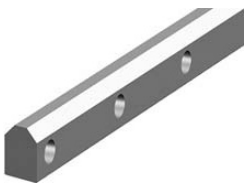


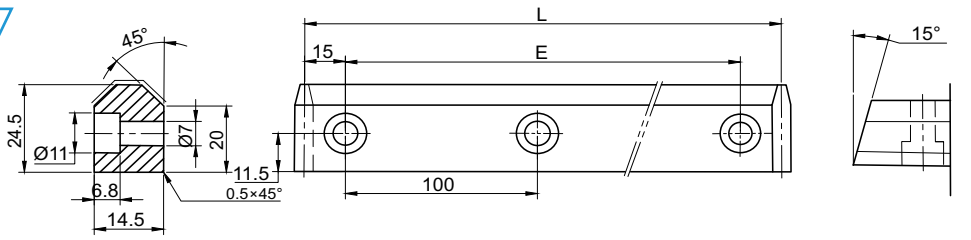
Code	Weight(kg)	Bolt size
KSA15	0.1	M4*18 8.8 痔

Size 15 roller for guideway V bars, guideway V bar rack, pinion



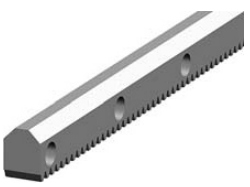
Guideway V bar

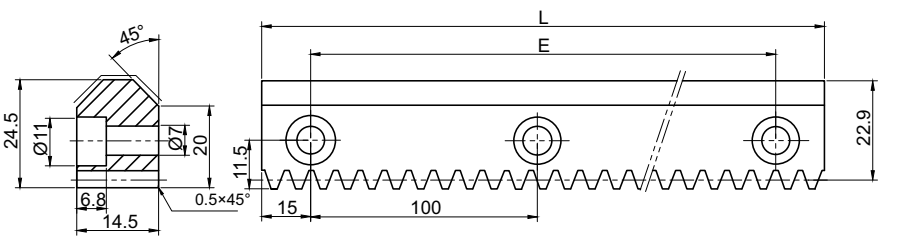




Code	L	E	Material	Bolt size
SV1506	630	600	S45C	M6*16 8.8 class
SV1510	1030	1000	S45C	M6*16 8.8 class

Guideway V bar rack





Code	L	E	Module	Pitch	Precision grade	Material
SVGH150606	630	600	1.5915	5.0	DIN6	S45C
SVGH151006	1030	1000	1.5915	5.0	DIN6	S45C
SVFH150609	630	600	1.5915	5.0	DIN9	S45C
SVFH151009	1030	1000	1.5915	5.0	DIN9	S45C

Drive pinion



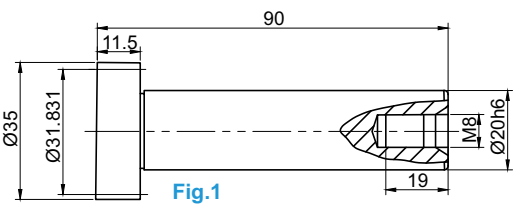


Fig.1

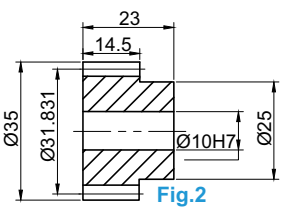
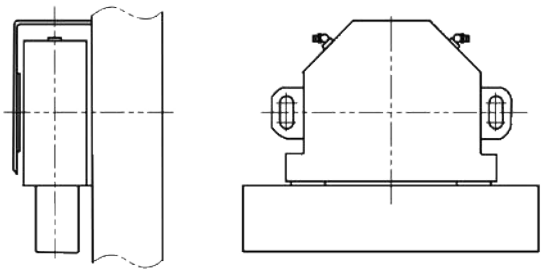


Fig.2

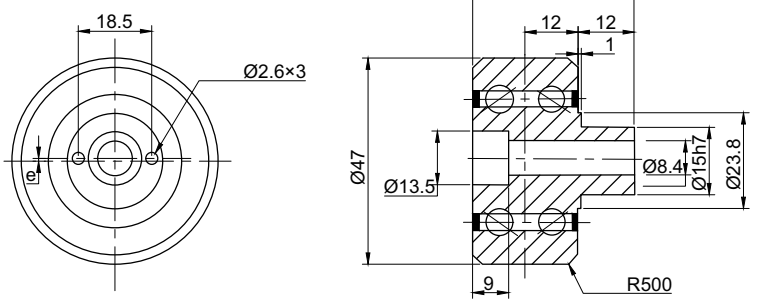
Code	Z	Module	P	Fig.	Precison grade	Max drive force
SGLP15	20	1.5915	5.0	1	DIN6	3KN
SGSP15	20	1.5915	5.0	2	DIN6	4KN

Size 15 roller for plain roller, Mounting flange, Wiper&lubrication unit



Plain roller



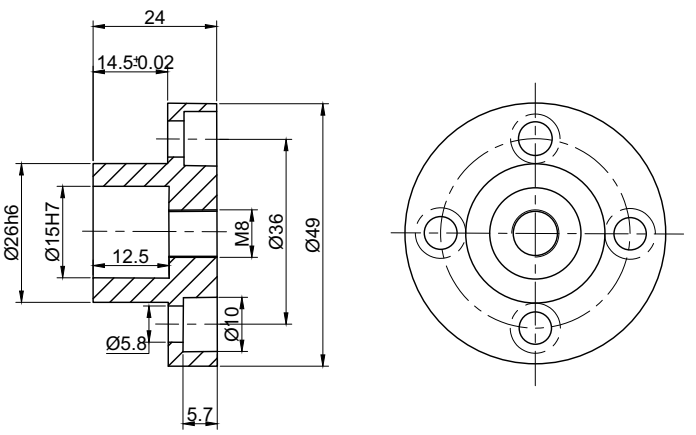


Code	Excenter	Ga (μm)	C_{0w} (N)	C_w ① (N)	C_w ② (N)	Nmax (min^{-1})	Boltsize
FR15A	1mm	-3/+5	6100	6500	1400	9000	M8*35 8.8 class
FR15B	0	-3/+5	6800	7200	1560	9000	M8*35 8.8 class

CW①: Normal service life 10^6m CW②: Normal service life 10^8m

Mounting flange

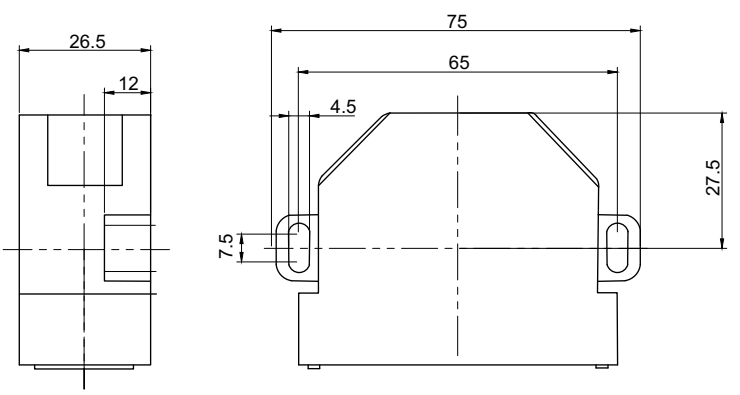




Code	Weight(kg)	Bolt size
KSP15	0.15	M8*16 8.8 class

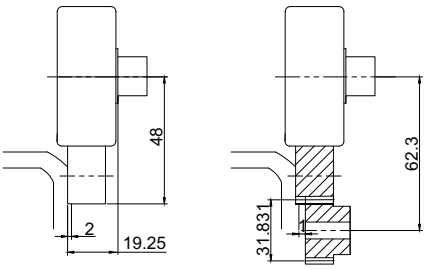
Wiper&lubrication unit





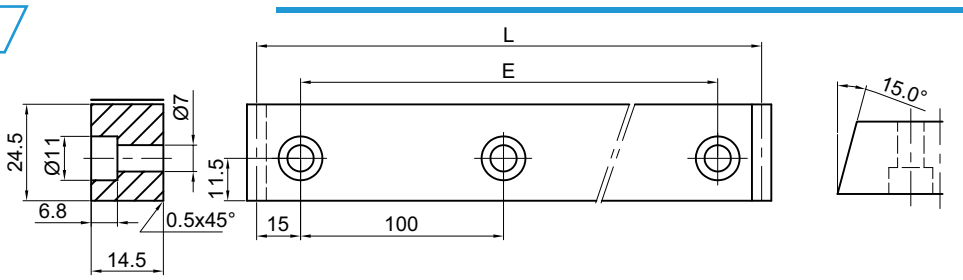
Code	Weight(kg)	Bolt size
KSB15	0.1	M4*18 8.8 class

Size 15 guideway flat rail, guideway flat rail rack, pinion



Guideway flat rail

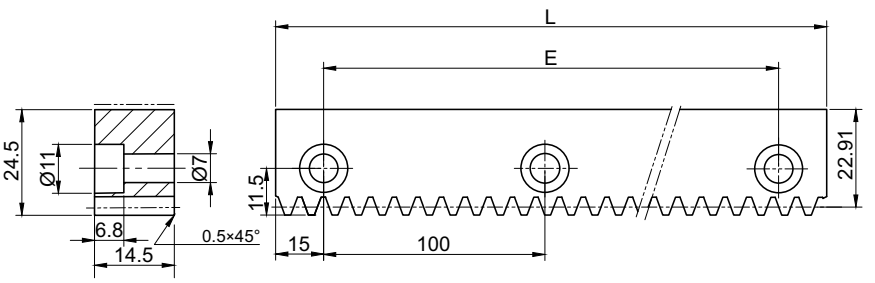




Code	L	E	Material	Bolt size
ST1506	630	600	S45C	M6*16 8.8 class
ST1510	1030	1000	S45C	M6*16 8.8 class

Guideway flat rail rack





Code	L	E	Module	Pitch	Precision grade	Material
STGH150606	630	600	1.5915	5.0	DIN6	S45C
STGH151006	1030	1000	1.5915	5.0	DIN6	S45C
STFH150609	630	600	1.5915	5.0	DIN9	S45C
STFH151009	1030	1000	1.5915	5.0	DIN9	S45C

Drive pinion



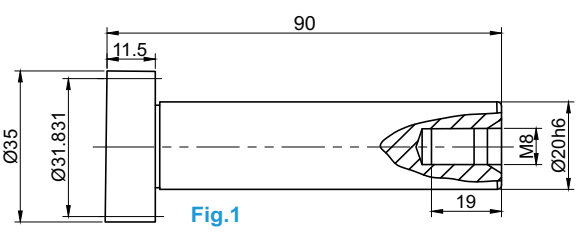


Fig.1

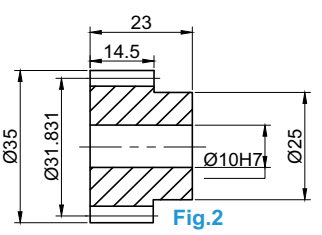
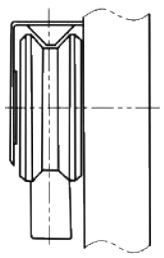


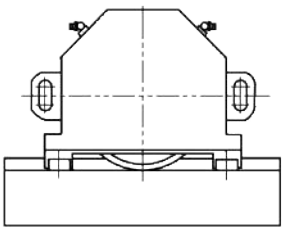
Fig.2

Code	Z	Module	P	Fig.	Precison grade	Max drive force
SGLP15	20	1.5915	5.0	1	DIN6	3KN
SGSP15	20	1.5915	5.0	2	DIN6	4KN

20 type

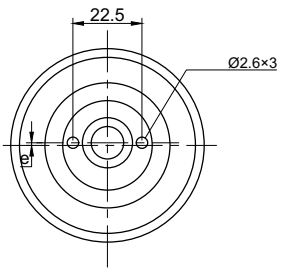
Size 20 roller for guideway V bars, Mounting flange, Wiper&lubrication unit

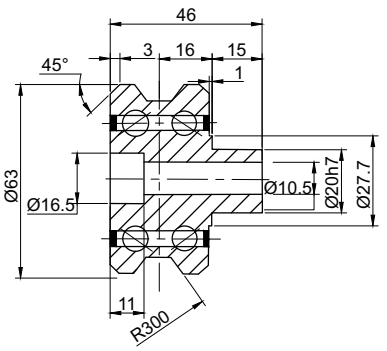




Roller for guideway V bars







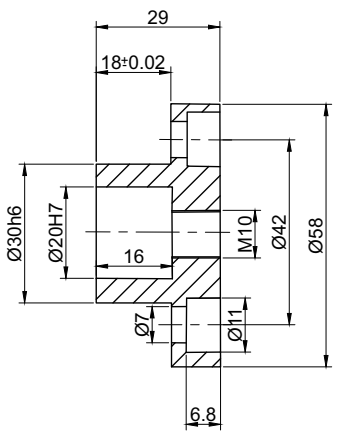
Code	Excenter	Ga (μm)	C_{0w} (N)	C_w ① (N)	C_w ② (N)	Nmax (min^{-1})	Boltsize
VR20A	1mm	-3/+5	8600	9000	2000	7000	M10*508.8 class
VR20B	0	-3/+5	8600	9000	2000	7000	M10*508.8 class

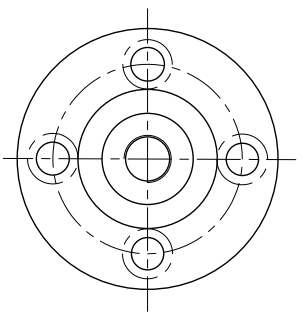
CW①: Normal service life 10^6m CW②: Normal service life 10^8m

Mounting flange

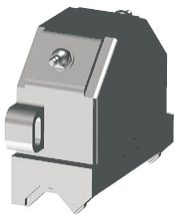


Code	Weight(kg)	Bolt size
KSP20	0.25	M10*16 8.8 class

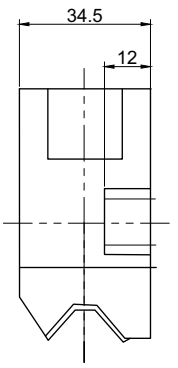


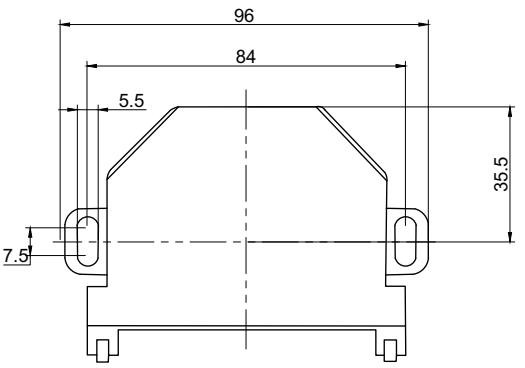


Wiper&lubrication unit

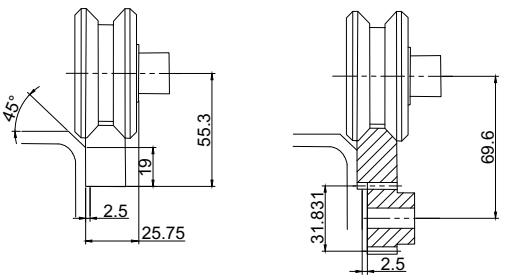


Code	Weight(kg)	Bolt size
KSA20	0.1	M5*20 8.8 class

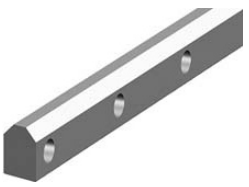


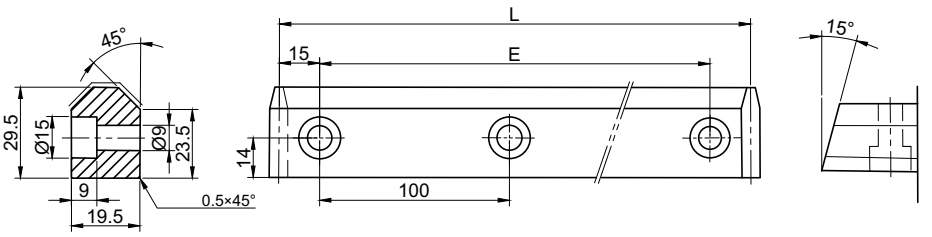


Size 20 roller for guideway V bars, guideway V bar rack, pinion



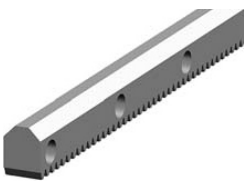
Guideway V bar

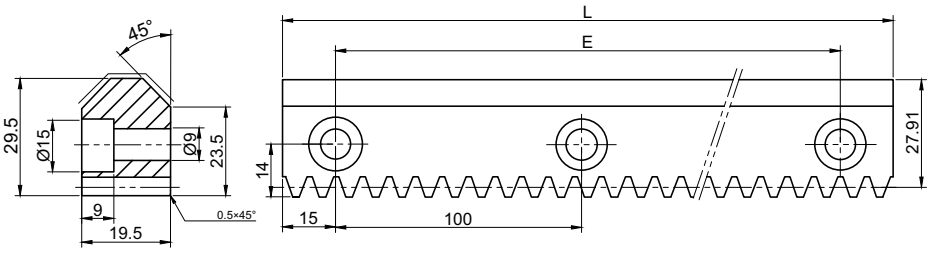




Code	L	E	Material	Bolt size
SV2006	630	600	S45C	M8*25 8.8 class
SV2010	1030	1000	S45C	M8*25 8.8 class

Guideway V bar rack





Code	L	E	Module	Pitch	Precision grade	Material
SVGH200606	630	600	1.5915	5.0	DIN6	S45C
SVGH201006	1030	1000	1.5915	5.0	DIN6	S45C
SVFH200609	630	600	1.5915	5.0	DIN9	S45C
SVFH201009	1030	1000	1.5915	5.0	DIN9	S45C

Drive pinion



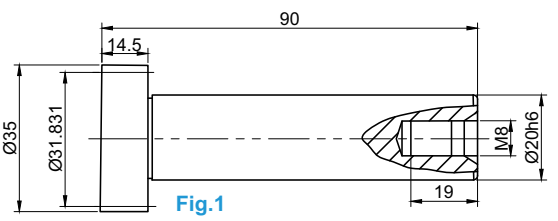


Fig.1

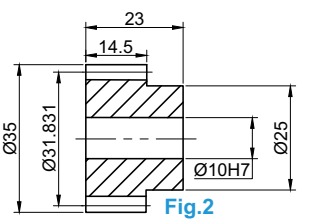
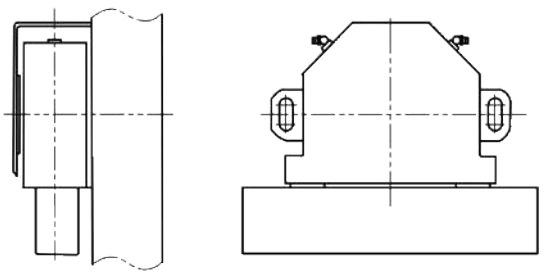


Fig.2

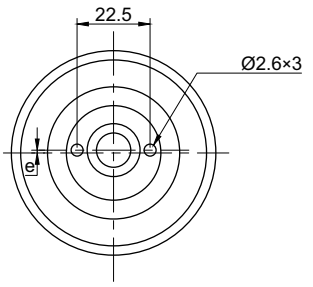
Code	Z	Module	P	Fig.	Precison grade	Max drive force
SGLP20	20	1.5915	5.0	1	DIN6	4KN
SGSP20	20	1.5915	5.0	2	DIN6	4KN

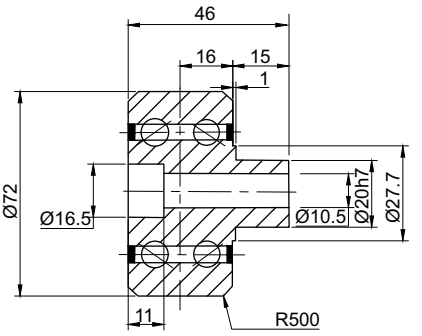
Size 20 roller for plain roller, Mounting flange, Wiper&lubrication unit



Plain roller







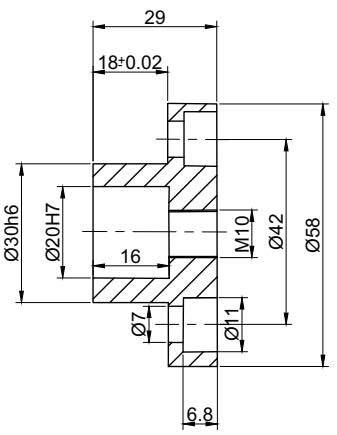
Code	Excenter	Ga (μm)	C_{0w} (N)	C_w ① (N)	C_w ② (N)	Nmax (min^{-1})	Boltsize
FR20A	1mm	-3/+5	8600	9000	2000	7000	M10*50 8.8 class
FR20B	0	-3/+5	9500	10200	2200	7000	M10*50 8.8 class

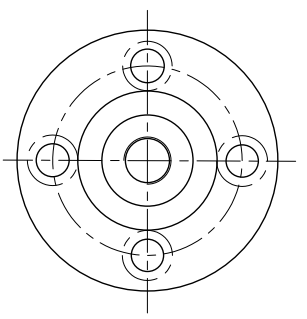
CW①: Normal service life 10^6m CW② : Normal service life 10 m^8

Mounting flange



Code	Weight(kg)	Bolt size
KSP20	0.25	M10*16 8.8 class

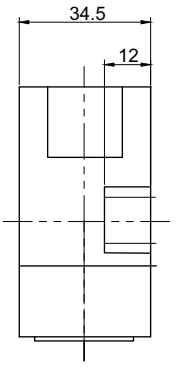


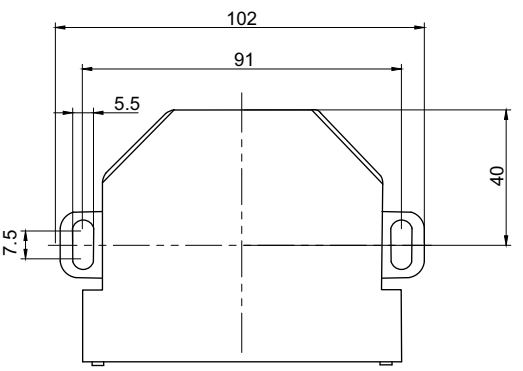


Wiper&lubrication unit

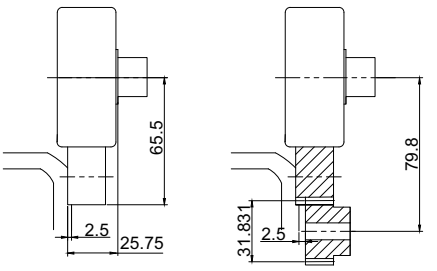


Code	Weight(kg)	Bolt size
KSB20	0.1	M5*20 8.8 class



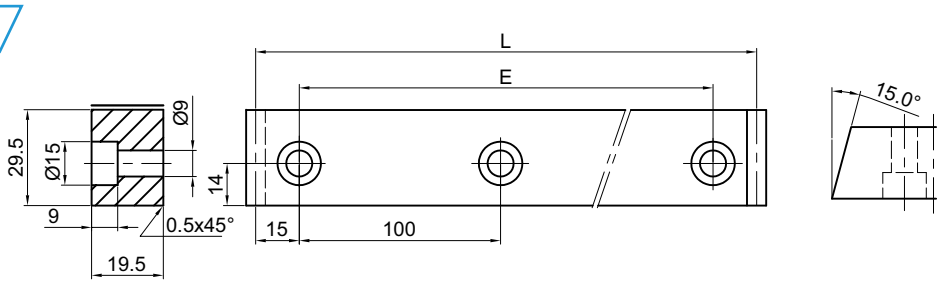


Size 20 guideway flat rail, guideway flat rail rack, pinion



Guideway flat rail

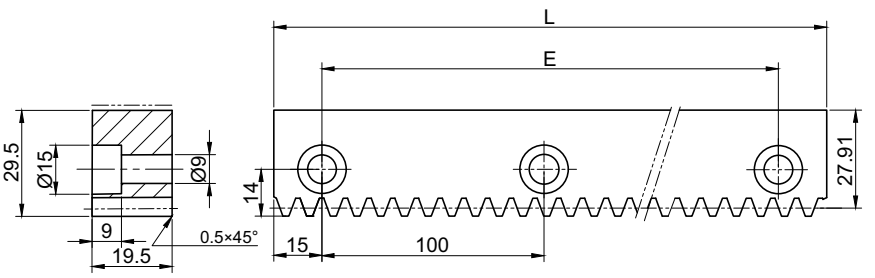




Code	L	E	Material	Bolt size
ST2006	630	600	S45C	M8*20 8.8 class
ST2010	1030	1000	S45C	M8*20 8.8 class

Guideway flat rail rack





Code	L	E	Module	Pitch	Precision grade	Material
STGH200606	630	600	1.5915	5.0	DIN6	S45C
STGH201006	1030	1000	1.5915	5.0	DIN6	S45C
STFH200609	630	600	1.5915	5.0	DIN9	S45C
STFH201009	1030	1000	1.5915	5.0	DIN9	S45C

Drive pinion



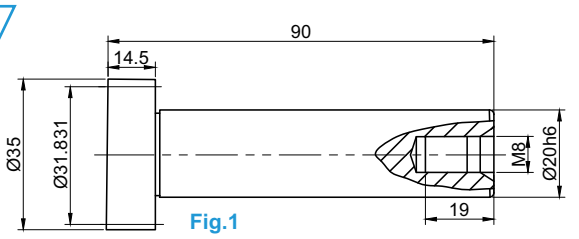


Fig.1

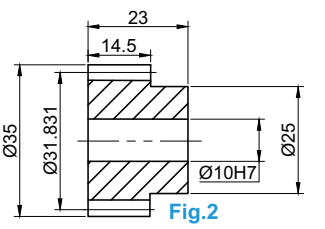
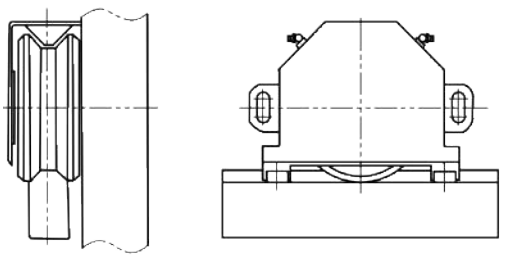


Fig.2

Code	Z	Module	P	Fig.	Precison grade	Max drive force
SGLP20	20	1.5915	5.0	1	DIN6	4KN
SGSP20	20	1.5915	5.0	2	DIN6	4KN

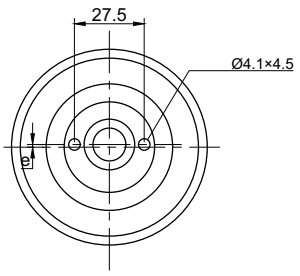
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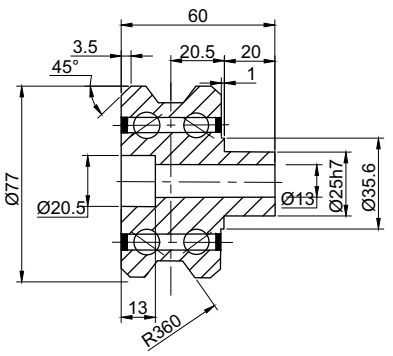
Size 25 roller for guideway V bars, Mounting flange, Wiper&lubrication unit



Roller for guideway V bars







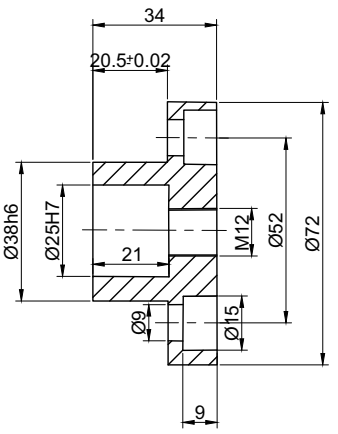
Code	Excenter	Ga (μm)	C_{0w} (N)	C_w ① (N)	C_w ② (N)	Nmax (min^{-1})	Boltsize
VR25A	1mm	-3/+5	13500	14700	3200	5600	M12*60 8.8 class
VR25B	0	-3/+5	13500	14700	3200	5600	M12*60 8.8 class

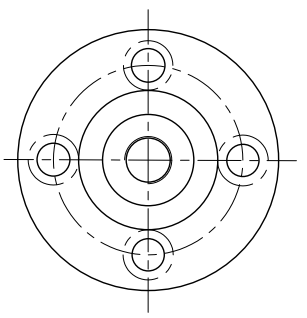
CW ①: Normal service life 10^6m CW ②: Normal service life 10^8m

Mounting flange

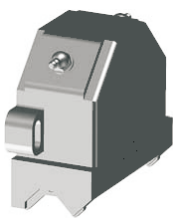


Code	Weight(kg)	Bolt size
KSP25	0.5	M12*20 8.8 class

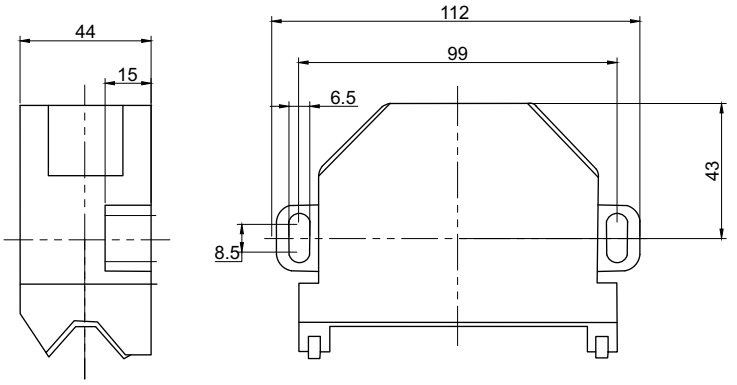




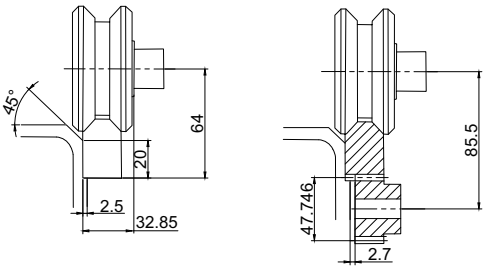
Wiper&lubrication unit



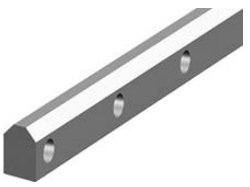
Code	Weight(kg)	Bolt size
KSA25	0.1	M6*25 8.8 class

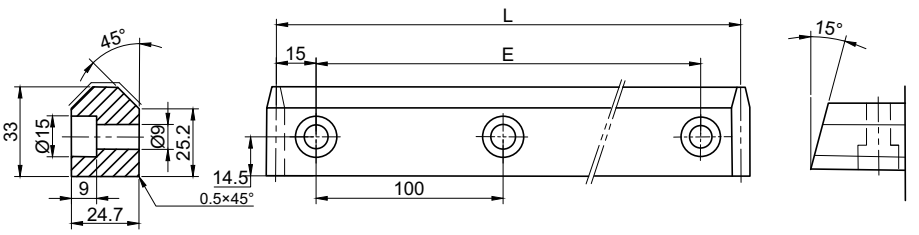


Size 25 roller for guideway V bars, guideway V bar rack, pinion



Guideway V bar

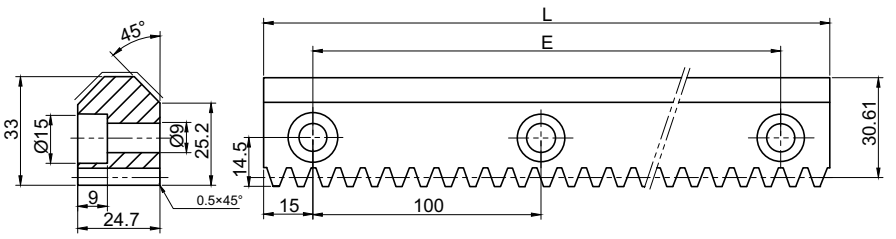




Code	L	E	Material	Bolt size
SV2506	630	600	S45C	M8*25 8.8 class
SV2509	930	900	S45C	M8*25 8.8 class
SV2510	1230	1200	S45C	M8*25 8.8 class

Guideway V bar rack





Code	L	E	Module	Pitch	Precision grade	Material
SVGH250606	630	600	2.3873	7.5	DIN6	S45C
SVGH250906	930	900	2.3873	7.5	DIN6	S45C
SVGH251006	1230	1200	2.3873	7.5	DIN6	S45C
SVFH250609	630	600	2.3873	7.5	DIN9	S45C
SVFH250909	930	900	2.3873	7.5	DIN9	S45C
SVFH251009	1230	1200	2.3873	7.5	DIN9	S45C

Drive pinion



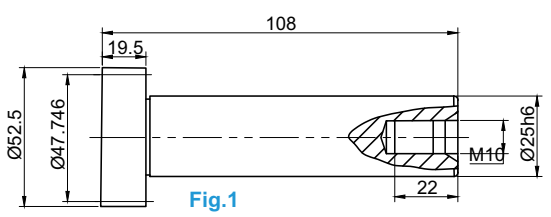


Fig.1

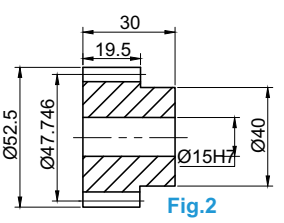
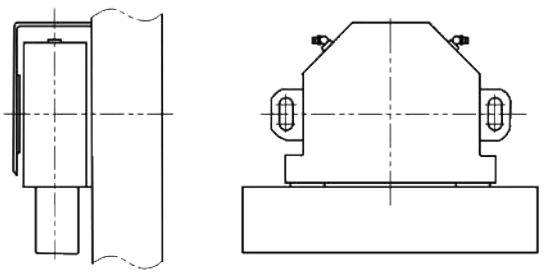


Fig.2

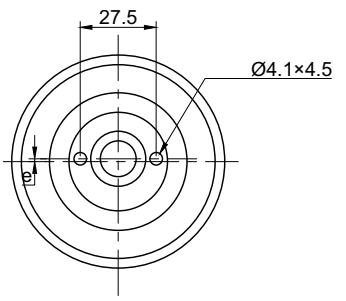
Code	Z	Module	P	Fig.	Precison grade	Max drive force
SGLP25	20	2.3873	7.5	1	DIN6	3KN
SGSP25	20	2.3873	7.5	2	DIN6	4KN

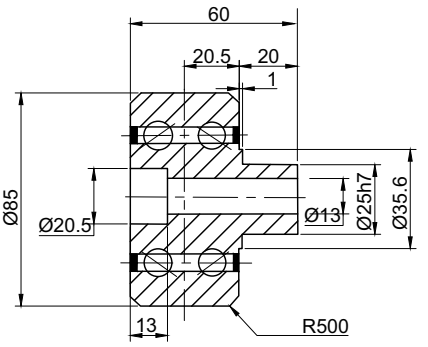
Size 25 roller for plain roller, Mounting flange, Wiper&lubrication unit



Plain roller





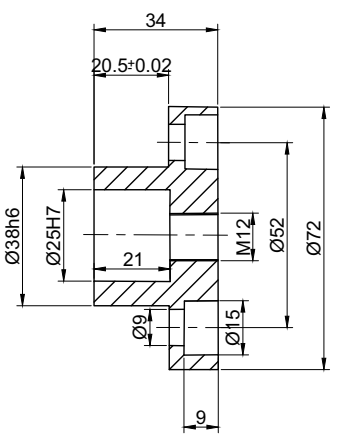


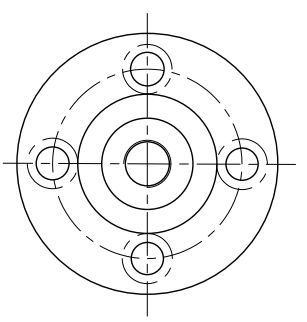
Code	Excenter	Ga (μm)	C_{0W} (N)	C_W ① (N)	C_W ② (N)	Nmax (min^{-1})	Boltsize
FR25A	1mm	-3/+5	13500	14700	3200	5600	M12*60 8.8 class
FR25B	0	-3/+5	15000	16300	3530	5600	M12*60 8.8 class

CW①: Normal service life 10^6m CW②: Normal service life 10^8m

Mounting flange

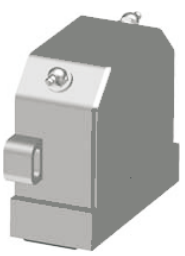


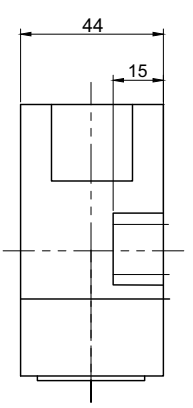


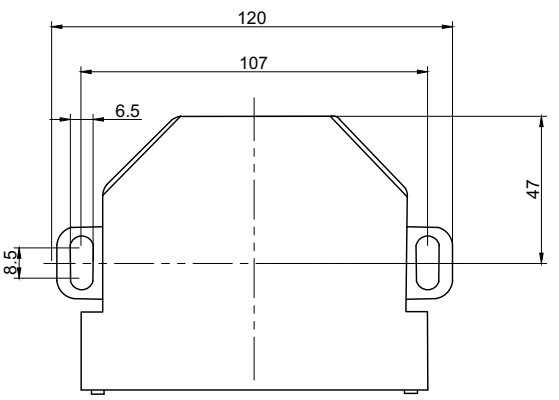


Code	Weight(kg)	Bolt size
KSP25	0.5	M12*20 8.8 class

Wiper&lubrication unit

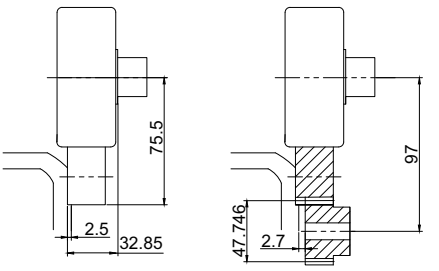






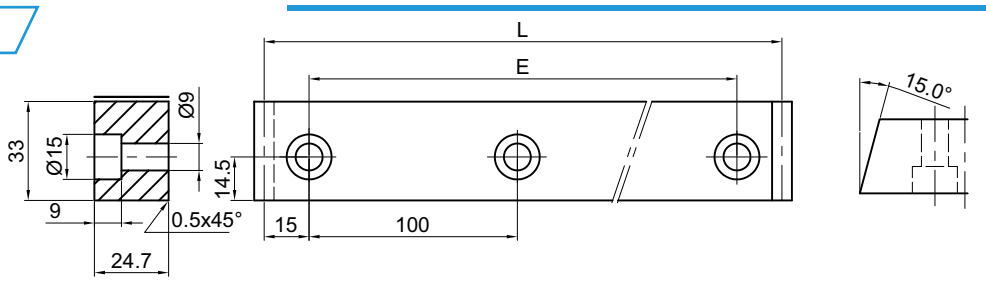
Code	Weight(kg)	Bolt size
KSB25	0.1	M6*25 8.8 class

Size 25 guideway flat rail, guideway flat rail rack, pinion



Guideway flat rail

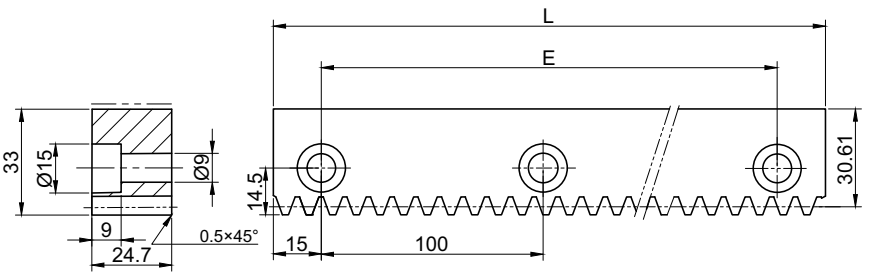




Code	L	E	Material	Bolt size
ST2506	630	600	S45C	M8*25 8.8 class
ST2509	930	900	S45C	M8*25 8.8 class
ST2510	1230	1200	S45C	M8*25 8.8 class

Guideway flat rail rack





Code	L	E	Module	Pitch	Precision grade	Material
STGH250606	630	600	2.3873	7.5	DIN6	S45C
STGH250906	930	900	2.3873	7.5	DIN6	S45C
STGH251006	1230	1200	2.3873	7.5	DIN6	S45C
STFH250609	630	600	2.3873	7.5	DIN9	S45C
STFH250909	930	900	2.3873	7.5	DIN9	S45C
STFH251009	1230	1200	2.3873	7.5	DIN9	S45C

Drive pinion



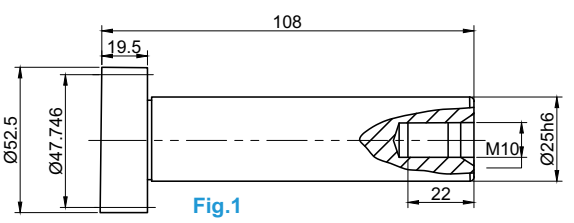


Fig.1

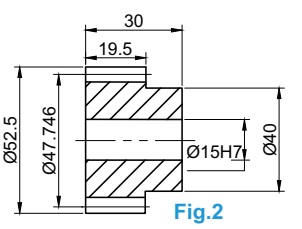
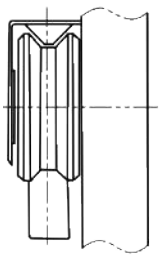


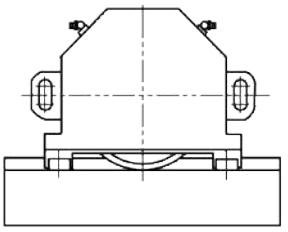
Fig.2

Code	Z	Module	P	Fig.	Precison grade	Max drive force
SGLP25	20	2.3873	7.5	1	DIN6	3KN
SGSP25	20	2.3873	7.5	2	DIN6	4KN

35 type

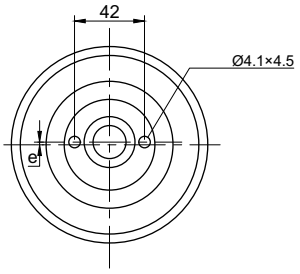
Size 35 roller for guideway V bars, Mounting flange, Wiper&lubrication unit

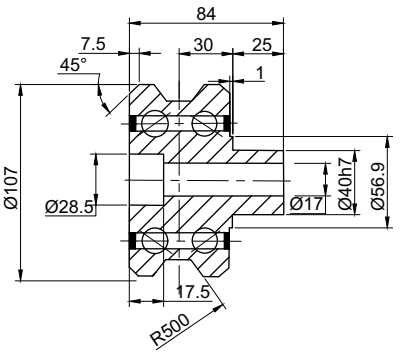




Roller for guideway V bars





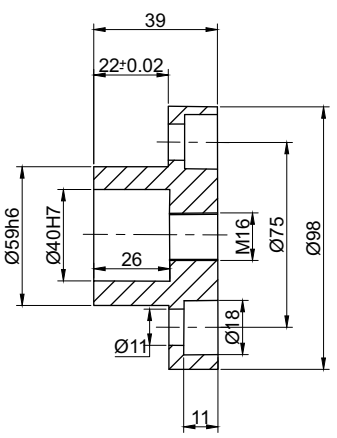


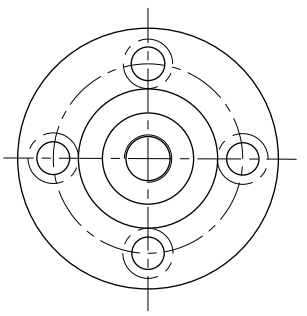
Code	Excenter	Ga (μm)	C_{0W} (N)	C_W ① (N)	C_W ② (N)	Nmax (min^{-1})	Bolt size
VR35A	1mm	-3/+5	28800	25600	5500	3600	M16*80 8.8 class
VR35B	0	-3/+5	28800	25600	5500	3600	M16*80 8.8 class

CW ①: Normal service life 10^6m CW ②: Normal service life 10^8m

Mounting flange

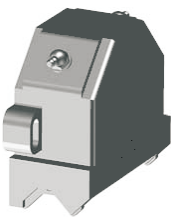


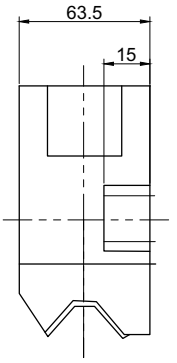


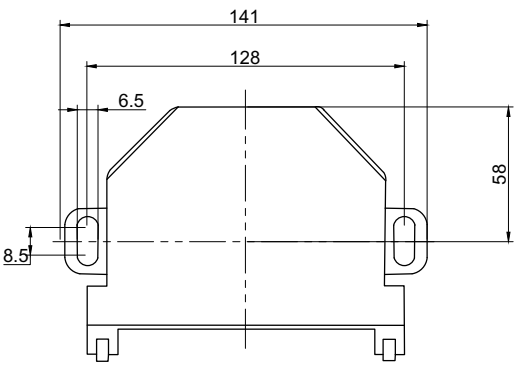


Code	Weight(kg)	Bolt size
KSP35	1.1	M16*25 8.8 class

Wiper&lubrication unit

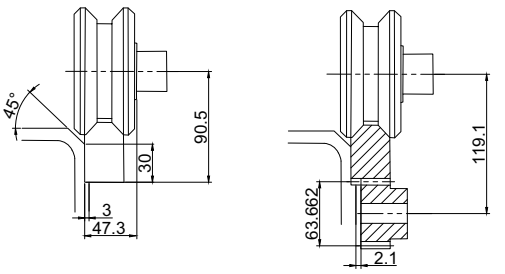




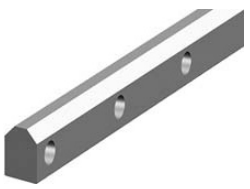


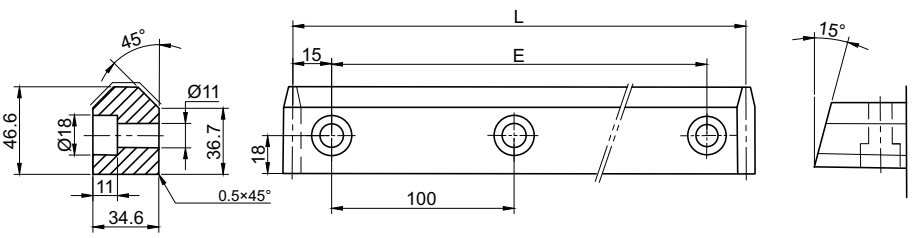
Code	Weight(kg)	Bolt size
KSA35	0.1	M6*25 8.8 class

Size 35 roller for guideway V bars, guideway V bar rack, pinion



Guideway V bar

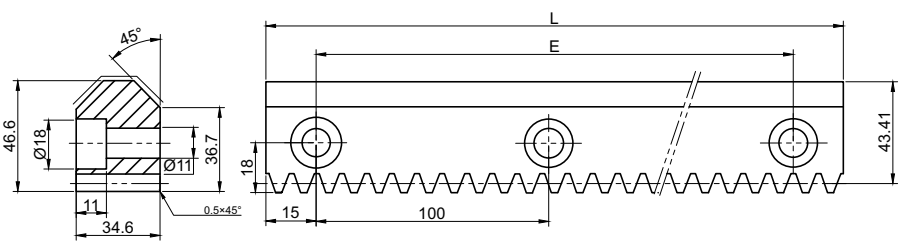




Code	L	E	Material	Bolt size
SV3506	630	600	S45C	M10*35 8.8 class
SV3509	930	900	S45C	M10*35 8.8 class
SV3510	1230	1200	S45C	M10*35 8.8 class

Guideway V bar rack





Code	L	E	Module	Pitch	Precision grade	Material
SVGH350606	630	600	3.1831	10	DIN6	S45C
SVGH350906	930	900	3.1831	10	DIN6	S45C
SVGH351006	1230	1200	3.1831	10	DIN6	S45C
SVFH350609	630	600	3.1831	10	DIN9	S45C
SVFH350909	930	900	3.1831	10	DIN9	S45C
SVFH351009	1230	1200	3.1831	10	DIN9	S45C

Drive pinion



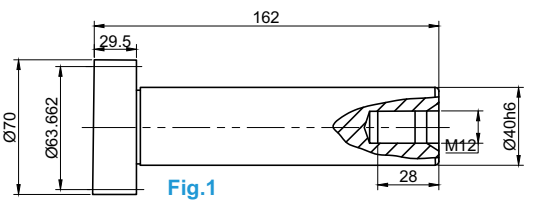


Fig.1

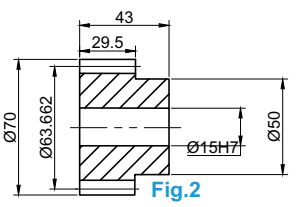
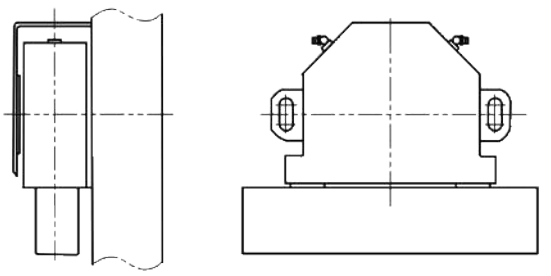


Fig.2

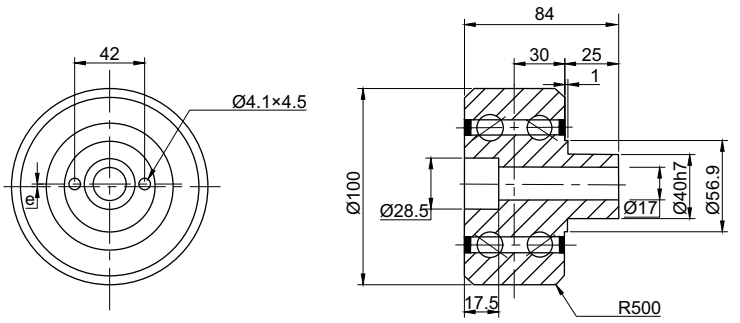
Code	Z	Module	P	Fig.	Precison grade	Max drive force
SGLP35	20	3.1831	10.0	1	DIN6	18.5KN
SGSP35	20	3.1831	10.0	2	DIN6	18.5KN

Size 35 roller for plain roller, Mounting flange, Wiper&lubrication unit



Plain roller



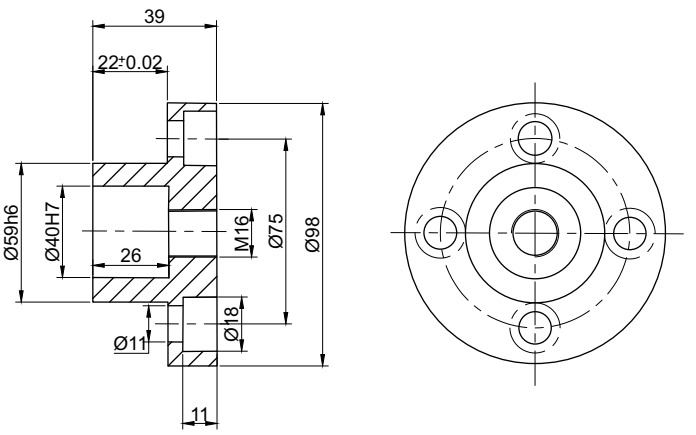


Code	Excenter	Ga (μm)	C_{0W} (N)	C_W ① (N)	C_W ② (N)	Nmax (min^{-1})	Boltsize
FR35A	1mm	-3/+5	28800	25600	5500	3600	M16*80 8.8 class
FR35B	0	-3/+5	32000	28400	6150	3600	M16*80 8.8 class

CW①: Normal service life 10^6m CW②: Normal service life 10^8m

Mounting flange

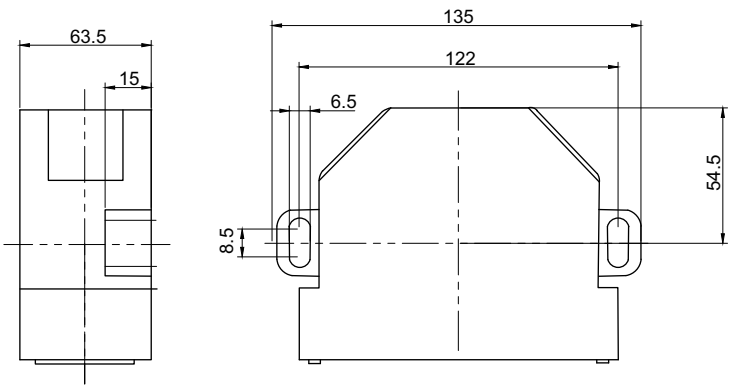




Code	Weight(kg)	Bolt size
KSP35	1.1	M16*25 8.8 class

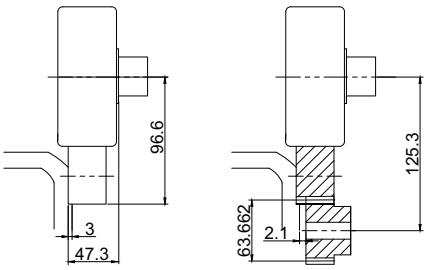
Wiper&lubrication unit





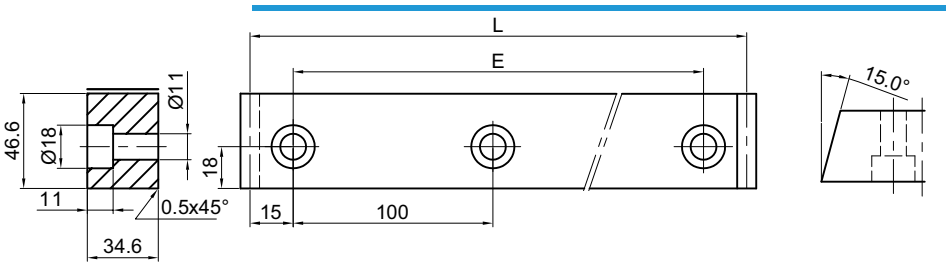
Code	Weight(kg)	Bolt size
KSB35	0.1	M6*25 8.8 class

Size 35 guideway flat rail, guideway flat rail rack, pinion



Guideway flat rail

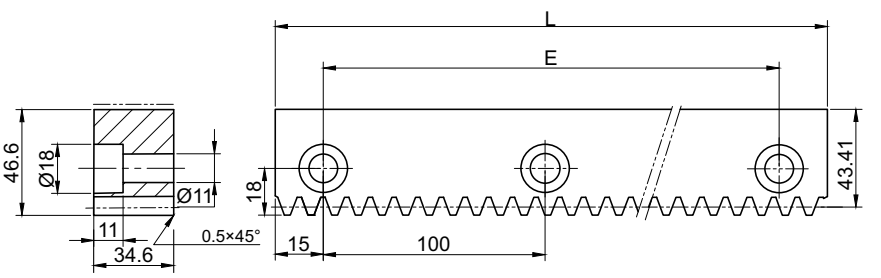




Code			Material	Bolt size
ST3506	630	600	S45C	M10*35 8.8 class
ST3509	930	900	S45C	M10*35 8.8 class
ST3510	1230	1200	S45C	M10*35 8.8 class

Guideway flat rail rack





Code	L	E	Module	Pitch	Precision grade	Material
STGH350606	630	600	3.1831	10.0	DIN6	S45C
STGH350906	930	900	3.1831	10.0	DIN6	S45C
STGH351006	1230	1200	3.1831	10.0	DIN6	S45C
STFH350609	630	600	3.1831	10.0	DIN9	S45C
STFH350909	930	900	3.1831	10.0	DIN9	S45C
STFH351009	1230	1200	3.1831	10.0	DIN9	S45C

Drive pinion



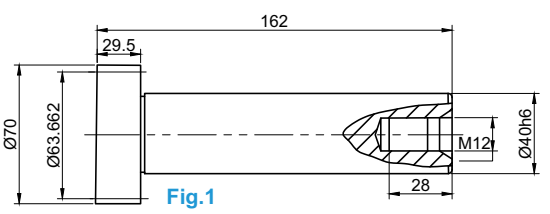


Fig.1

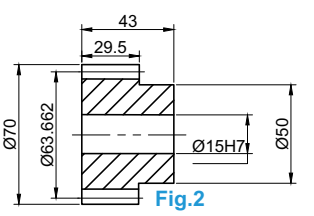
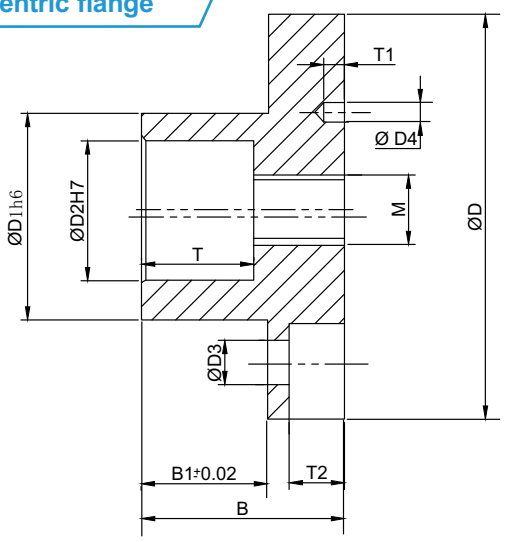


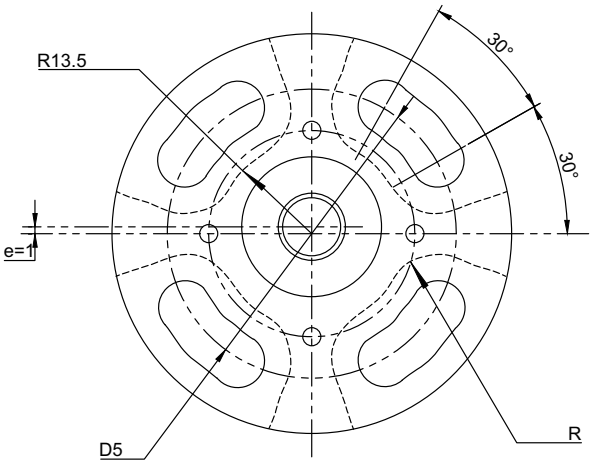
Fig.2

Code	Z	Module	P	Fig.	Precison grade	Max drive force
SGLP35	20	3.1831	10.0	1	DIN6	18.5KN
SGSP35	20	3.1831	10.0	2	DIN6	18.5KN

Eccentric mounting flange

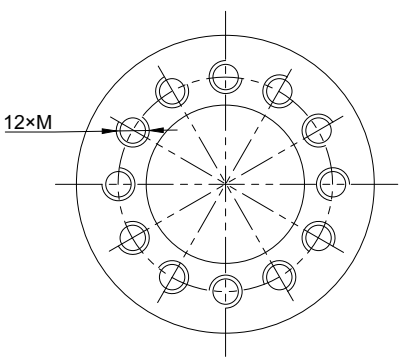
Eccentric flange

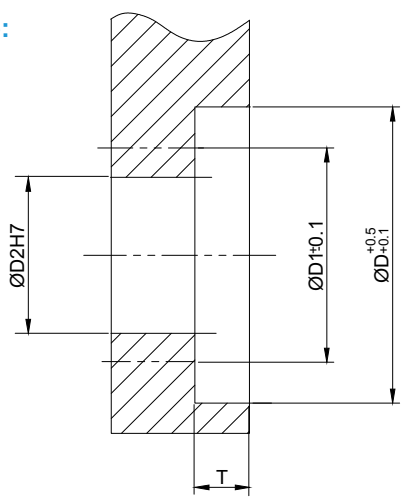




Code	B	B1	D	D1	D2①	D3	D4	D5	M①	R	T	T1	T2
KEP15	24.0	14.5	49.0	26.0	15.0	5.3	2.6	36.0	8.0	6.5	12.5	3.0	6.3
KEP20	29.0	18.0	58.0	30.0	20.0	6.4	2.6	42.0	10.0	7.5	16.0	3.0	7.9
KEP25	34.0	20.5	72.0	38.0	25.0	8.4	4.1	52.0	12.0	9.0	21.0	4.5	9.9
KEP35	39.0	22.0	98.0	59.0	40.0	10.5	4.1	75.0	16.0	12.0	26.0	4.5	12.3

Holes in the drive plate for the eccentric flange:

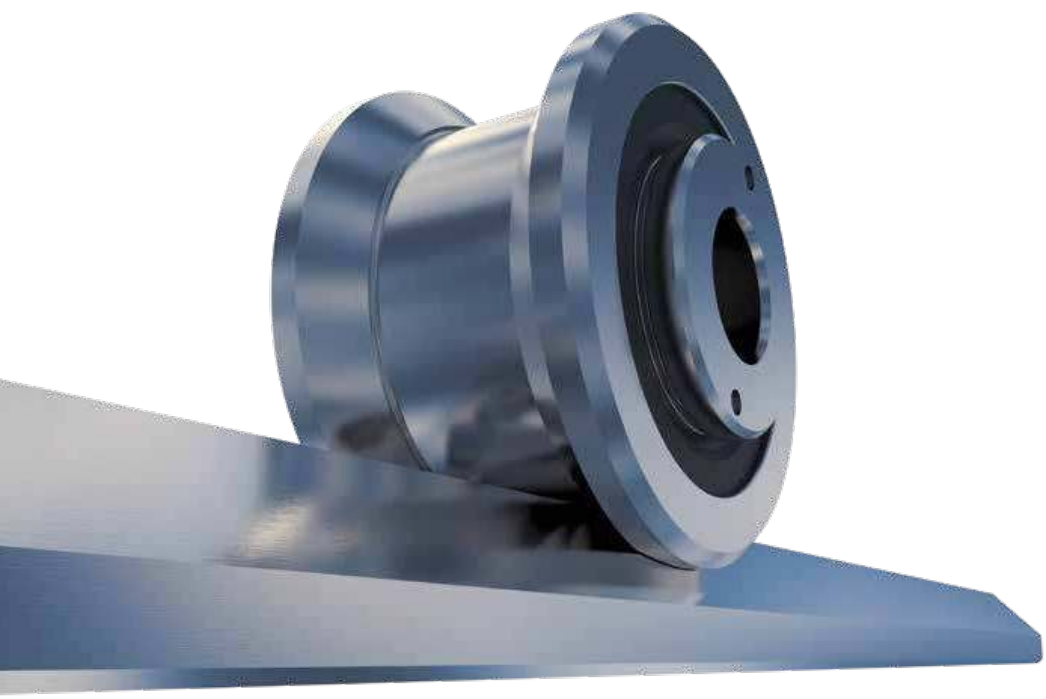




Code	D	D1	D2	T	M
KEP15	49	36	26	9.5	5
KEP20	58	42	30	11	6
KEP25	72	52	38	13.5	8
KEP35	98	75	59	17	10

GUIDEWAY SYSTEM

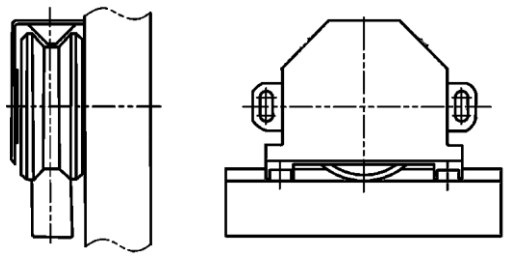
FOR MEDIUM DUTY APPLICATIONS



V-shaped guide rail & roller

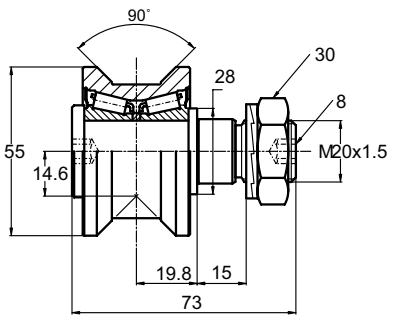
30 type

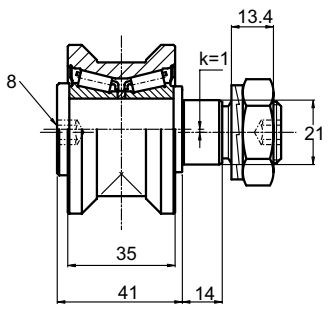
Size 30 roller for guideway V bars, Guideway V bar Wiper&lubrication unit



Roller for guideway V bars



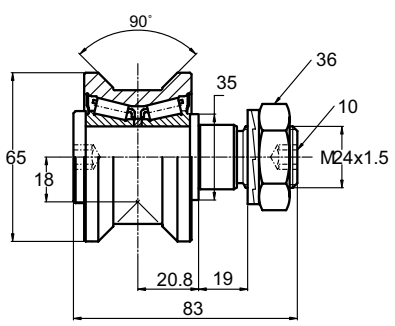


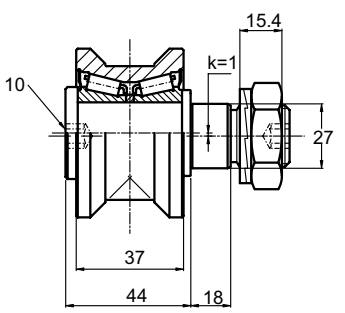


Code	Excenter	Cw(N)	Fr(N)	Fa(N)	(N.m)	(kg)
NU55	0	42000	11900	3900	80	0.6
NU55R	1mm	42000	11900	3900	80	0.6

Roller for guideway V bars



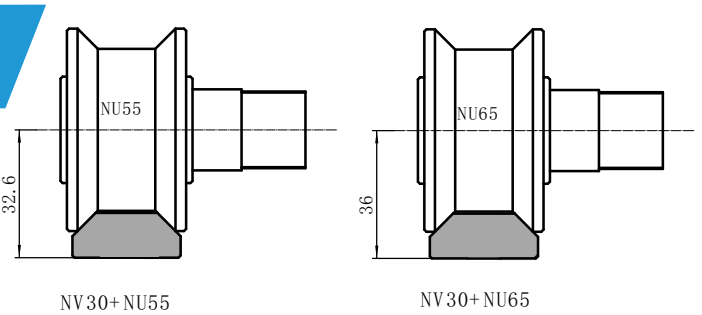




Code	Excenter	Cw(N)	Fr(N)	Fa(N)	(N.m)	(kg)
NU65	0	48000	17000	6900	160	0.9
NU65R	1mm	48000	17000	6900	160	0.9

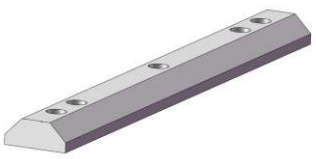
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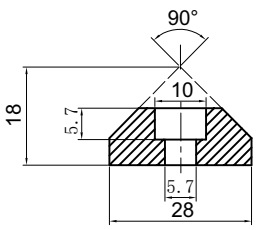
Size 30 roller for guideway V bars, Guideway V bar Wiper&lubrication unit

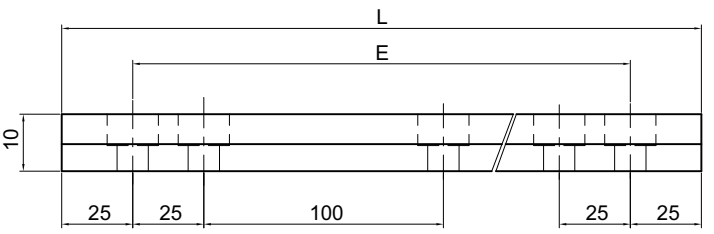


NV30+NU55　　NV30+NU65

Guideway V bar

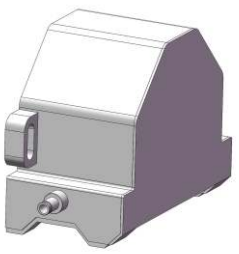


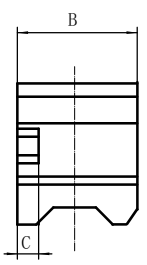


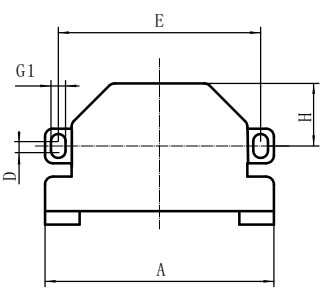


Code	L	E	Material	Bolt Size
NV3010	1000	950	42CrMo	M5　8.8 class

Wiper&lubrication unit



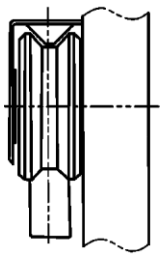


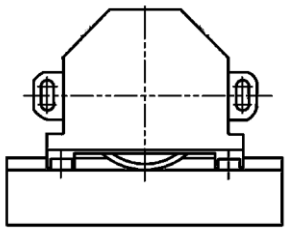


Code	Dimensions (mm)						
	D	B	C	E	G1	H	A
NH3055	6	46	6	70	5.5	30	80
NH3065	7.5	49	8	85.5	5.5	37	92

40 type

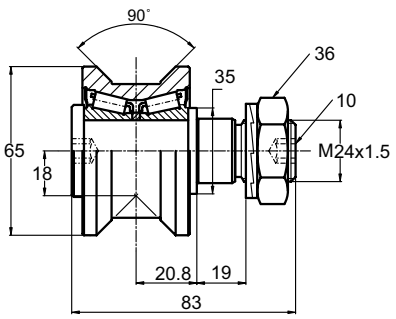
Size 40 roller for guideway V bars, Guideway V bar Wiper&lubrication unit

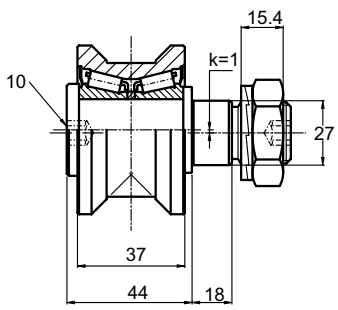




Roller for guideway V bars



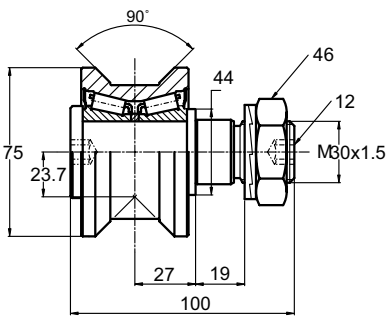


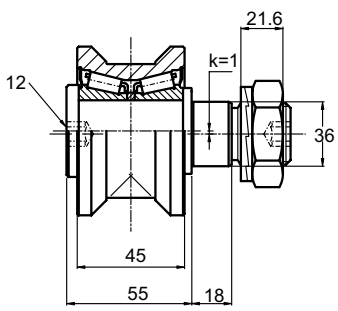


Code	Excenter	Cw(N)	Fr(N)	Fa(N)	（N.m)	（kg)
NU65	0	48000	17000	6900	160	0.9
NU65R	1mm	48000	17000	6900	160	0.9

Roller for guideway V bars



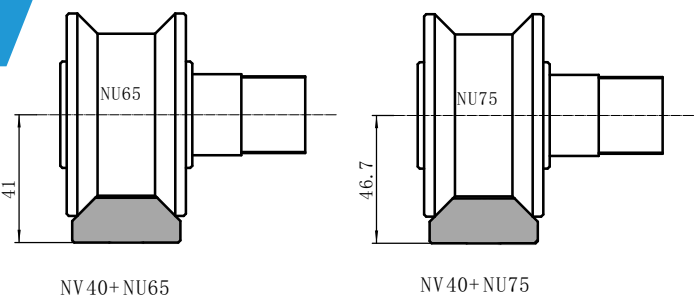




Code	Excenter	Cw(N)	Fr(N)	Fa(N)	（N.m)	（kg)
NU75	0	69000	28500	10200	300	1.6
NU75R	1mm	69000	28500	10200	300	1.6

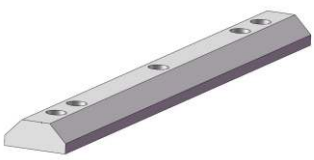
40 type

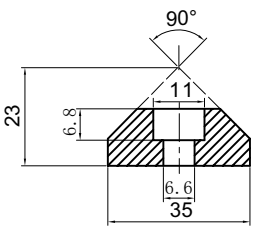
Size 40 roller for guideway V bars, Guideway V bar Wiper&lubrication unit

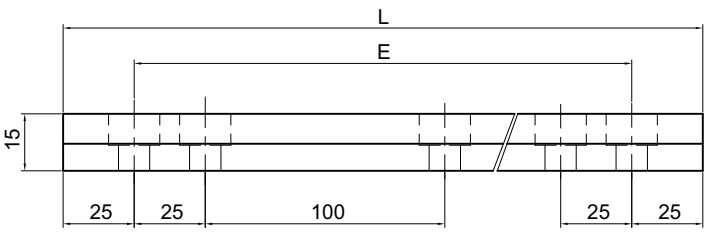


NV40+NU65　　NV40+NU75

Guideway V bar

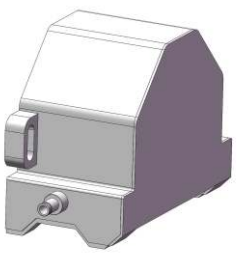


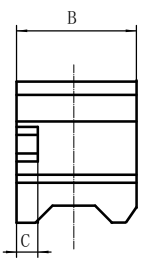


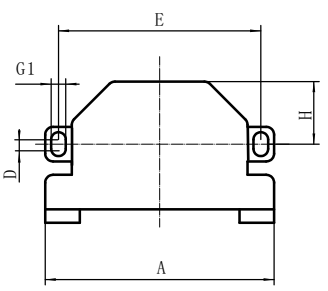


Code	L	E	Material	Bolt Size
NV4010	1000	950	42CrMo	M6 8.8 class
NV4020	2000	1950	42CrMo	M6 8.8 class

Wiper&lubrication unit



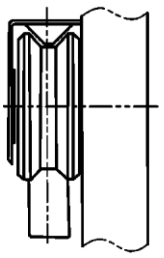


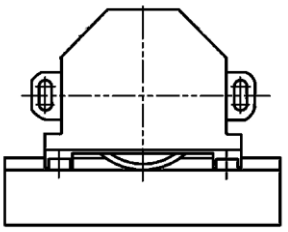


Code	Dimensions (mm)						
	D	B	C	E	G1	H	A
NH4065	7.5	49	8	85.5	5.5	37	92
NH4075	7.5	59	8	94.5	5.5	42	102

50 type

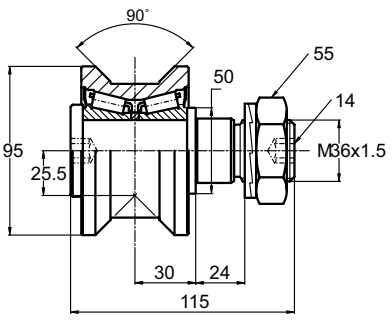
Size 50 roller for guideway V bars, Guideway V bar Wiper&lubrication unit

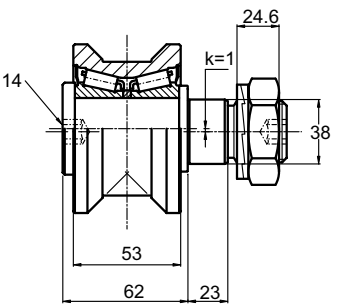




Roller for guideway V bars



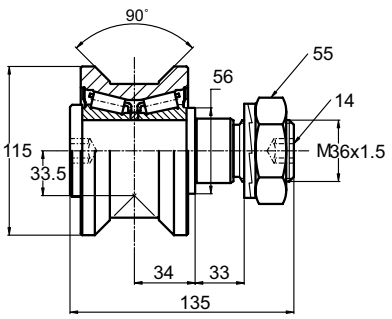


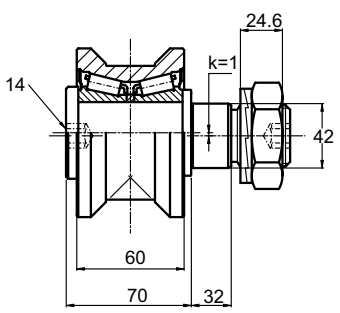


Code	Excenter	Cw(N)	Fr(N)	Fa(N)	(N.m)	(kg)
NU95	0	134000	29000	12700	450	2.8
NU95R	1mm	134000	29000	12700	450	2.8

Roller for guideway V bars



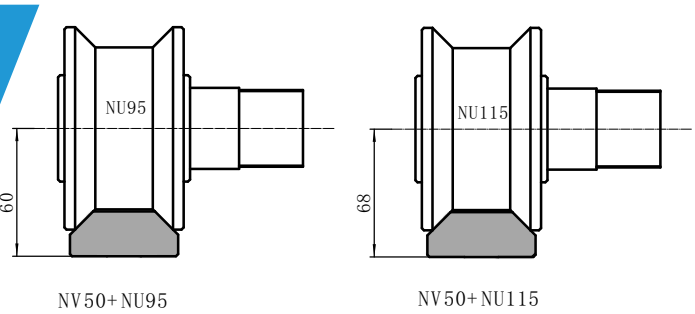




Code	Excenter	Cw(N)	Fr(N)	Fa(N)	(N.m)	(kg)
NU115	0	190000	45000	17900	450	4.9
NU115R	1mm	190000	45000	17900	450	4.9

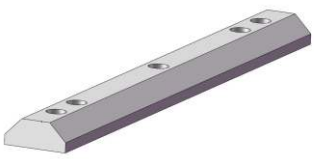
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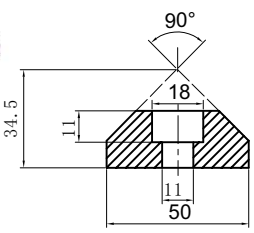
Size 50 roller for guideway V bars, Guideway V bar Wiper&lubrication unit

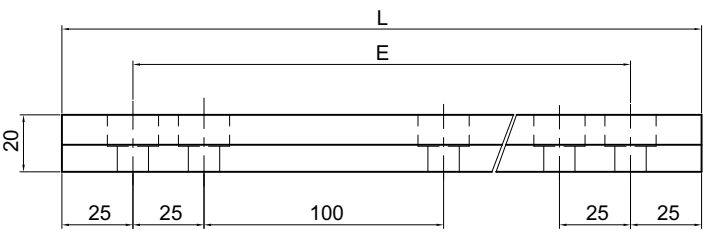


NV50+NU95　　NV50+NU115

Guideway V bar

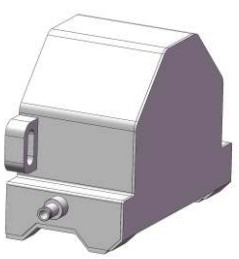


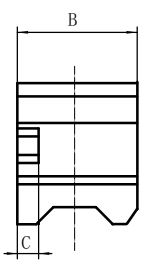


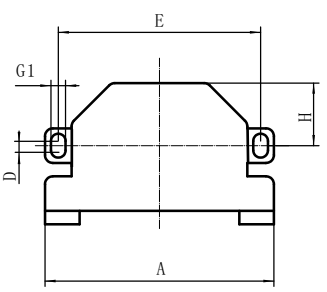


Code	L	E	Material	Bolt Size
NV5010	1000	950	42CrMo	M10 8.8 class
NV5020	2000	1950	42CrMo	M10 8.8 class

Wiper&lubrication unit



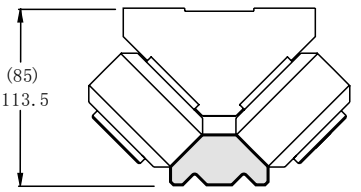




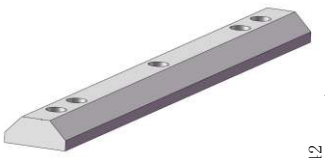
Code	Dimensions (mm)						
	D	B	C	E	G1	H	A
NH5095	8.5	66	8	113.5	5.5	50	120
NH50115	8.5	75	8	133.5	5.5	60	140

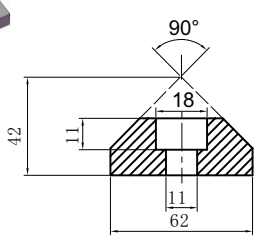
60 type

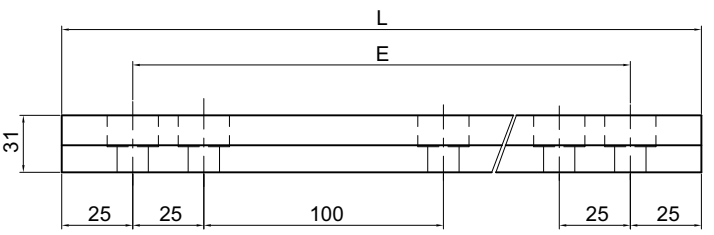
Size 60 roller for guideway V bars, Guideway V bar Wiper&lubrication unit



Guideway V bar



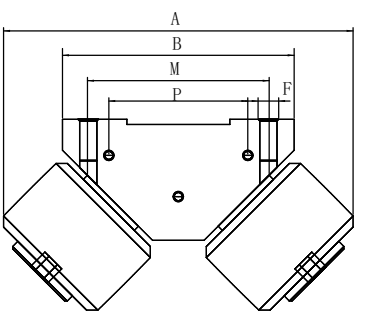


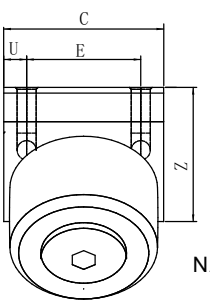


Code	L	E	Material	Bolt Size
NV6010	1000	950	42CrMo	M10 8.8 class
NV6020	2000	1950	42CrMo	M10 8.8 class

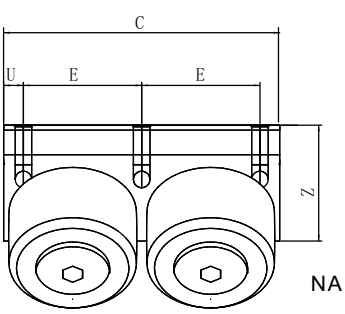








NA62



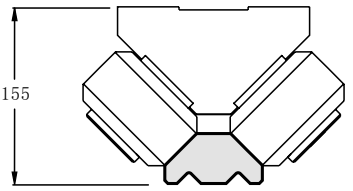
NA64

Code	Dimensions (mm)									Cw(N)	Fr(N)	Fa(N)
	A	B	C	P	M	E	U	F	Z			
NA6252	136	90	56	54	70	40	8	M8	47	59000	16800	8400
NA6452	136	90	112	54	70	48	8	M8	47	118000	33600	16800
NA6275	170	125	76	56	85	56	10	M12	70	99000	44200	22100
NA6475	170	125	152	56	85	66	10	M12	70	198000	88400	44200

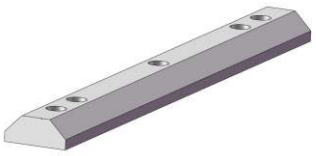
*The combined height of N A 6 2 5 2 and N A 6 4 5 2 on the same track is 8 5mm

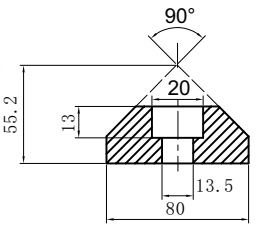
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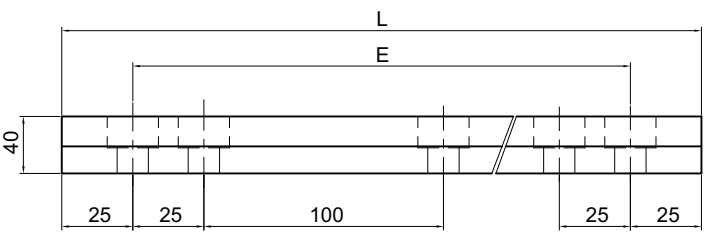
Size 80 roller for guideway V bars, Guideway V bar Wiper&lubrication unit



Guideway V bar



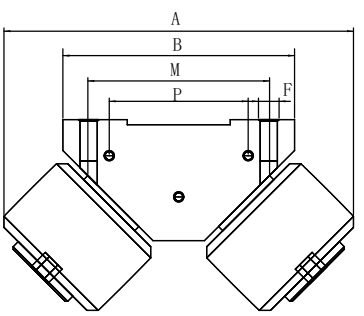


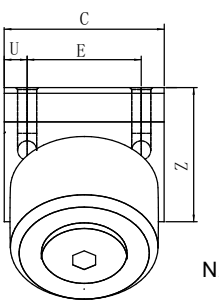


Code	L	E	Material	Bolt Size
NV8010	1000	950	42CrMo	M12 8.8 class
NV8020	2000	1950	42CrMo	M12 8.8 class

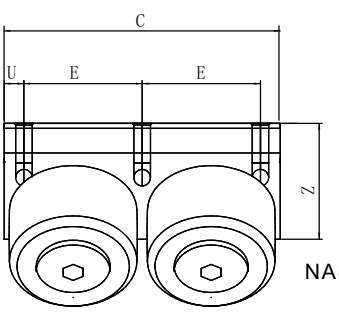








NA82



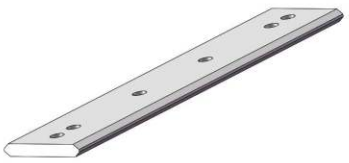
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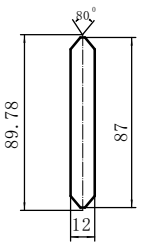
Code	Dimensions (mm)									Cw(N)	Fr(N)	Fa(N)
	A	B	C	P	M	E	U	F	Z			
NA82115	243	170	250	80	120	95	15	M14	93	275000	78600	39300
NA84115	243	170	250	80	120	110	15	M14	93	550000	157200	78600

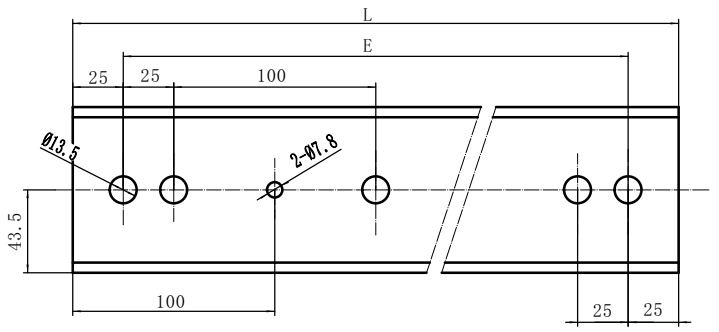
90 type

Size 90 roller for guideway V bars, Guideway V bar Wiper&lubrication unit

Roller for guideway V bar

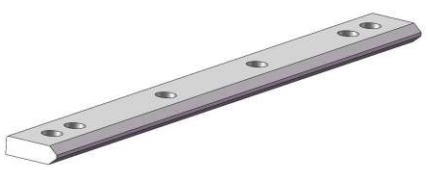


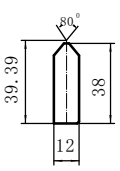


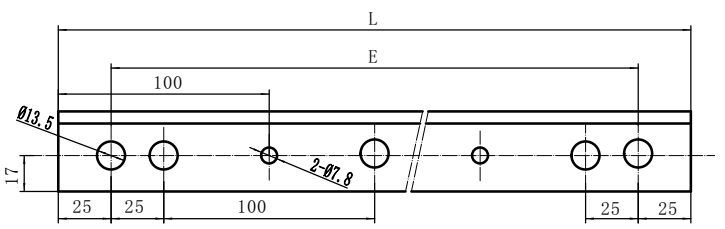


Code	L	E	Material	Bolt Size
NV90102	1000	950	42CrMo	M12 8.8 class
NV90202	2000	1950	42CrMo	M12 8.8 class

Roller for guideway V bar



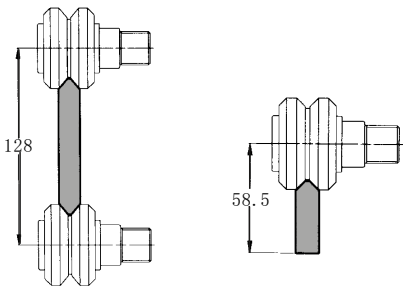




Code	L	E	Material	Bolt Size
NV90101	1000	950	42CrMo	M12 8.8 class
NV90201	2000	1950	42CrMo	M12 8.8 class

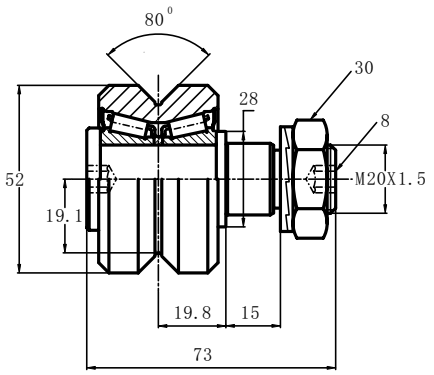
90 type

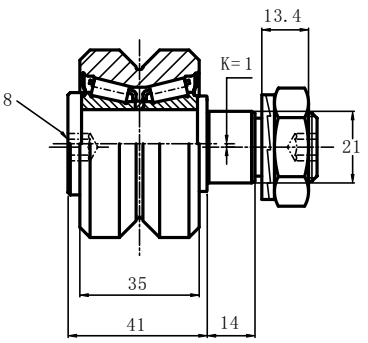
Size 90 roller for guideway V bars, Guideway V bar Wiper&lubrication unit



Roller for guideway V bars



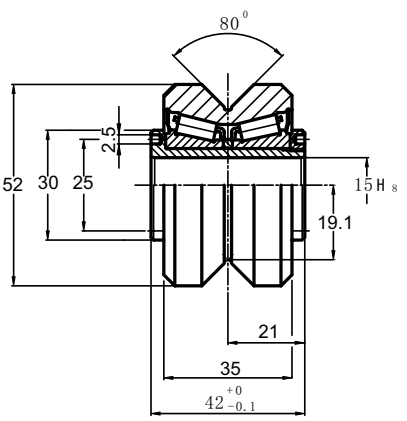




Code	Excenter	Cw(N)	Fr(N)	Fa(N)	(N.m)	(kg)
NY52	0	41000	11900	4800	80	0.6
NY52R	1mm	41000	11900	4800	80	0.6

Roller for guideway V bars



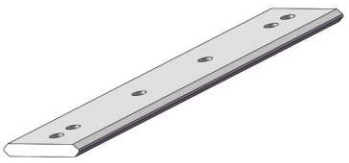


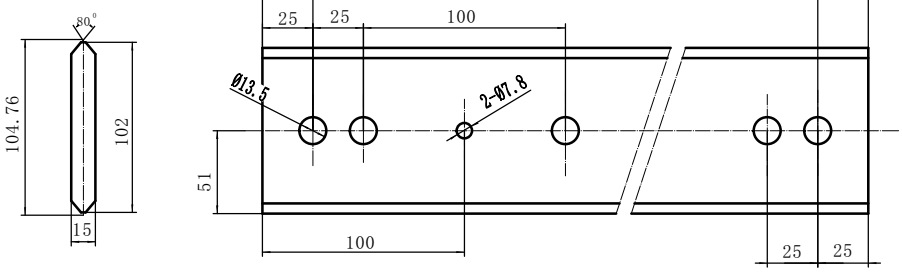
Code	Cw(N)	Fr(N)	Fa(N)	(kg)
NF52	41000	11900	4800	0.5

100 type

Size 100 roller for guideway V bars, Guideway V bar Wiper&lubrication unit

Roller for guideway V bar

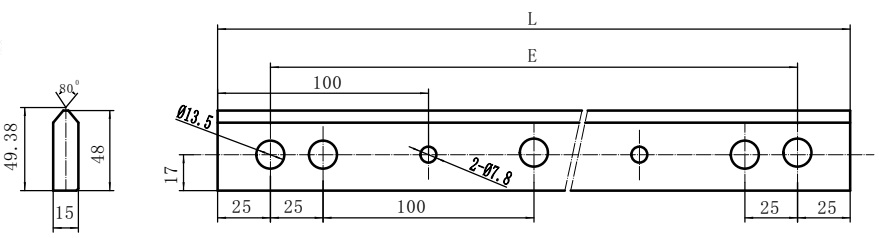




Code	L	E	Material	Bolt Size
NV100102	1000	950	42CrMo	M12 8.8 class
NV100202	2000	1950	42CrMo	M12 8.8 class

Roller for guideway V bar

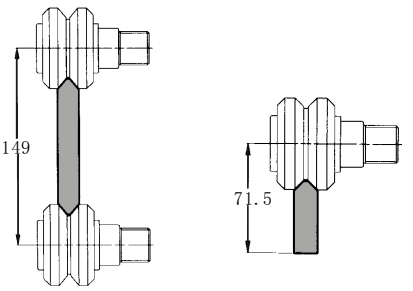




Code	L	E	Material	Bolt Size
NV100101	1000	950	42CrMo	M12 8.8 class
NV100201	2000	1950	42CrMo	M12 8.8 class

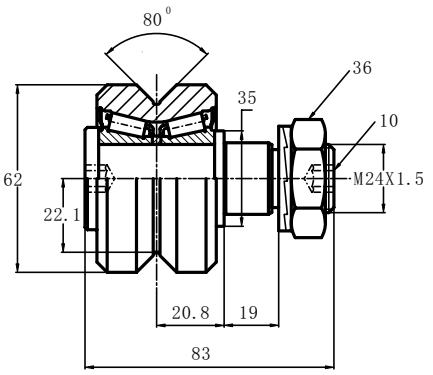
100 type

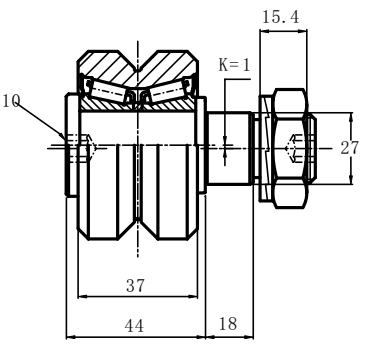
Size 100 roller for guideway V bars, Guideway V bar Wiper&lubrication unit



Roller for guideway V bars



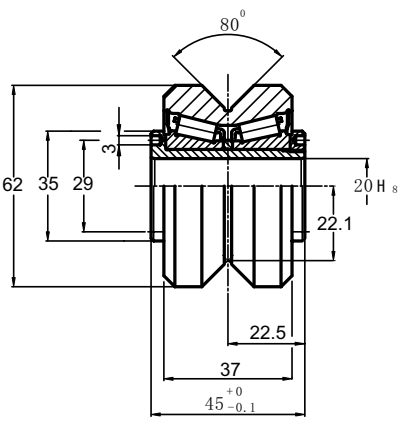




Code	Excenter	Cw(N)	Fr(N)	Fa(N)	(N.m)	(kg)
NY62	0	46000	19000	8300	160	0.9
NY62R	1mm	46000	19000	8300	160	0.9

Roller for guideway V bars



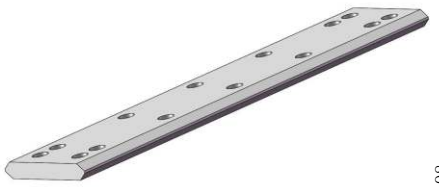


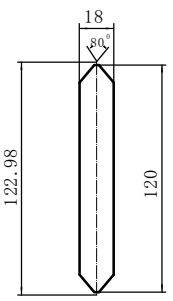
Code	Cw(N)	Fr(N)	Fa(N)	(kg)
NF62	46000	19000	8300	0.6

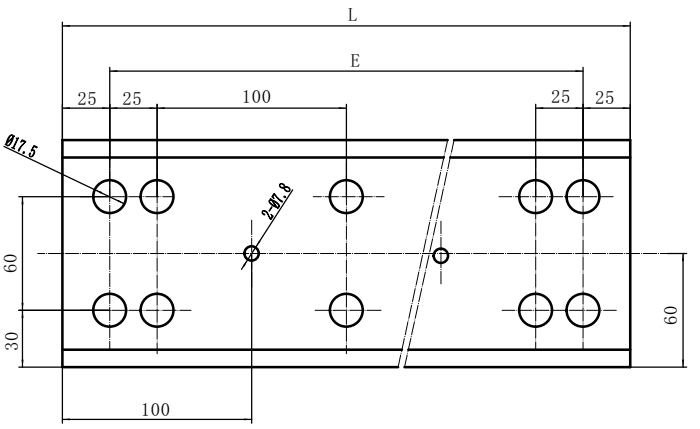
120 type

Size 120 roller for guideway V bars, Guideway V bar Wiper&lubrication unit

Roller for guideway V bar



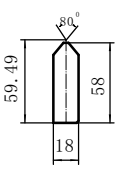


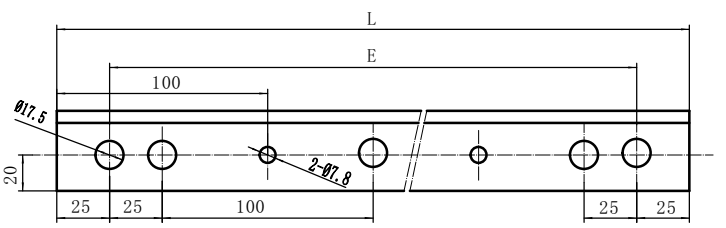


Code	L	E	Material	Bolt Size
NV120102	1000	950	42CrMo	M16 8.8 class
NV120202	2000	1950	42CrMo	M16 8.8 class

Roller for guideway V bar



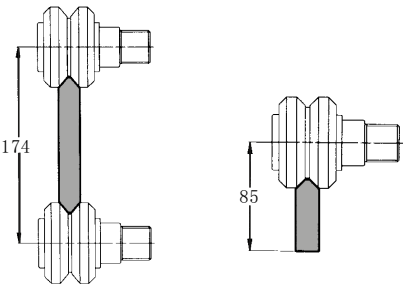




Code	L	E	Material	Bolt Size
NV120101	1000	950	42CrMo	M16 8.8 class
NV120201	2000	1950	42CrMo	M16 8.8 class

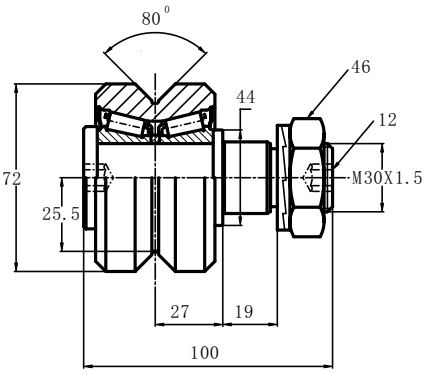
120 type

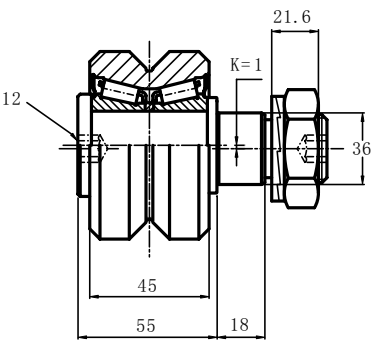
Size 120 roller for guideway V bars, Guideway V bar Wiper&lubrication unit



Roller for guideway V bars



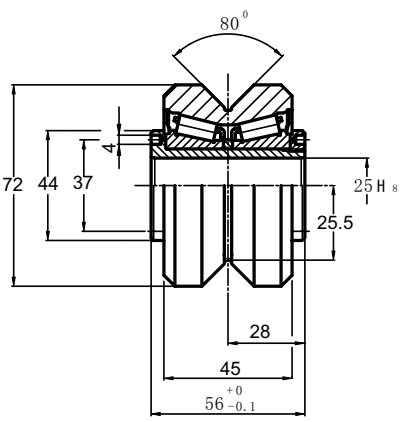




Code	Excenter	Cw(N)	Fr(N)	Fa(N)	(N.m)	(kg)
NY72	0	66000	30000	12300	300	1.6
NY72R	1mm	66000	30000	12300	300	1.6

Roller for guideway V bars





Code	Cw(N)	Fr(N)	Fa(N)	(kg)
NF72	66000	30000	12300	1.2

GUIDEWAY SYSTEM

FOR MEDIUM DUTY APPLICATIONS



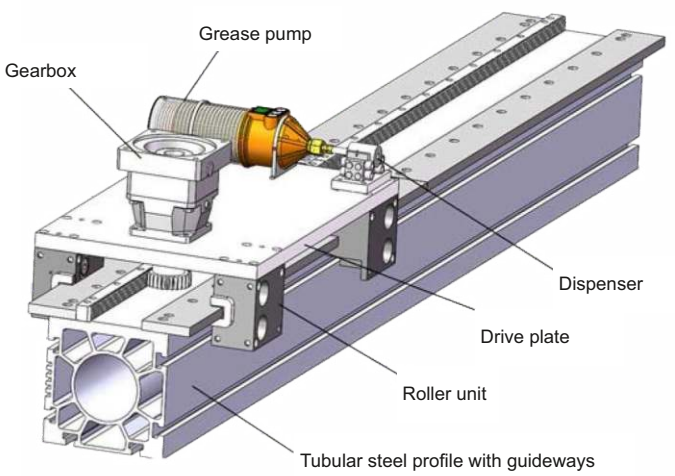
Heavy duty guide rail & roller box

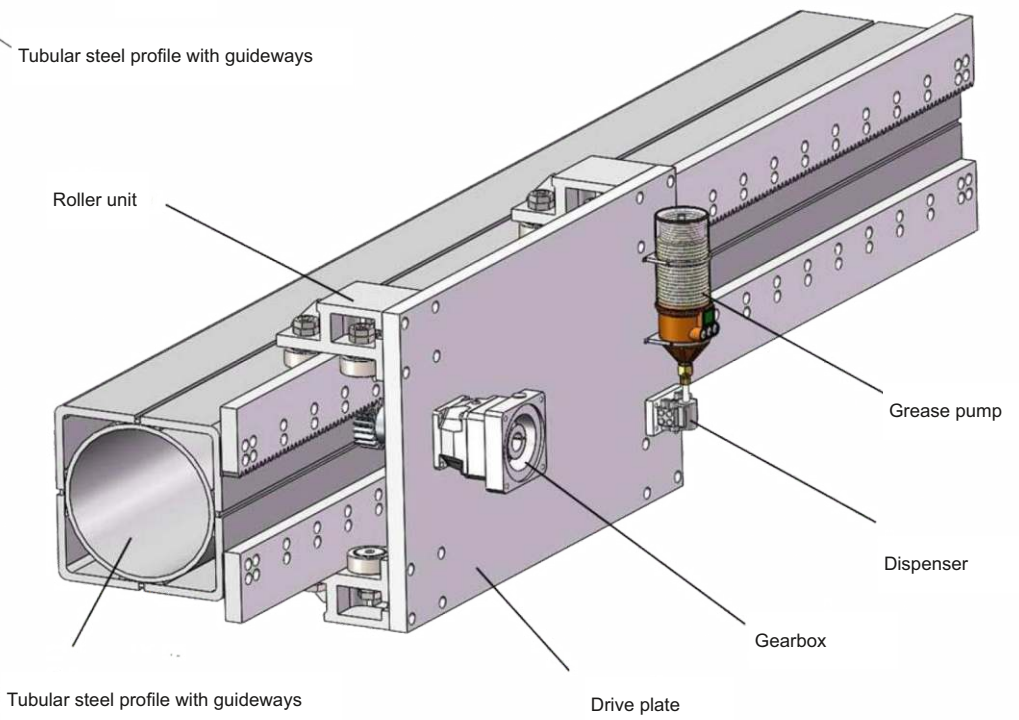
Heavy duty flat rail rack system modular system

Guideway systems for heavy duty applications

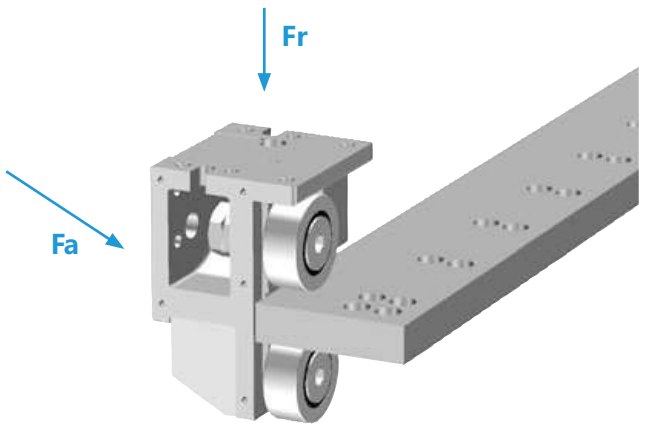
Guideway systems for heavy duty applications includes guideway flat rail, guideway flat rail rack, rollers support, etc. It can be used for truss robot mobile platform, as well as the seventh axis of the robot.

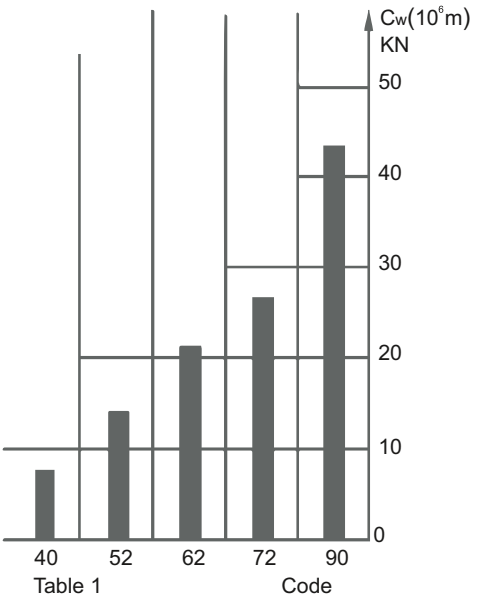
Our standard code includes 40, 52, 72, 90 sizes. To avoid cumulative pitch tolerance due to π, we use CP racks. The guideways are inductioned hardened to HRC50-55.





Heavy duty flat guide rack system specification selection — Size selection





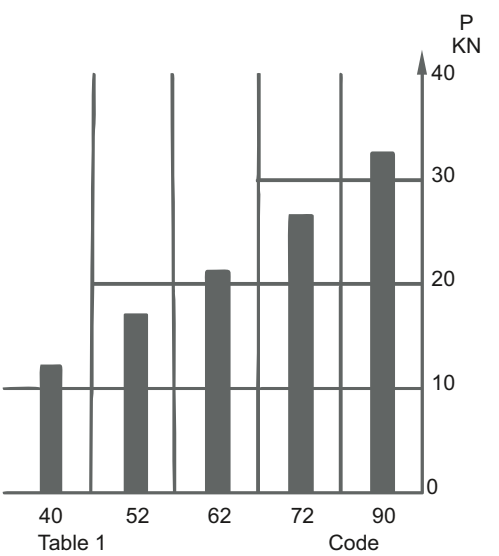
Size selection

This data allows for a rough selection of the size of the required guideway system. The Cw value are listed in table 1 for a nominal service life of 10^6m (1000 km), and refer to a roller with radial loading. In the dimensional tables for the rollers, the values for C0w and Cw (10^8m) are also given. Table 2 indicates the load values for an admissible Hertzian stress of 1600 Nmm^{-2}.

In case of combined loading and shock, the calculation data on page 30 must be consulted, or a calculation verification can be requested from the manufacturer. The main loads are to be taken by track rollers without eccentric hub.In case of suspended arrangement the maximum admissible radial load has to be reduced to the following values.

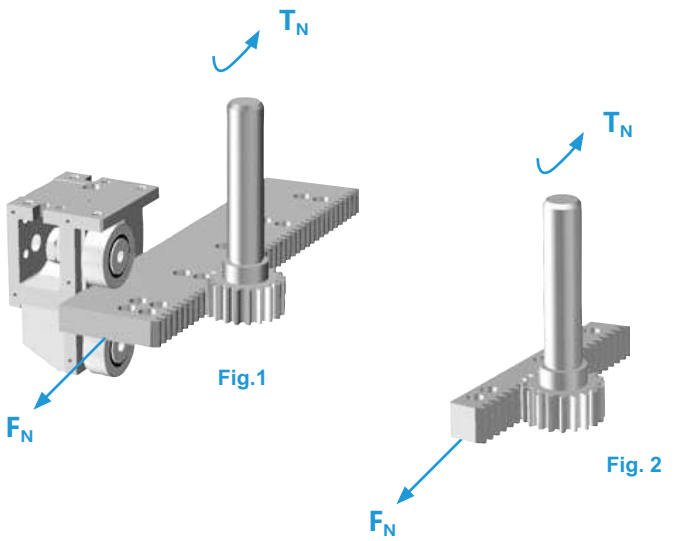
KGB40:7KN KGB52:12KN KGB62:13KN

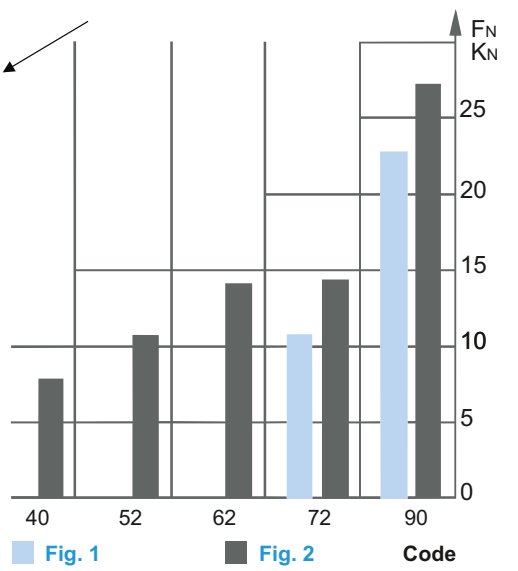
KGB72:17KN KGB90:33KN



Heavy duty flat rail rack driving force selection

Selection of drive forces





Size selection

After selecting the rack, the gear teeth of the guideway systemmust be checked for compatibility with the required drive forces and torques.

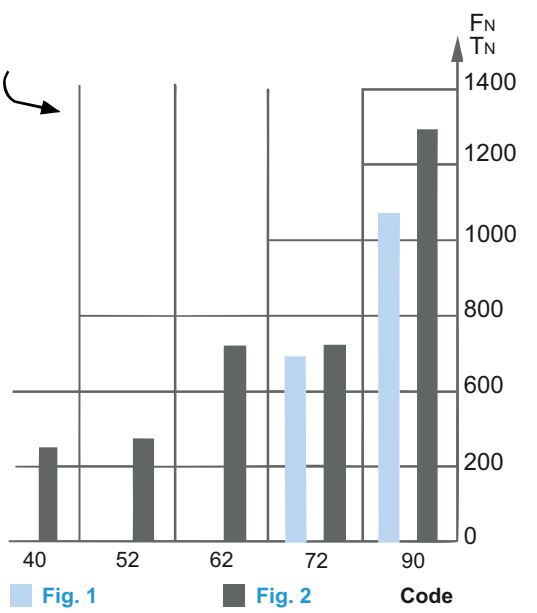
The rack can be supplied precision cut or hardened and ground.

The values given are values for shock-free operation, good lubrication and stiff arrangement of the pinion.

A safety factor for tooth root stress $S_F \geq 1.4$ and a safety factor for Hertzian stress $S_H \geq 1.0$ is taken in account.

Depending on your experience and application a safety factor $S_B \approx 1.0...4.0$ has to be considered.

The tracking force FN is related to the number of teeth Z of the pinion.



Heavy duty flat rail rack system selection confirmation — Size verification

The calculation must be done for the roller under the highest load. The life time values calculated are nominal. 90% of all rollers reach these values. The service life Lh (h) hours can be calculated according to the average speed of the roller.

Fr: External radical force per roller(KN)

P: Equivalent dynamic load(KN)

Cw: Effective basic dynamic load rating(KN)

L: Nominal life time(m)

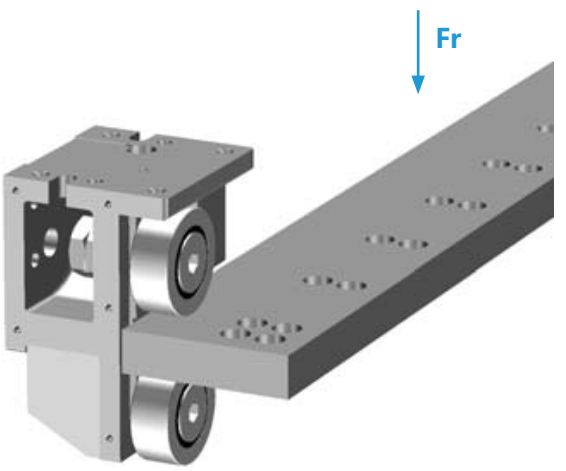
Kr: Size factor

f: Load factor
Uniform shocks:1.0...1.2
Moderate shocks:1.2...1.5
Heavy shocks:1.5...2.5

fs: Static loading factor

C_{0w}: Max.admissible static radial force(KN)

$P=Fr$	(KN)
$Pw=f\cdot P$	(KN)
$L=Kr\cdot(\frac{C_w}{P_w})^{\frac{10}{3}}\cdot 10^5$	(m)
$fs=0.7\cdot\frac{C_{0w}}{P_w}$	$fs \geq 1$



GBR/GER	Cw(KN)	Kr
40	13.2	1.257
52	24.2	1.634
62	35.0	1.948
72	38.5	2.262
90	63.0	2.827

Heavy duty flat rail rack system installation

Assembly

The backlash setting and the pre-tensioning of the rollers take place via the eccentric hub of the rollers of the series GER (Fig. 1). By using an Allen key the eccentric of the roller can be turned and preloaded. The nuts are tightened by using a torque wrench. The rollers of the series GBR are in concentric version.



Fig. 1

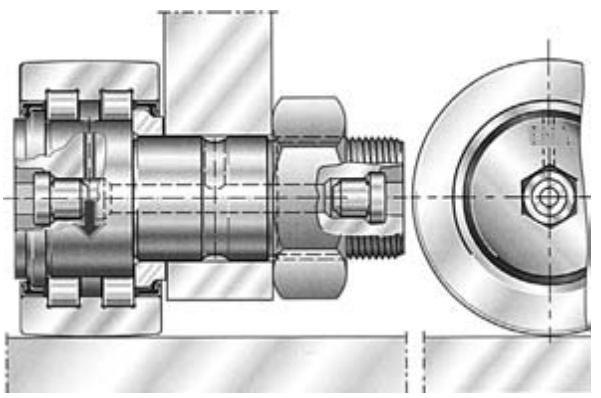
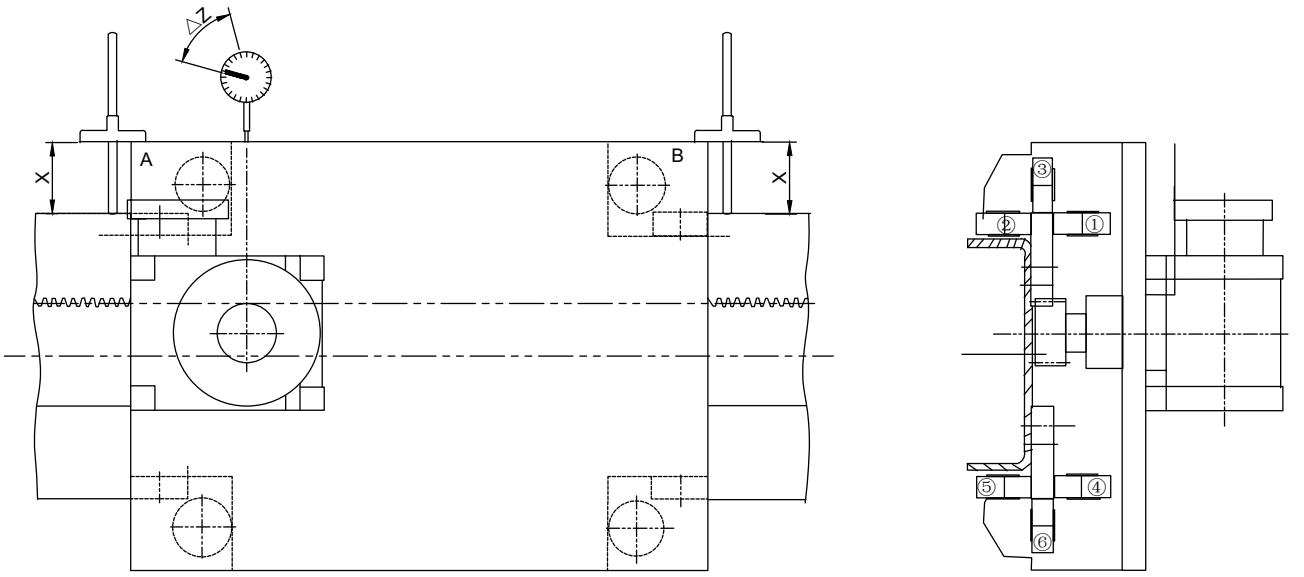


Fig. 2



Adjustment of preload of rollers

1. Tighten the nuts of the rollers ① and ④. Loosenthe nuts of the rollers ②, ③ and ⑤, ⑥. Turn the eccentric hubs to teh minimal position.

2. Turn the eccentrics of the rollers ② and ⑤.Thentighten the nuts gently.

3. Position the dial gauge adjacent to the drive pinion.

4. Align the carriage and eliminate backlash: Adjustrollers ③ until the measurement X of the roller supports A and B are identical. At the same time, the tooth backlash must be zero.

5. Reset the dial gauge.

6. Adjust the backlash clearance: Loosen rollers ③ and subsequently turn the eccetric hubs so that the dial gauge displays △Z =0.10mm (results in a backlash clearance o f -0.07mm). The measurement X must be equal again on both roller supports.

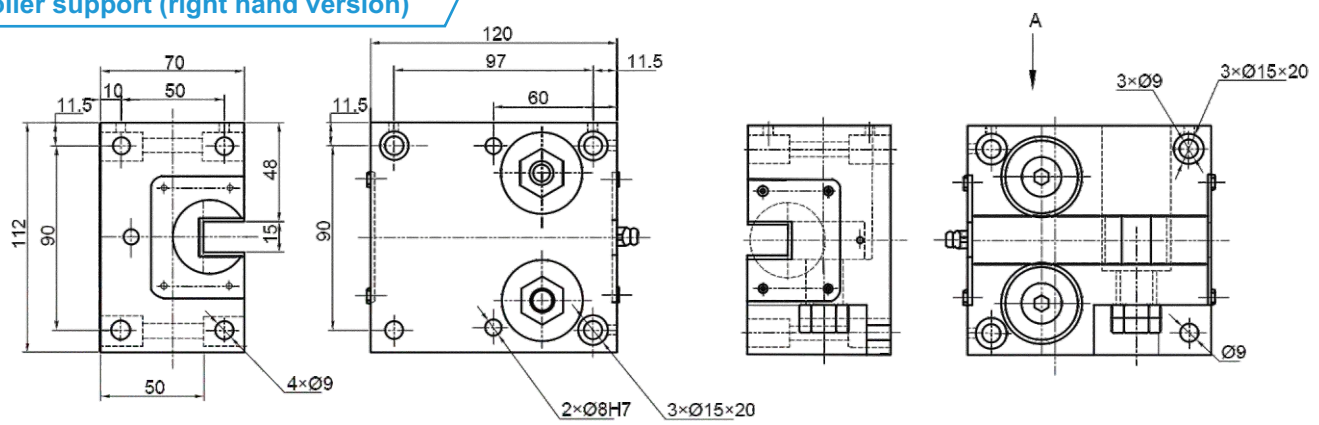
7. Tighten the eccentric rollers while the value △Z =0.10mm is maintained.

8. Check the pre-tensioning: Rollers that are not underload must be able to turn using moderate force. If they are not free, loosen rollers ②, ⑤, ⑥ and adjust them again.

40 type roller set



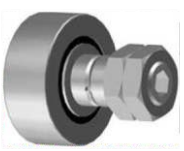
Roller support (right hand version)



Code	①	②	③	M (kg)	C_{0W} (N)	C_W ① (N)	C_W ② (N)	Nmax (min^{-1})
KGB40.1R	GBR	GER	GER	2.5	13800	7000	1800	5000
KGB40.2R	GBR	GER	GBR	2.5	13800	7000	1800	5000
KGB40.3R	GER	GBR	GER	2.5	13800	7000	1800	5000

CW①: Normal service life 10^6m CW②: Normal service life 10^8m

Stud roller



Code	Fig.	Excenter (mm)	Weight (kg)	MA (Nm)
GBR40	1	--	0.25	87
GER40	2	1	0.25	87

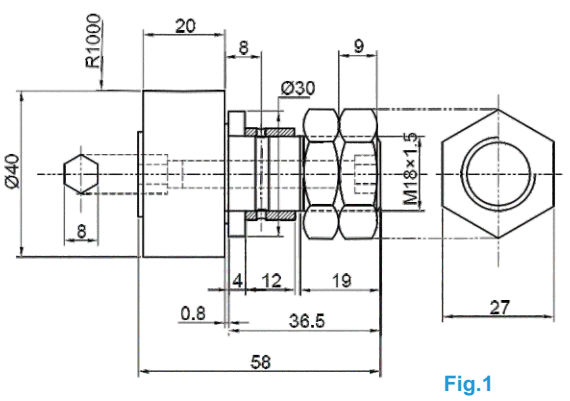


Fig.1

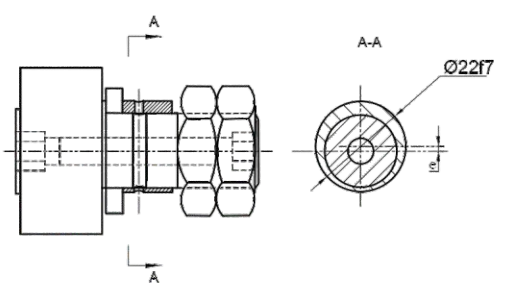
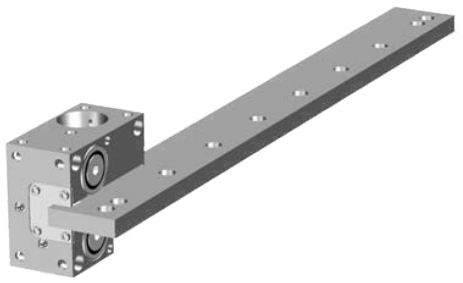
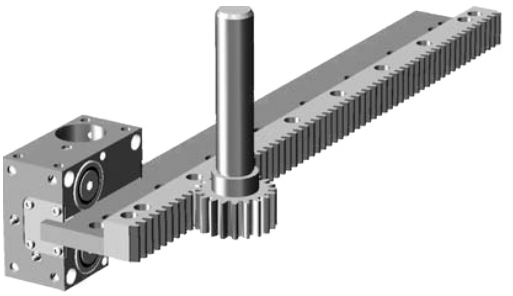
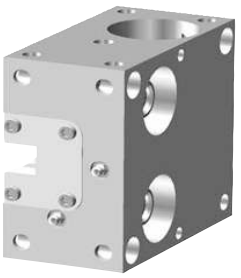


Fig.2





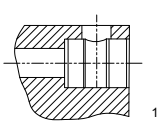
40 Roller support (left hand version)



Code	①	②	③	M (kg)	C_{0W} (N)	C_W ① (N)	C_W ② (N)	Nmax (min^{-1})
KGB40.1L	GBR	GER	GER	2.5	13800	7000	1800	5000
KGB40.2L	GBR	GER	GBR	2.5	13800	7000	1800	5000
KGB40.3L	GER	GBR	GER	2.5	13800	7000	1800	5000

CW①: Normal service life 10 ^{6}m CW②: Normal service life 10 ^{8}m

Accessories



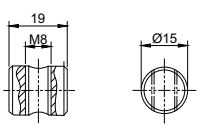
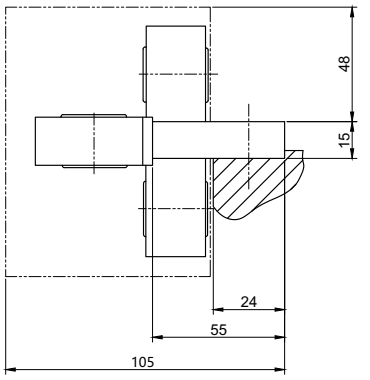
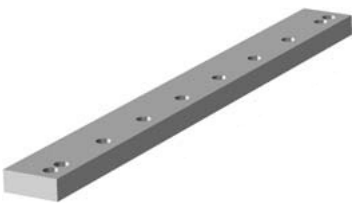


Fig.	Material	Weight (kg)
①	C45	0.01
②	felt	
③	Q345B	

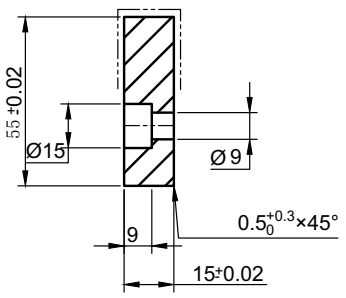
40 Guideway flat rail mounting dimensions

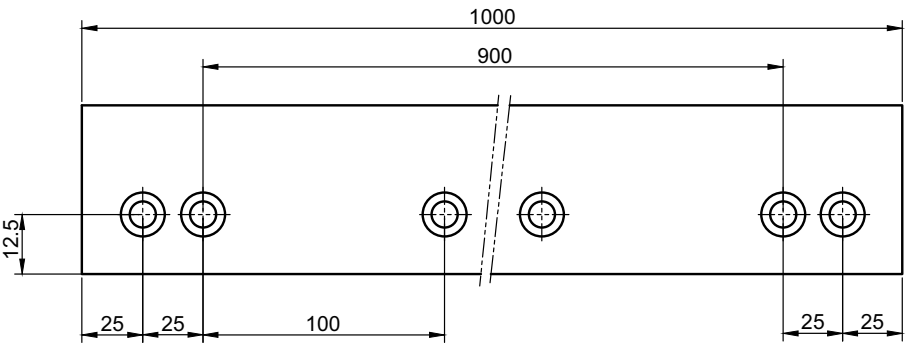


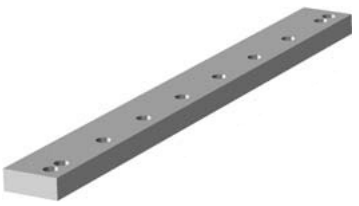
40 Guideway flat rail



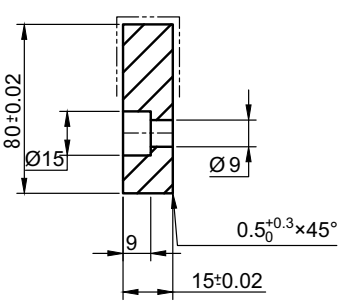
Code	L	L1	Material	Bolt size
KGT40103	1000	900	42CrMo	M8×20 8.8class

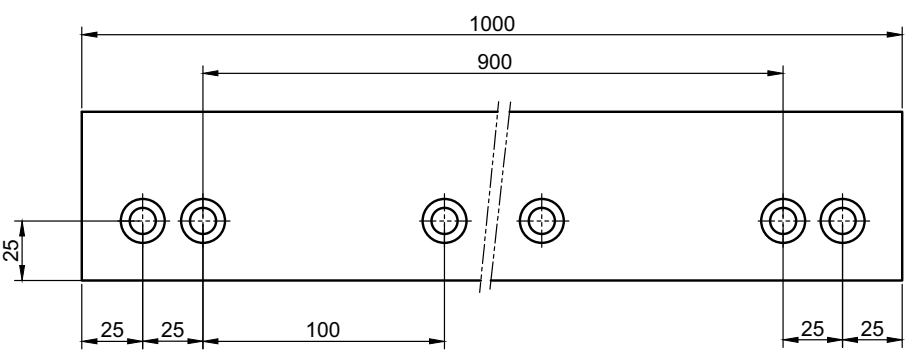




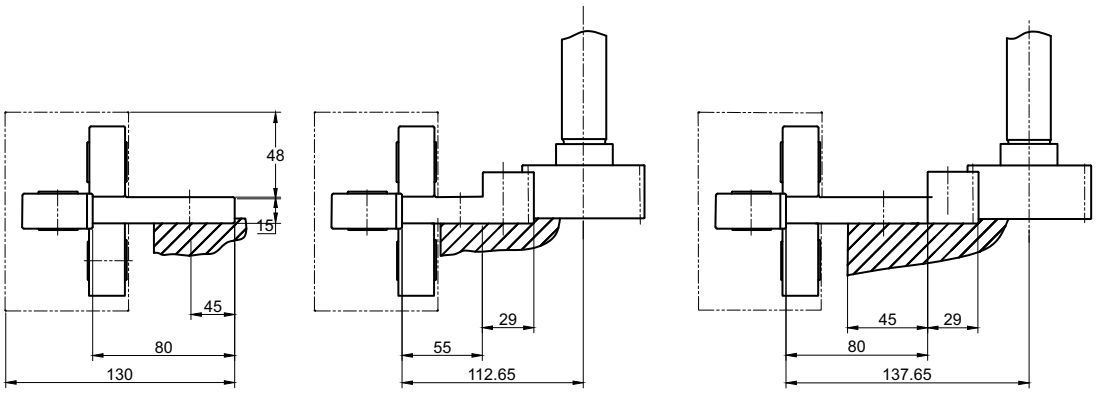


Code	L	L1	Material	Bolt size
KGT40102	1000	900	42CrMo	M8×20 8.8class

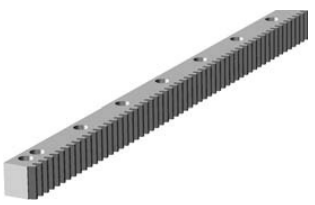




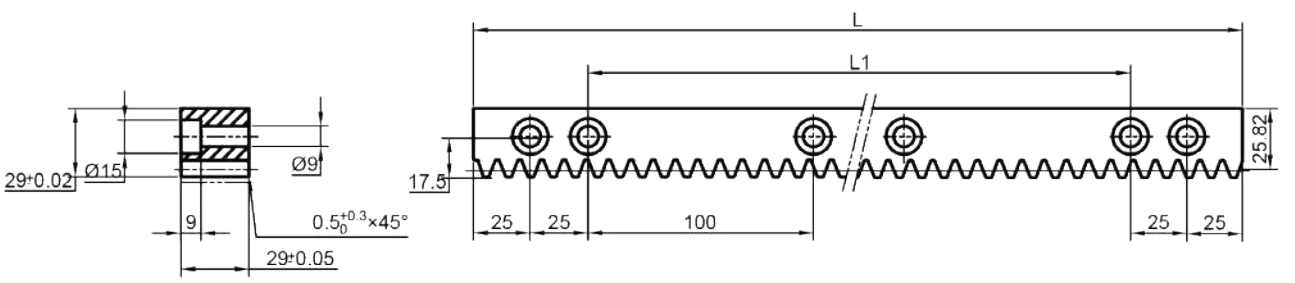
40 Guideway flat rail, rack, pinon mounting dimensions



Rack



Code	L	L1	Module	P (mm)	Material	Precision grade	Bolt size
KGS40129	1200	1100	3.1831	10.0	S45C	DIN9	M8×35 8.8 class
KGS40209	2000	1900	3.1831	10.0	S45C	DIN9	M8×35 8.8 class



Drive pinion



Code	Z	Module	P	Fig.	Precison grade	Weight KG
SGLP40-CP10	20	3.1831	10.0	1	DIN6	1.95
SGSP40-CP10	20	3.1831	10.0	2	DIN6	0.9

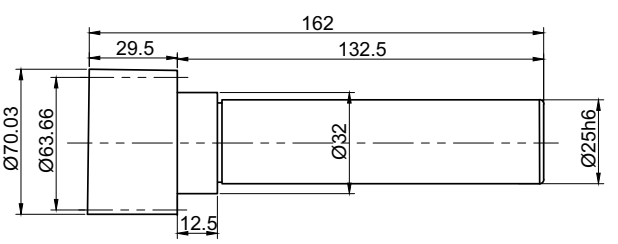


Fig.1

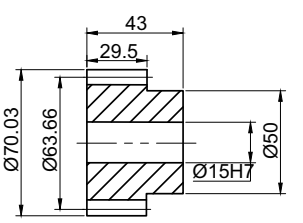
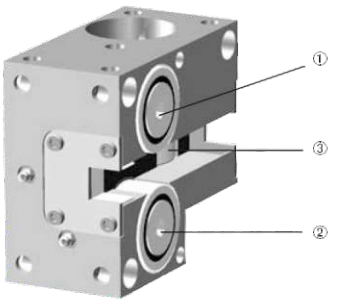
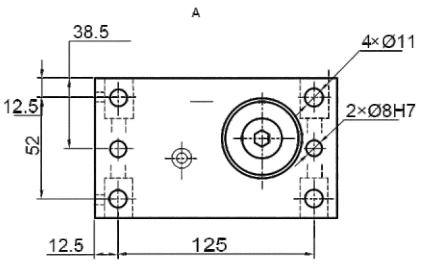


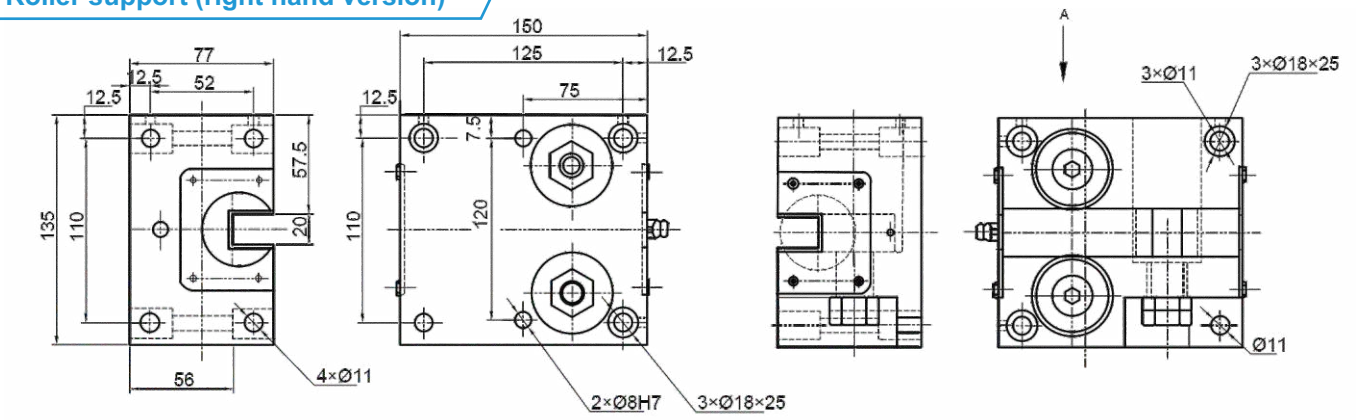
Fig.2

52 type roller set





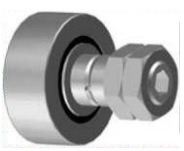
Roller support (right hand version)



Code	①	②	③	M (kg)	C_{0W} (N)	C_W ① (N)	C_W ② (N)	Nmax (min^{-1})
KGB52.1R	GBR	GER	GER	4	28000	14000	3500	3800
KGB52.2R	GBR	GER	GBR	4	28000	14000	3500	3800
KGB52.3R	GER	GBR	GER	4	28000	14000	3500	3800

CW①: Normal service life 10^6m CW②: Normal service life 10^8m

Stud roller



Code	Fig.	Excenter (mm)	Weight (kg)	MA (Nm)
GBR52	1	--	0.47	120
GER52	2	1	0.47	120

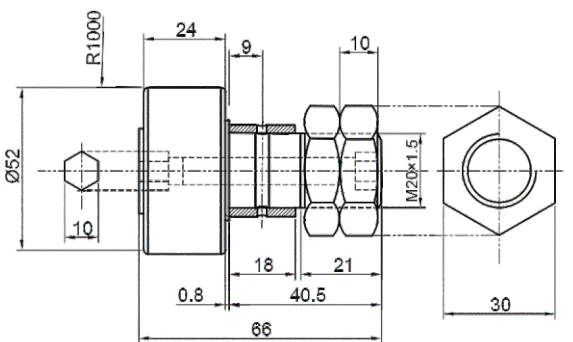


Fig.1

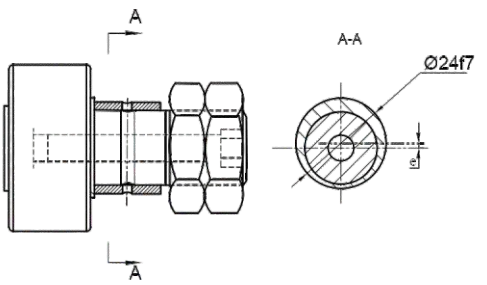
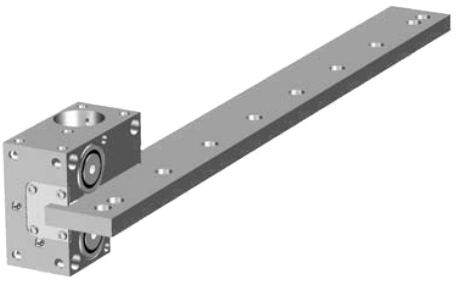
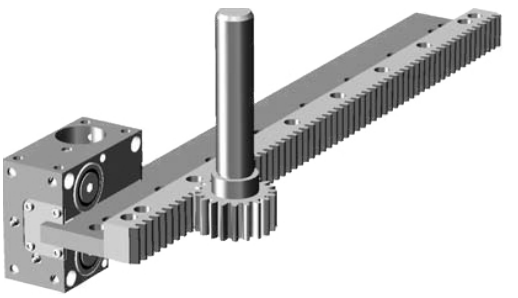
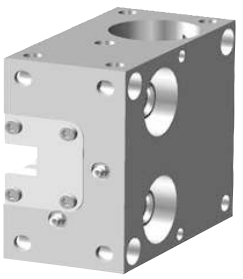


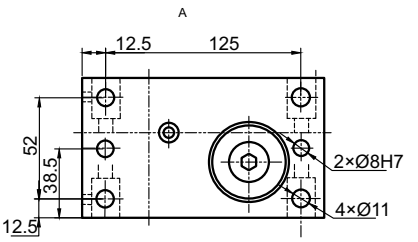
Fig.2

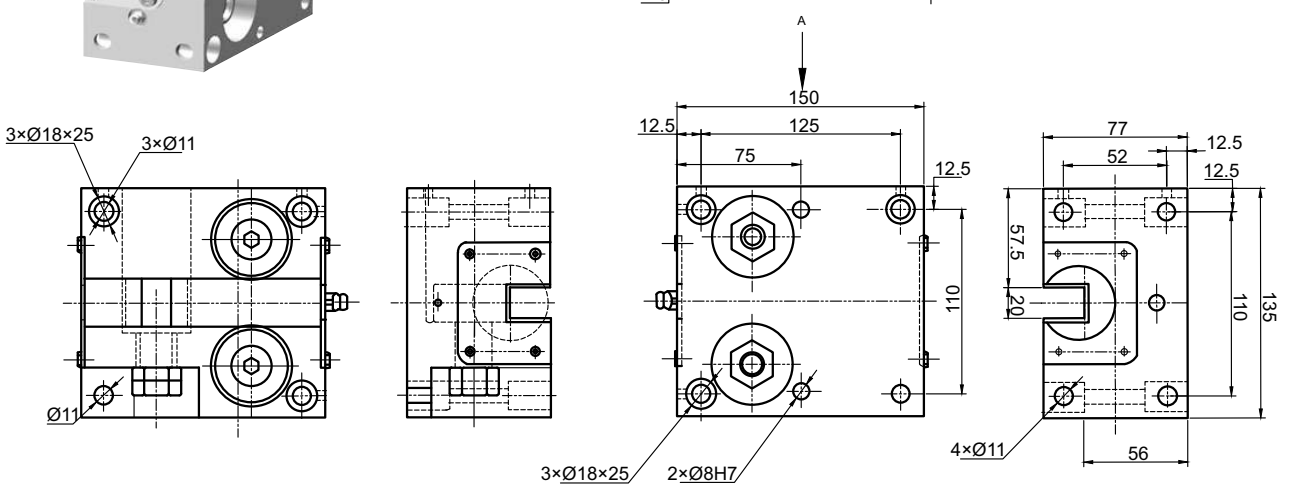




Roller support (left hand version)



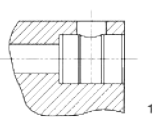




Code	①	②	③	M (kg)	C_{0W} (N)	C_W ① (N)	C_W ② (N)	Nmax (min^{-1})
KGB52.1L	GBR	GER	GER	4	28000	14000	3500	3800
KGB52.2L	GBR	GER	GBR	4	28000	14000	3500	3800
KGB52.3L	GER	GBR	GER	4	28000	14000	3500	3800

CW①: Normal service life 10 ^{6}m CW②: Normal service life 10 ^{8}m

Accessories



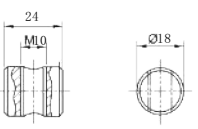
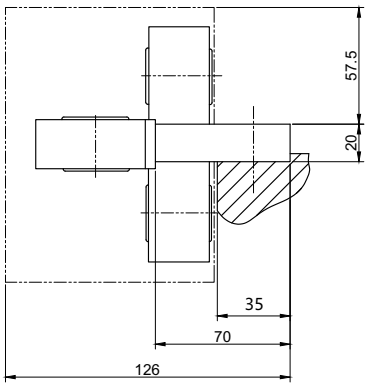
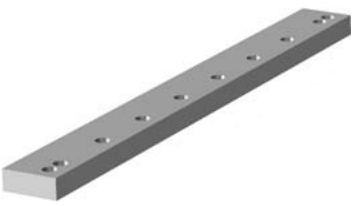


Fig.	Material	Weight (kg)
1	C45	0.01
2	felt	
3	Q345B	

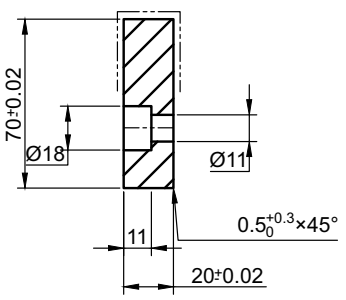
52 Guideway flat rail mounting dimensions

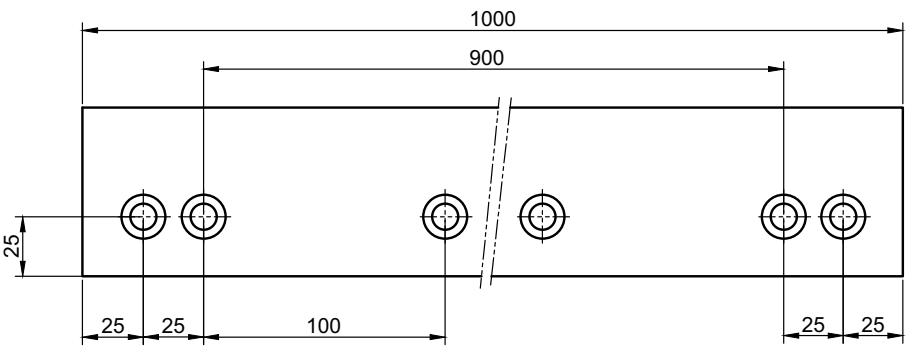


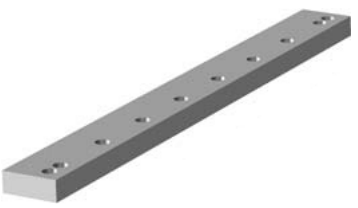
52 Guideway flat rail



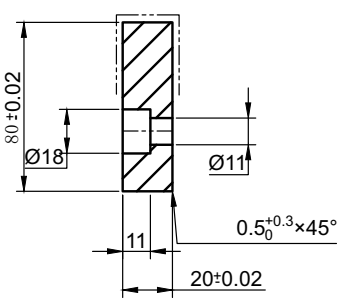
Code	L	L1	Material	Bolt size
KGT52101	1000	900	42CrMo	M10×25 8.8 class

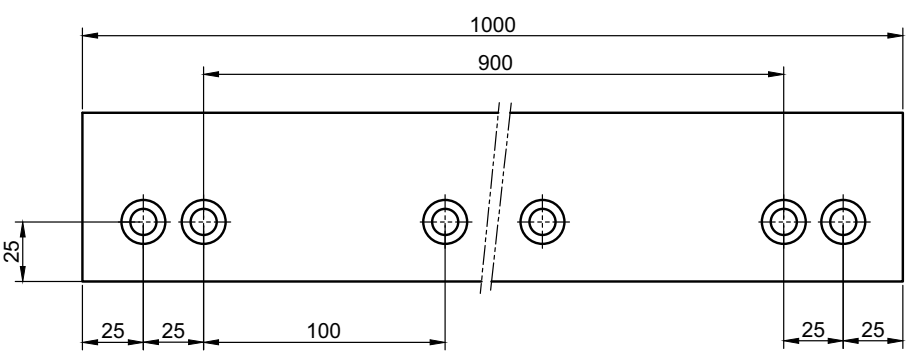




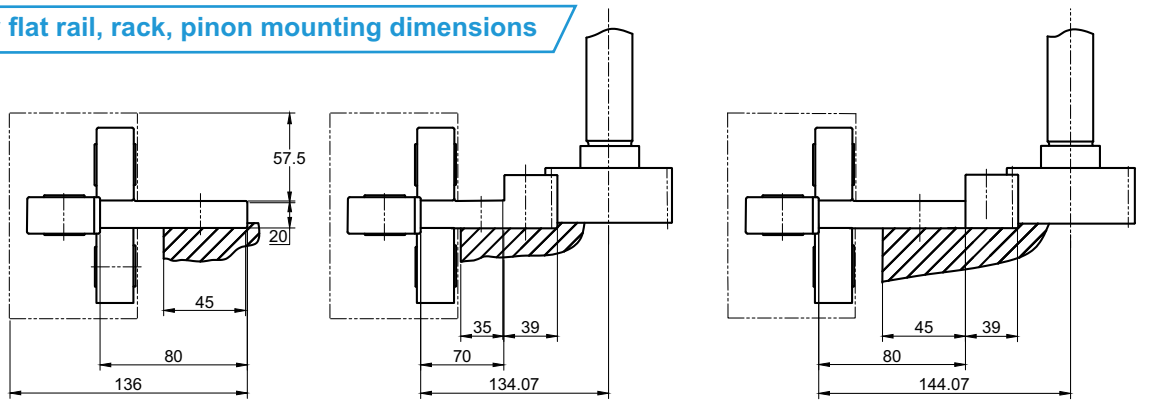


Code	L	L1	Material	Bolt size
KGT52102	1000	900	42CrMo	M10×25 8.8 class

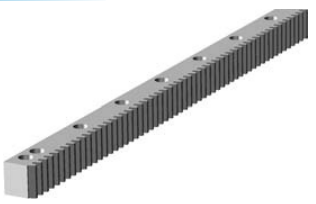




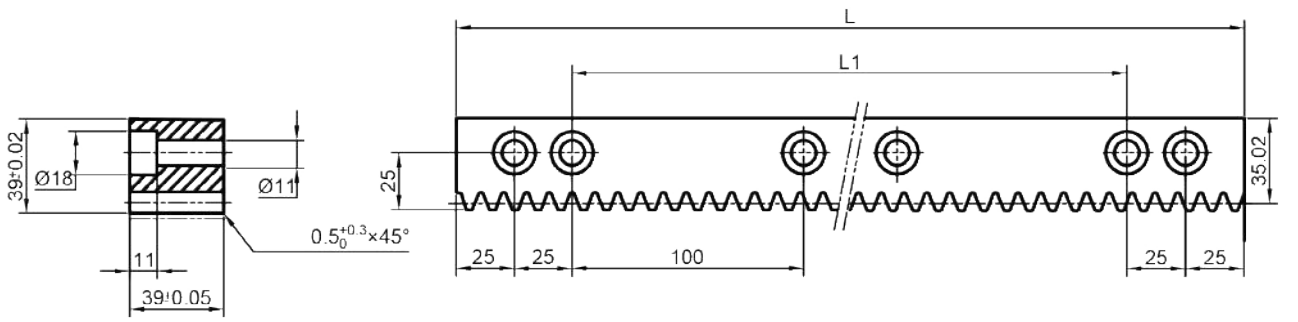
52 Guideway flat rail, rack, pinon mounting dimensions



Rack



Code	L	L1	Module	P (mm)	Material	Precision grade	Bolt size
KGS52129	1200	1100	3.9789	12.5	S45C	DIN9	M10×40 8.8 class
KGS52209	2000	1900	3.9789	12.5	S45C	DIN9	M10×40 8.8 class



Drive pinion



Code	Z	Module	P	Fig.	Precison grade	Weight KG
SGLP52-CP10	14	3.9789	12.5	1	DIN6	5.0
SGSP52-CP10	20	3.9789	12.5	2	DIN6	1.8

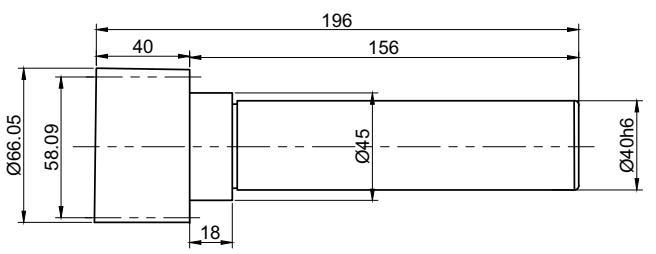


Fig.1

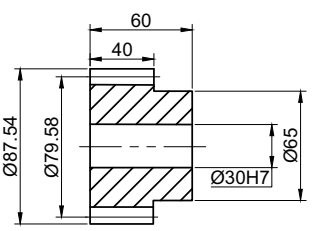
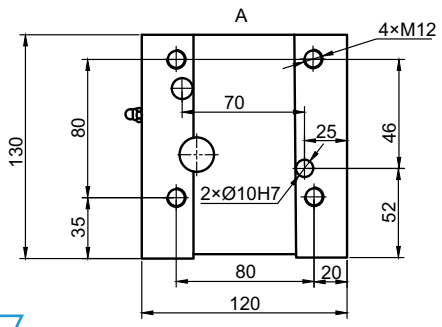
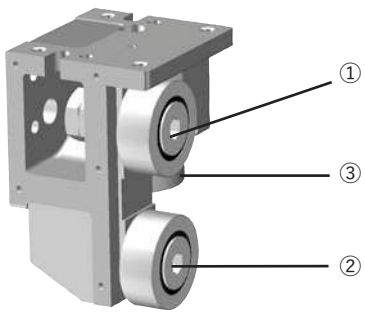


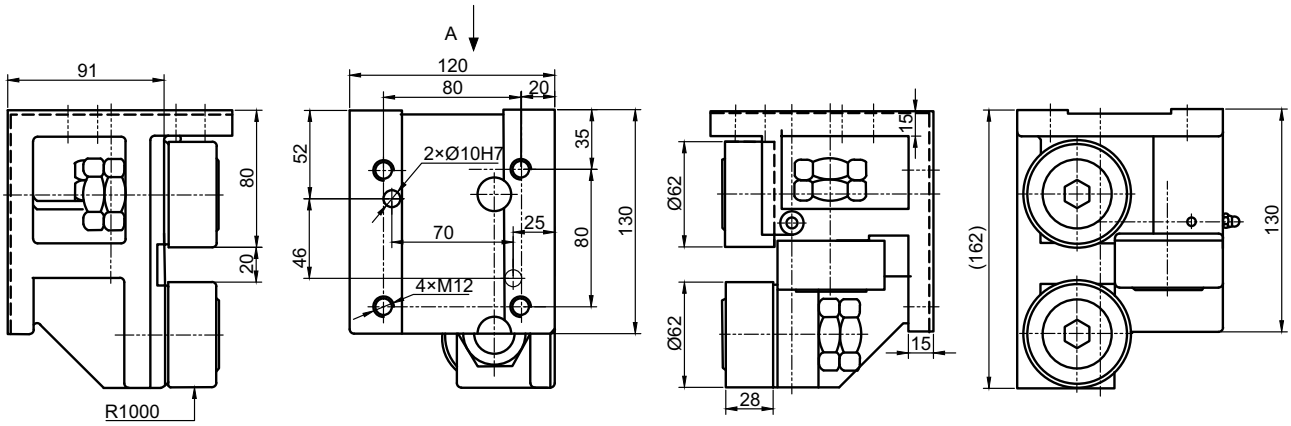
Fig.2

62 type roller set





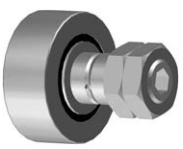
Roller support (right hand version)



Code	①	②	③	M (kg)	C_{0W} (N)	C_W ① (N)	C_W ② (N)	Nmax (min^{-1})
KGB62.1R	GBR	GER	GER	7	39500	21400	5400	2200
KGB62.2R	GBR	GER	GBR	7	39500	21400	5400	2200
KGB62.3R	GER	GBR	GER	7	39500	21400	5400	2200

CW①: Normal service life 10^6m CW②: Normal service life 10^8m

Stud roller



Code	Fig.	Excenter (mm)	Weight (kg)	MA (Nm)
GBR62	1	--	0.82	220
GER62	2	1	0.82	220

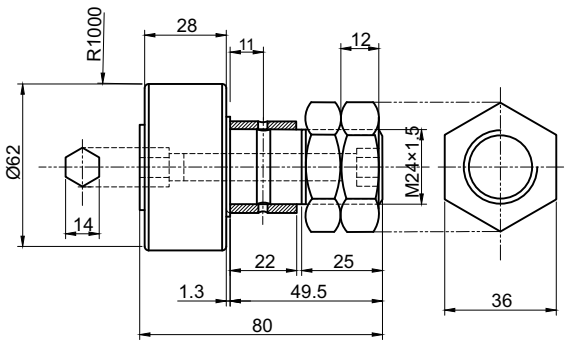


Fig.1

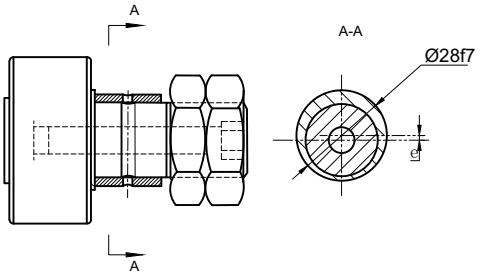
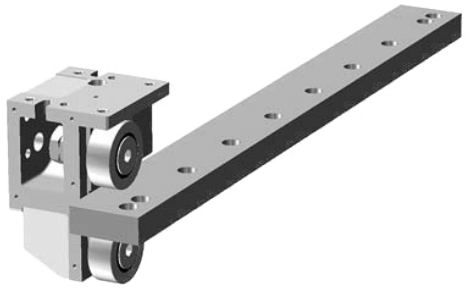
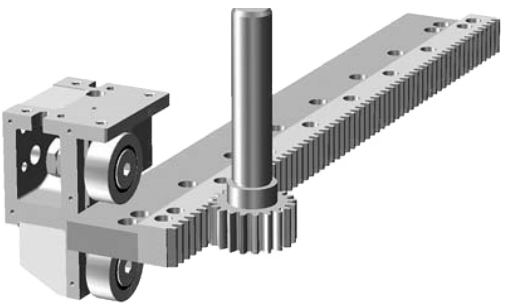
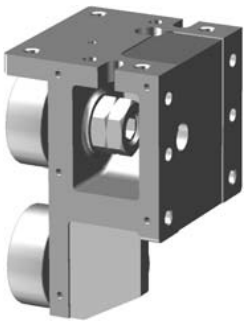


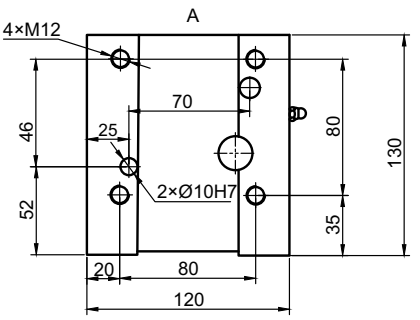
Fig.2

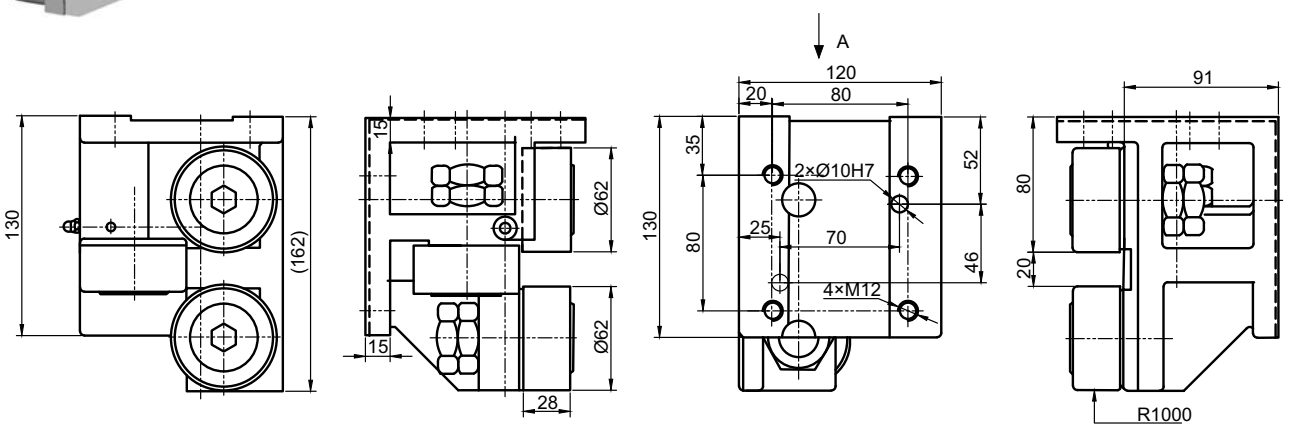




Roller support (left hand version)





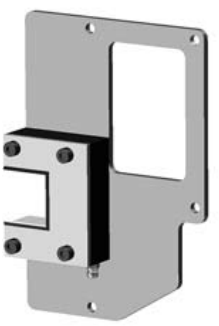


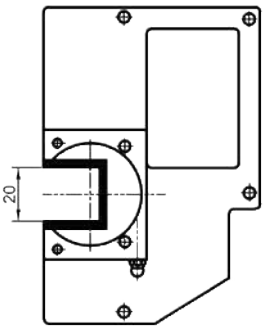
Code	①	②	③	M (kg)	C_{0w} (N)	C_w ① (N)	C_w ② (N)	Nmax (min^{-1})
KGB62.1L	GBR	GER	GER	7	39500	21400	5400	2200
KGB62.2L	GBR	GER	GBR	7	39500	21400	5400	2200
KGB62.3L	GER	GBR	GER	7	39500	21400	5400	2200

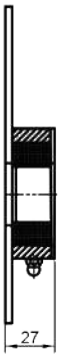
CW①: Normal service life 10^6m CW②: Normal service life 10^8m

Accessories

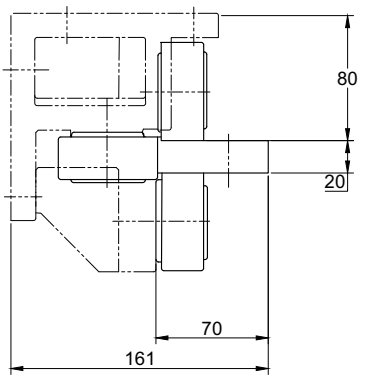
Code	Weight (kg)
KA62R	0.3
KA62L	0.3



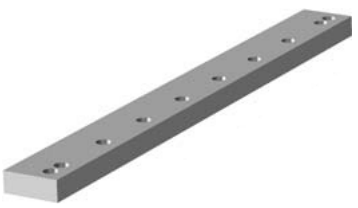




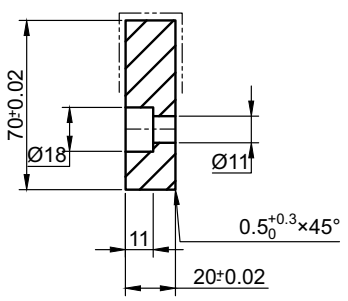
62 Guideway flat rail mounting dimensions

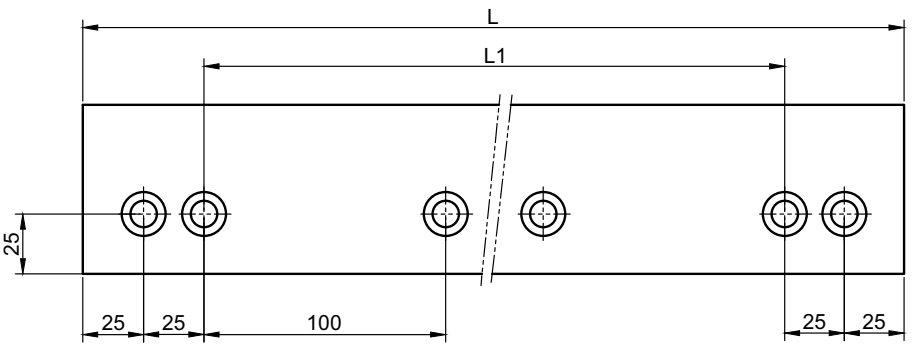


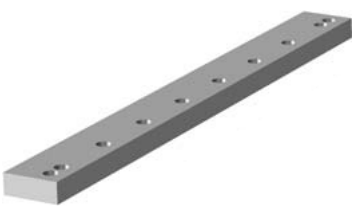
62 Guideway flat rail



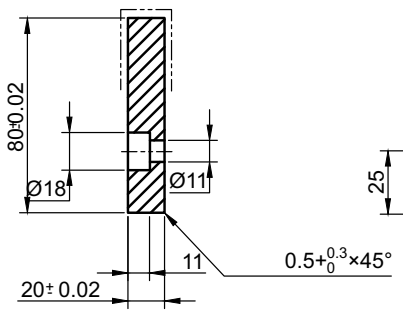
Code	L	L1	Material	Bolt size
KGT62101	1000	900	42CrMo	M10×25 8.8 class

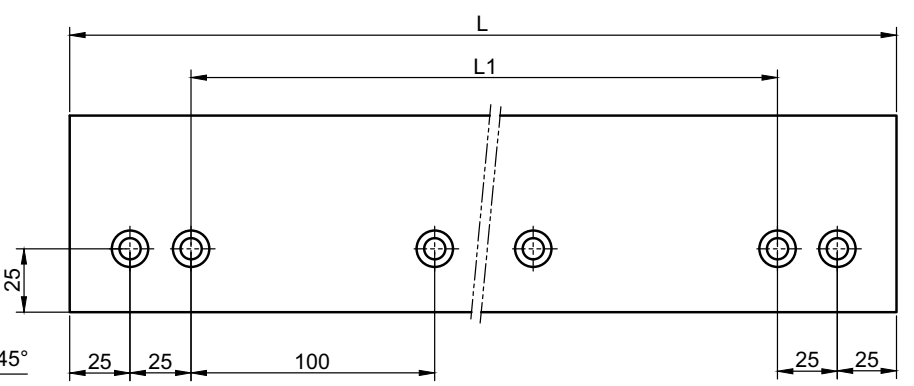




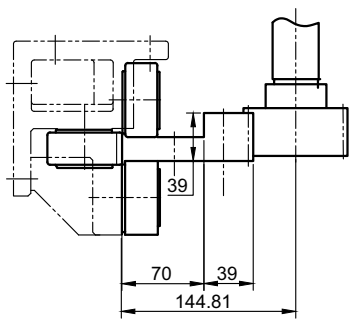


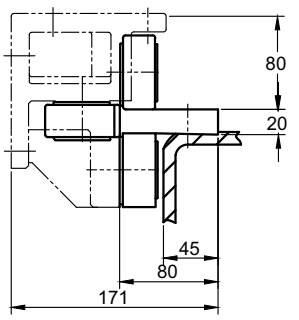
Code	L	L1	Material	Bolt size
KGT62102	1000	900	42CrMo	M10×25 8.8 class

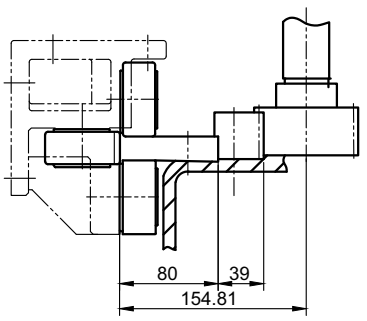




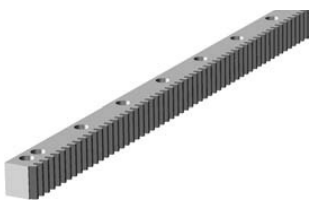
62 Guideway flat rail, rack, pinon mounting dimensions



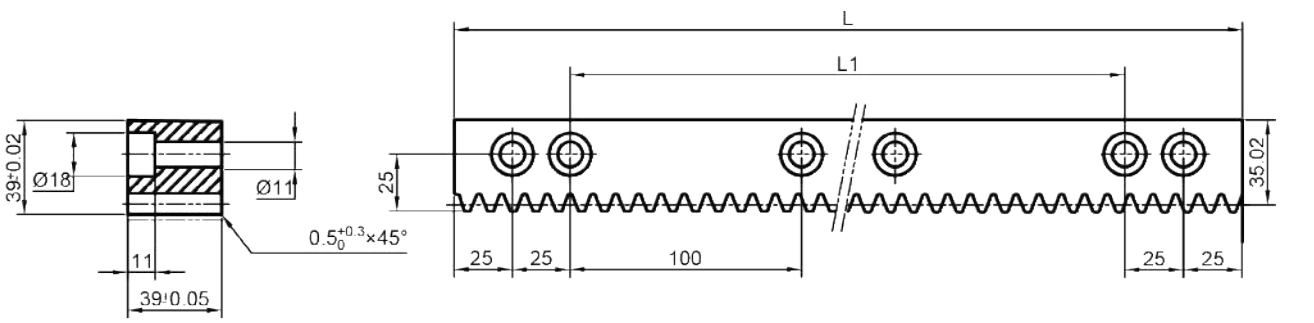




Rack



Code	L	L1	Module	P (mm)	Material	Precision grade	Bolt size
KGS62109	1000	900	3.9789	12.5	S45C	DIN9	M10×45 8.8 class
KGS62209	2000	1900	3.9789	12.5	S45C	DIN9	M10×45 8.8 class



Drive pinion



Code	Z	Module	P	Fig.	Precison grade	Weight KG
SGLP62-CP10	20	3.9789	12.5	1	DIN6	6.0
SGSP62-CP10	20	3.9789	12.5	2	DIN6	1.8

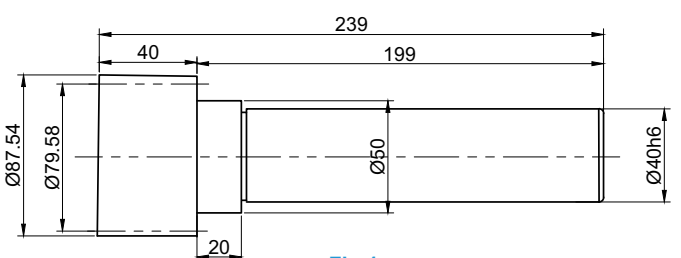


Fig.1

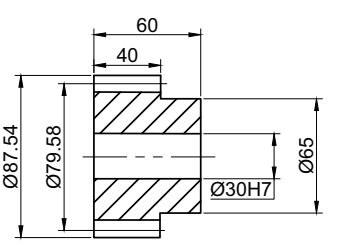
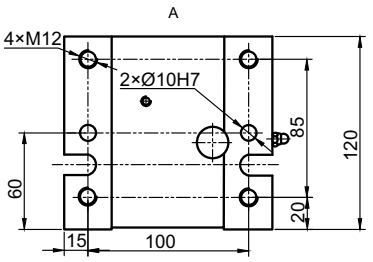
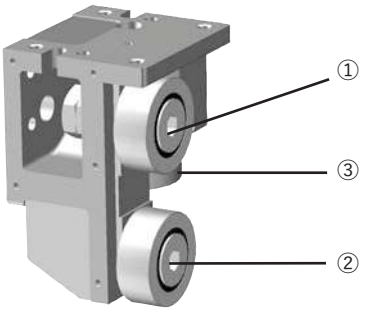


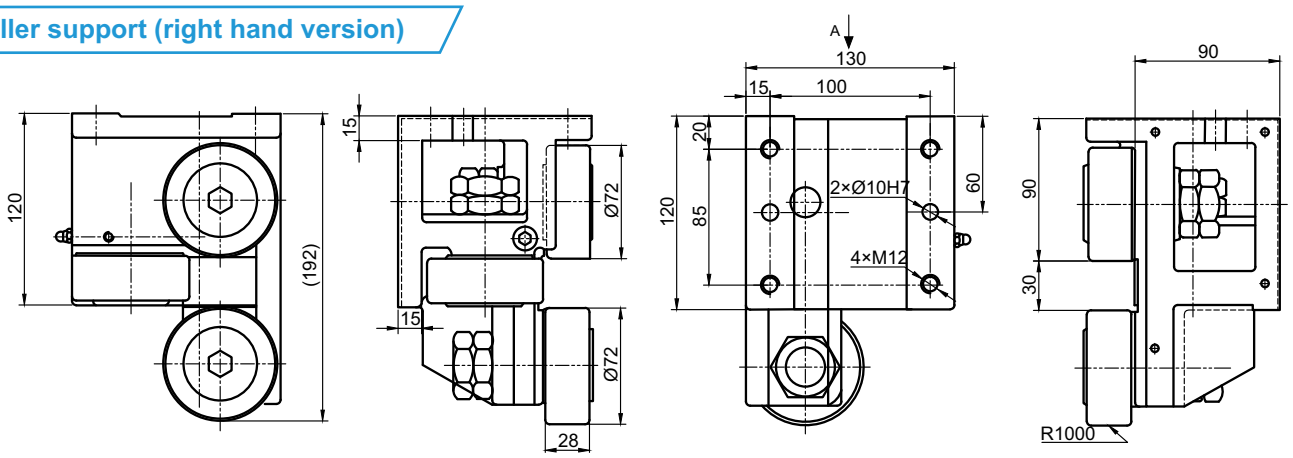
Fig.2

72 type roller set





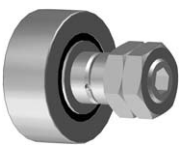
Roller support (right hand version)



Code	①	②	③	M (kg)	C_{0W} (N)	C_W ① (N)	C_W ② (N)	Nmax (min^{-1})
KGB72.1R	GBR	GER	GER	9	46500	24600	6200	2200
KGB72.2R	GBR	GER	GBR	9	46500	24600	6200	2200
KGB72.3R	GER	GBR	GER	9	46500	24600	6200	2200

CW①: Normal service life 10^6m CW②: Normal service life 10^8m

Stud roller



Code	Fig.	Excenter (mm)	Weight (kg)	MA (Nm)
GBR72	1	--	1.05	220
GER72	2	1	1.05	220

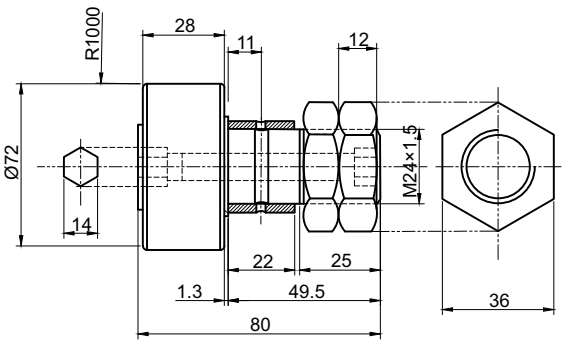


Fig.1

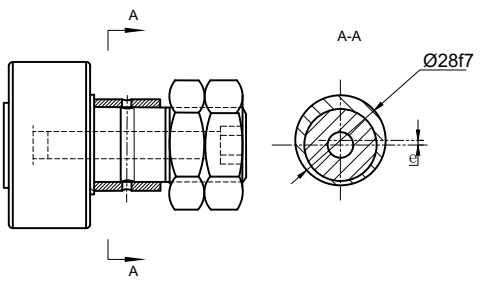
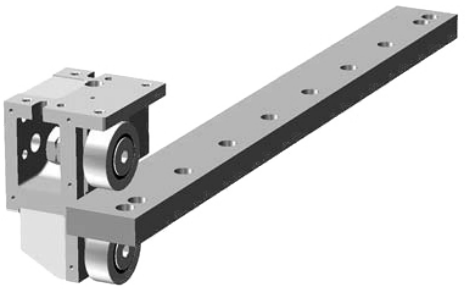
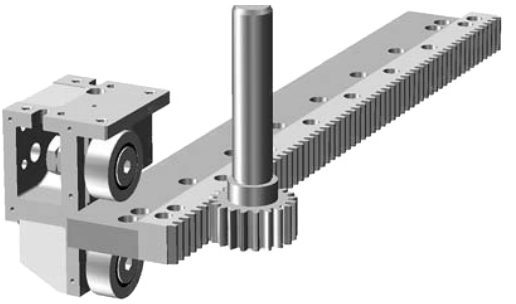
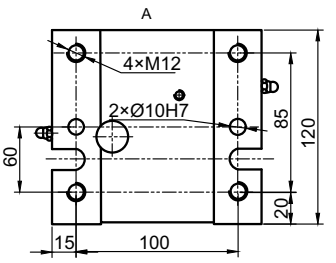


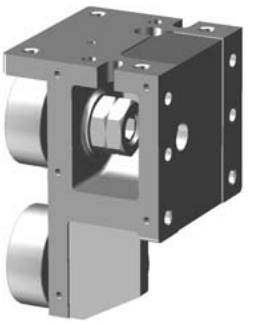
Fig.2

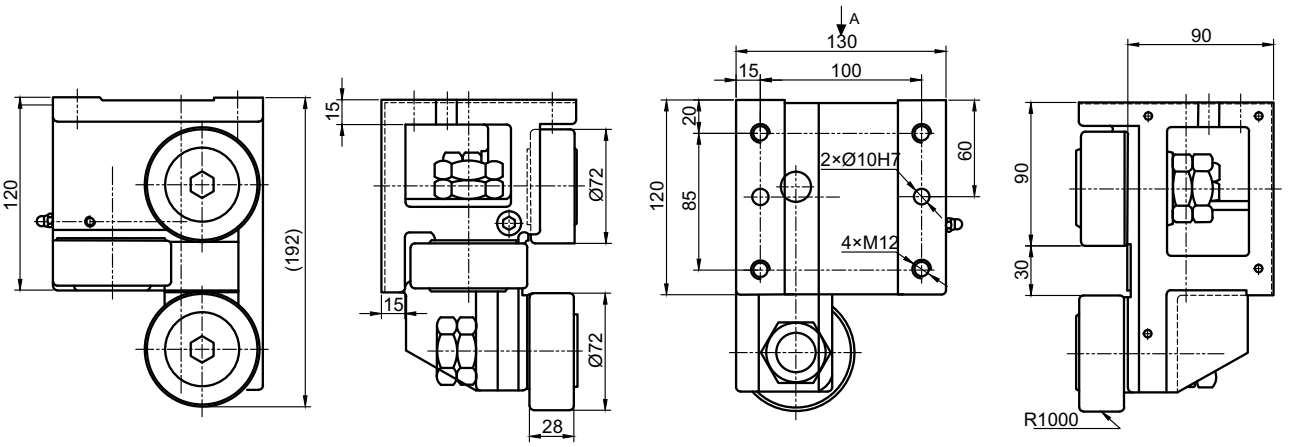




Roller support (left hand version)





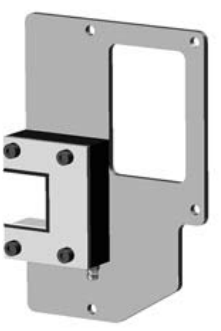


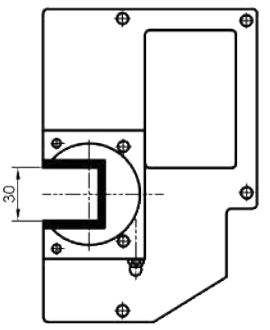
Code	①	②	③	M (kg)	C_{0W} (N)	C_W ① (N)	C_W ② (N)	Nmax (min^{-1})
KGB72.1L	GBR	GER	GER	9	46500	24600	6200	2200
KGB72.2L	GBR	GER	GBR	9	46500	24600	6200	2200
KGB72.3L	GER	GBR	GER	9	46500	24600	6200	2200

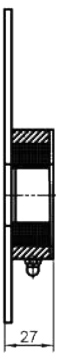
CW①: Normal service life 10^6m CW②: Normal service life 10^8m

Accessories

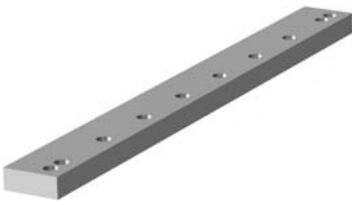
Code	Weight (kg)
KA72R	0.3
KA72L	0.3



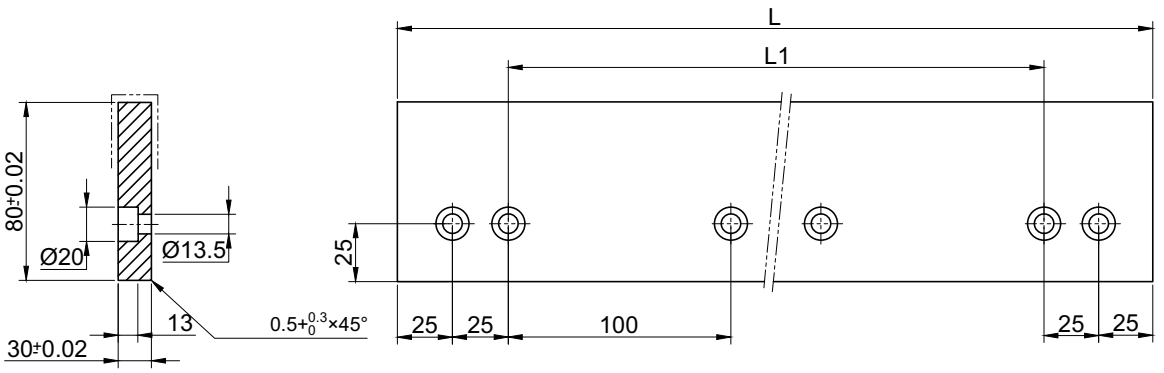


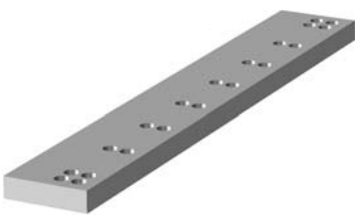


72 Guideway flat rail

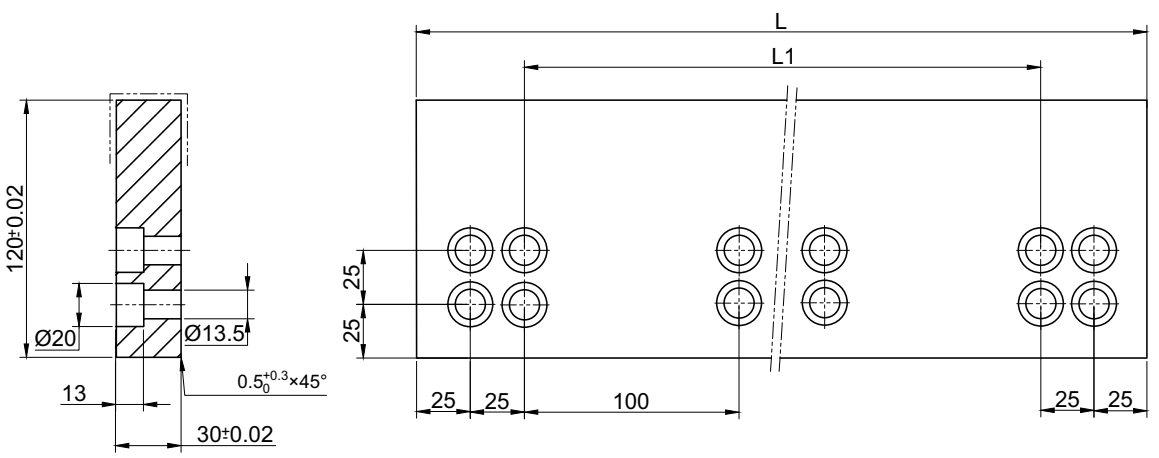


Code	L	L1	Material	Bolt size
KGT72101	1000	900	42CrMo	M12×35 8.8 class
KGT72201	2000	1900	42CrMo	M12×35 8.8 class

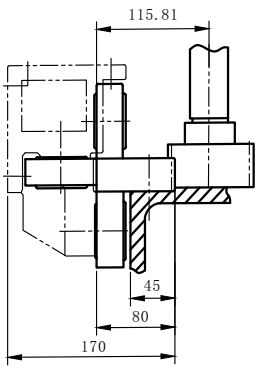


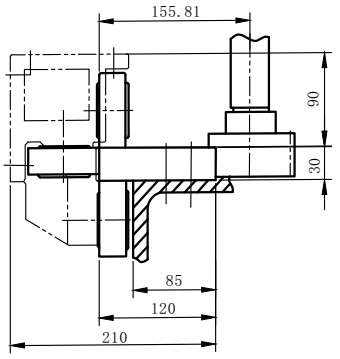


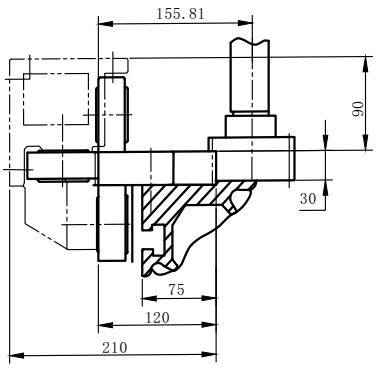
Code	L	L1	Material	Bolt size
KGT72102	1000	900	42CrMo	M12×35 8.8 class
KGT72202	2000	1900	42CrMo	M12×35 8.8 class



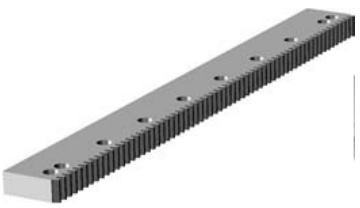
72 Guideway flat rail,rack,pinon mounting dimensions



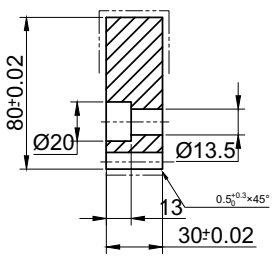


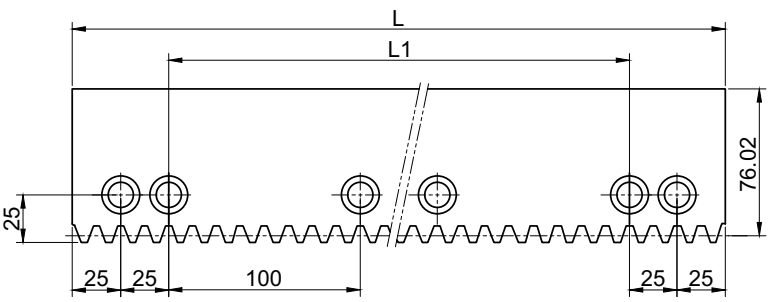


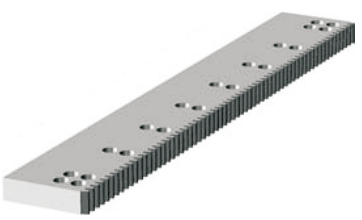
Guideway flat rail rack



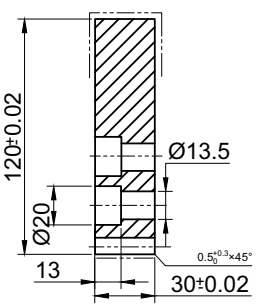
Code	L	L1	Module	P (mm)	Material	Precision grade	Bolt size
KGK721019	1000	900	3.9789	12.5	S45C	DIN9	M12×35 8.8 class
KGK722019	2000	1900	3.9789	12.5	S45C	DIN9	M12×35 8.8 class

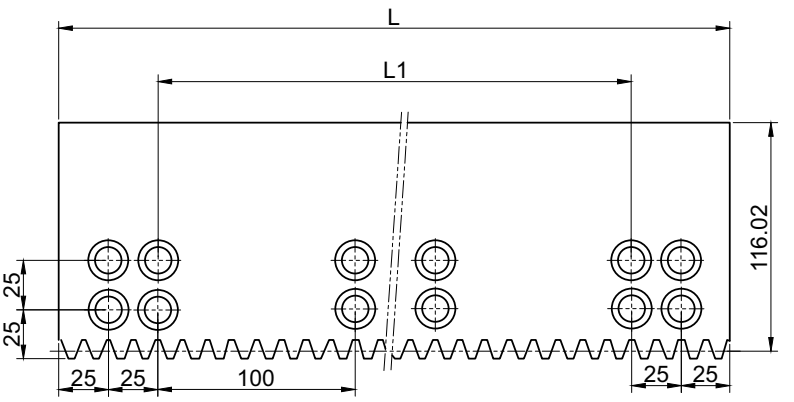




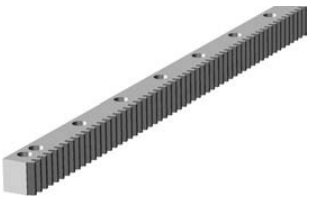


Code	L	L1	Module	P	Material	Precision grade	Bolt size
KGK721029	1000	900	3.9789	12.5	S45C	DIN9	M12×35 8.8 class
KGK722029	2000	1900	3.9789	12.5	S45C	DIN9	M12×35 8.8 class

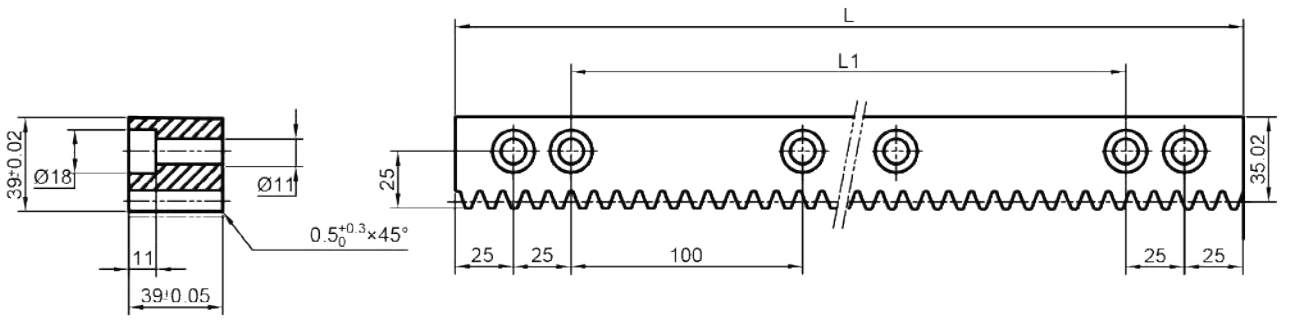




Rack



Code	L	L1	Module	P (mm)	Material	Precision grade	Bolt size
KGS72109	1000	900	3.9789	12.5	S45C	DIN9	M10×45 8.8 class
KGS72209	2000	1900	3.9789	12.5	S45C	DIN9	M10×45 8.8 class



Drive pinion



Code	Z	Module	P	Fig.	Precison grade	Weight KG
SGLP72-CP10	20	3.9789	12.5	1	DIN6	6.0
SGSP72-CP10	20	3.9789	12.5	2	DIN6	1.8

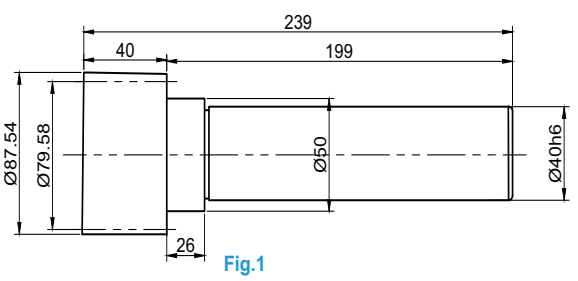


Fig.1

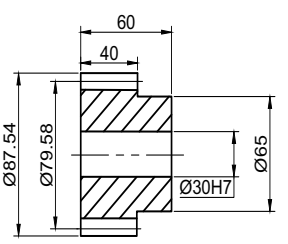
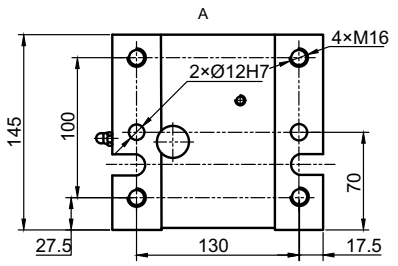
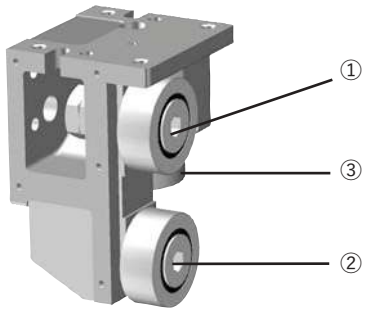


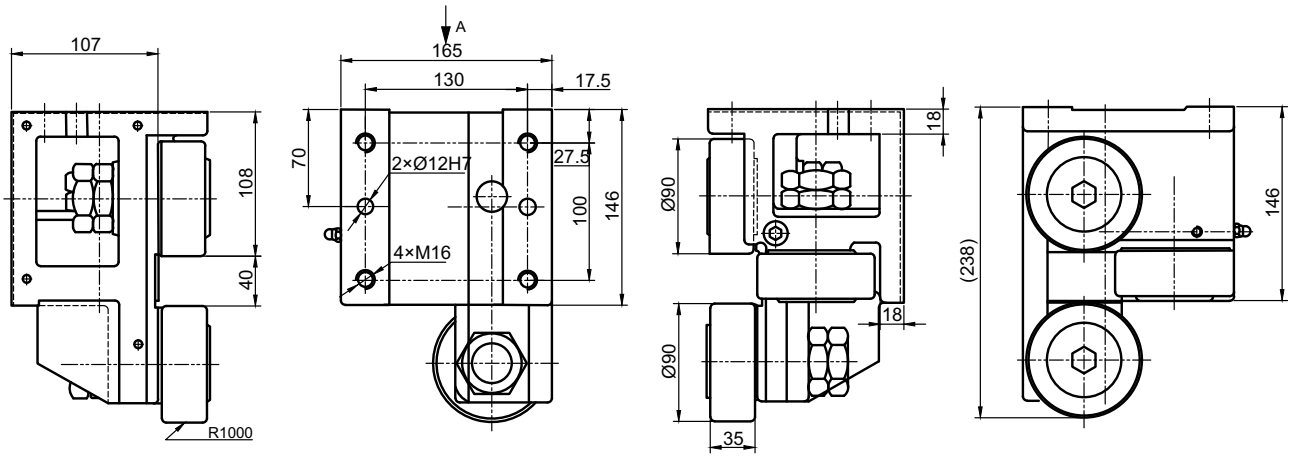
Fig.2

90 type roller set





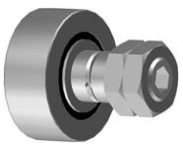
Roller support (right hand version)



Code	①	②	③	M (kg)	C_{0W} (N)	C_W ① (N)	C_W ② (N)	Nmax (min^{-1})
KGB90.1R	GBR	GER	GER	15	82000	43100	10800	1800
KGB90.2R	GBR	GER	GBR	15	82000	43100	10800	1800
KGB90.3R	GER	GBR	GER	15	82000	43100	10800	1800

CW①: Normal service life 10^6m CW②: Normal service life 10^8m

Stud roller



Code	Fig.	Excenter (mm)	Weight (kg)	MA (Nm)
GBR90	1	--	2.02	450
GER90	2	1	2.02	450

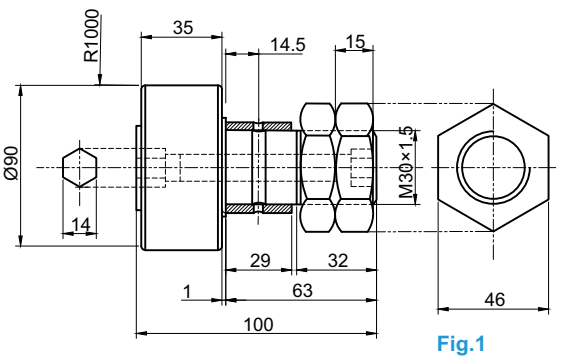


Fig.1

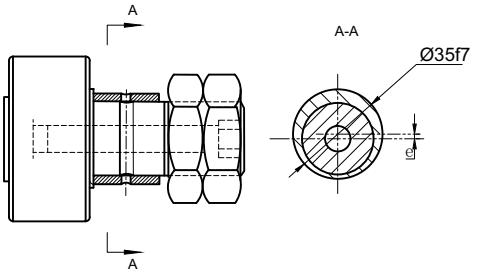
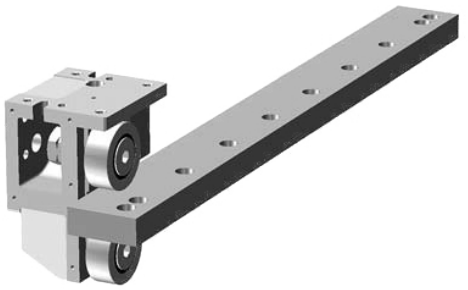
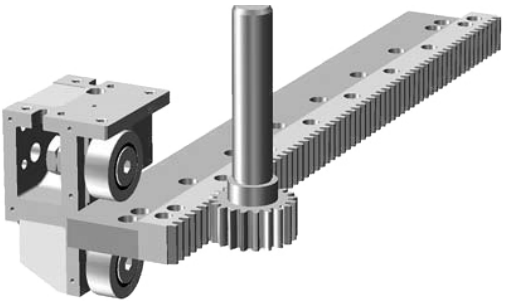
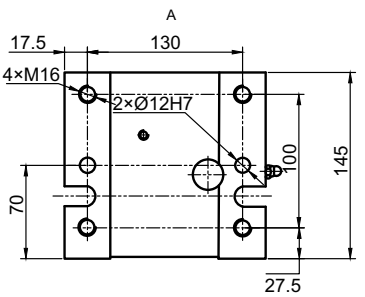


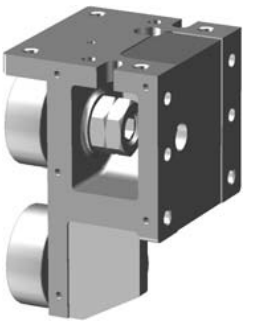
Fig.2

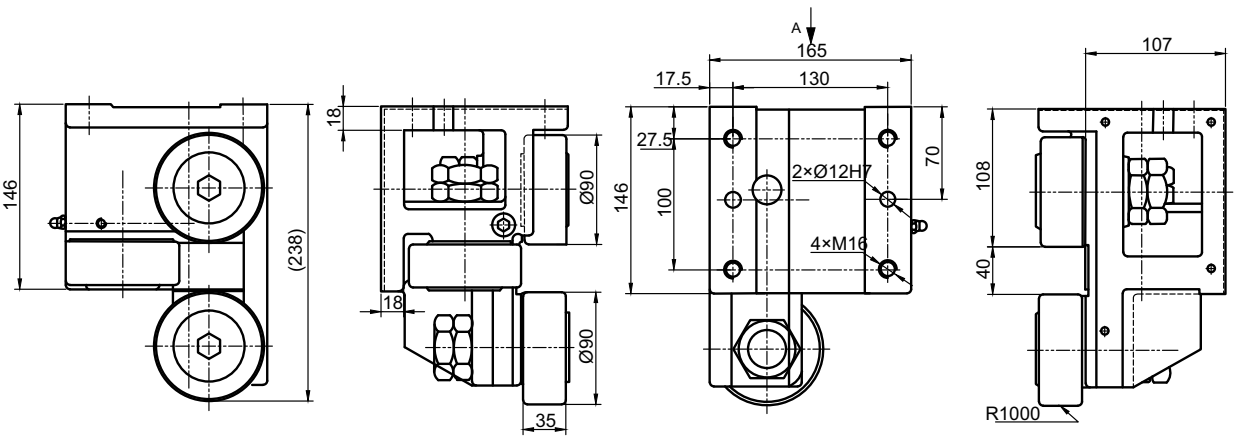




Roller support (left hand version)







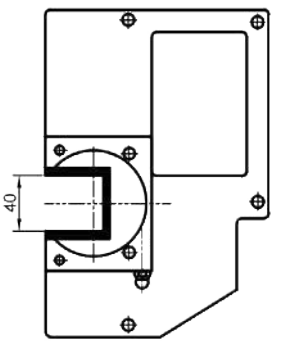
Code	①	②	③	M (kg)	C_{0w} (N)	C_w ① (N)	C_w ② (N)	Nmax (min^{-1})
KGB90.1R	GBR	GER	GER	15	82000	43100	10800	1800
KGB90.2R	GBR	GER	GBR	15	82000	43100	10800	1800
KGB90.3R	GER	GBR	GER	15	82000	43100	10800	1800

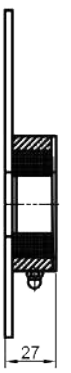
CW①: Normal service life 10 ^{6}m CW②: Normal service life 10 ^{8}m

Accessories

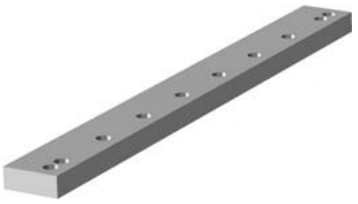
Code	Weight (kg)
KA90R	0.4
KA90L	0.4



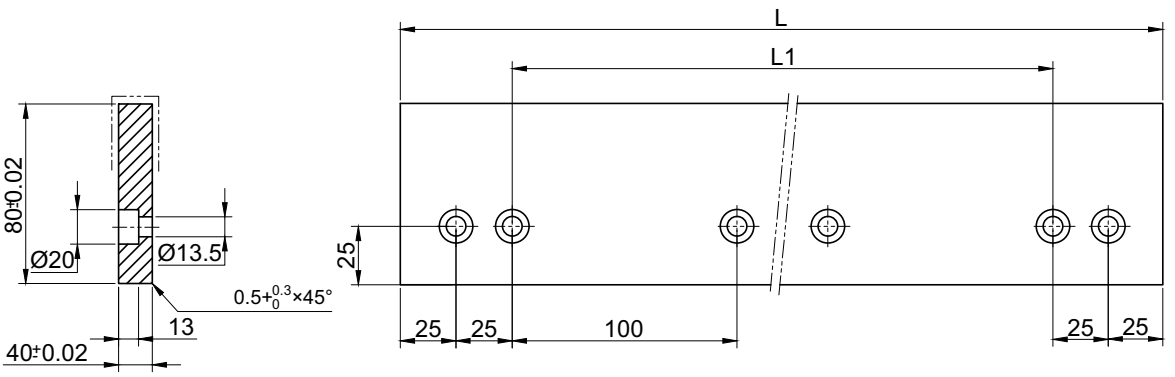


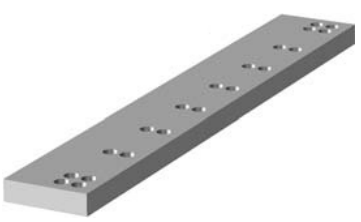


90 Guideway flat rail

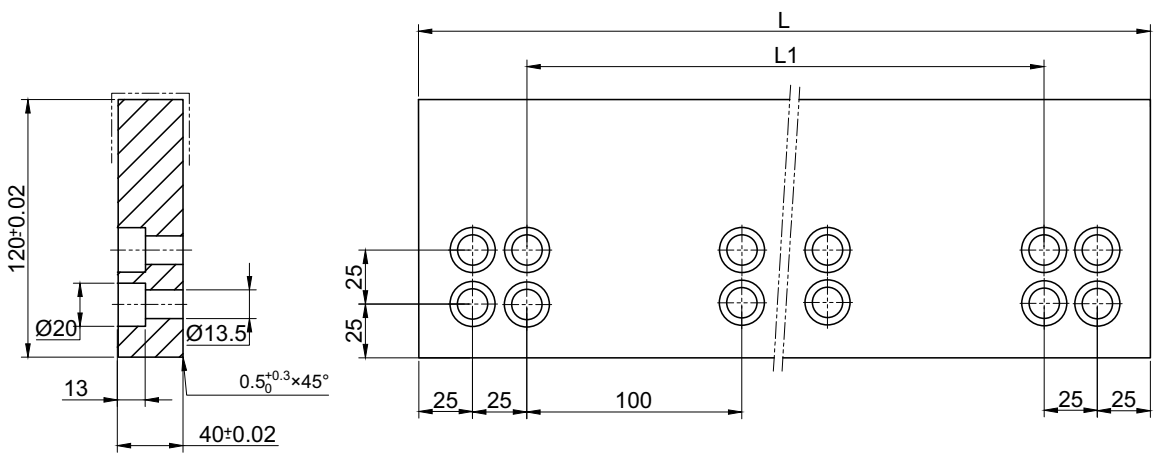


Code	L	L1	Material	Bolt size
KGT90101	1000	900	42CrMo	M12×45 8.8 class
KGT90201	2000	1900	42CrMo	M12×45 8.8 class

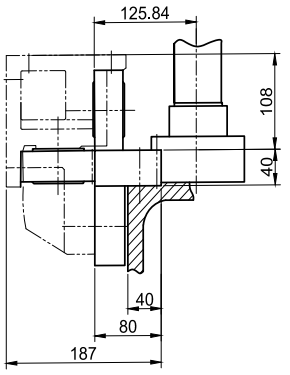


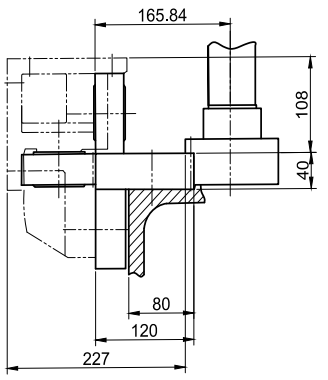


Code	L	L1	Material	Bolt size
KGT90102	1000	900	42CrMo	M12×45 8.8 class
KGT90202	2000	1900	42CrMo	M12×45 8.8 class



90 Guideway flat rail, rack, pinon mounting dimensions

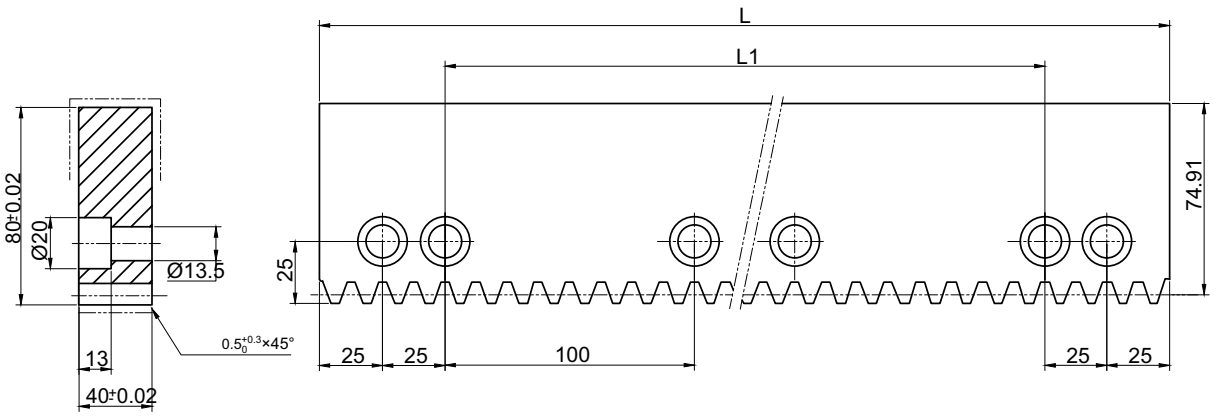


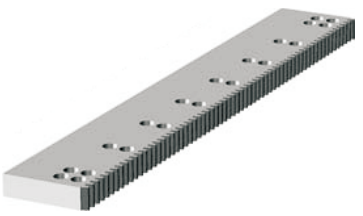


Guideway flat rail rack

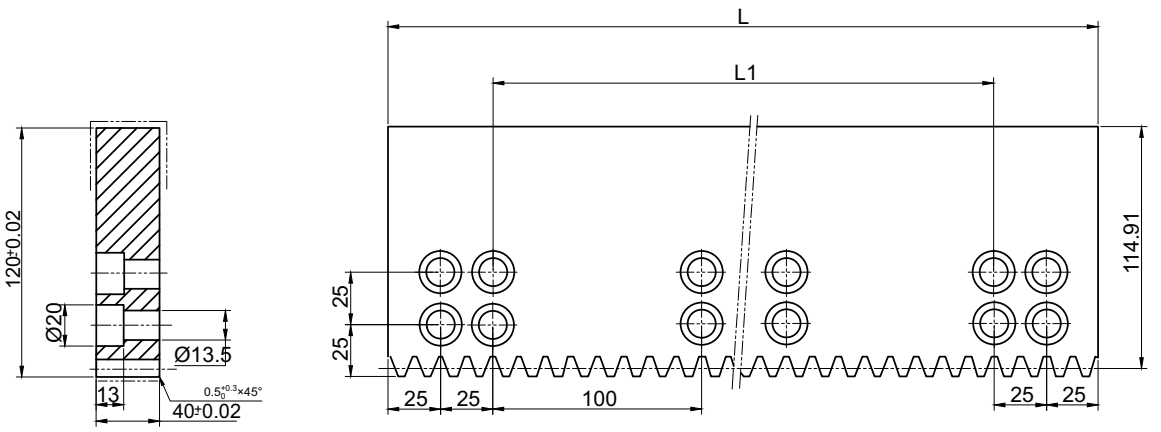


Code	L	L1	Module	P (mm)	Material	Precision grade	Bolt size
KGK901019	1000	900	5.0930	16.0	S45C	DIN9	M12×45 8.8 class
KGK902019	2000	1900	5.0930	16.0	S45C	DIN9	M12×45 8.8 class

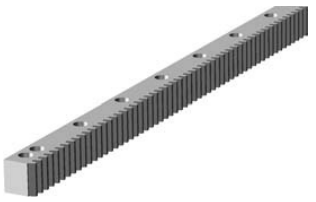




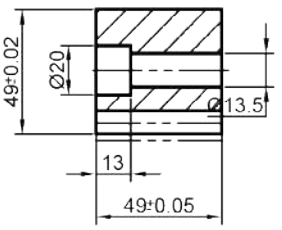
Code	L	L1	Module	P (mm)	Material	Precision grade	Bolt size
KGK901029	1000	900	5.0930	16.0	S45C	DIN9	M12×45 8.8 class
KGK902029	2000	1900	5.0930	16.0	S45C	DIN9	M12×45 8.8 class

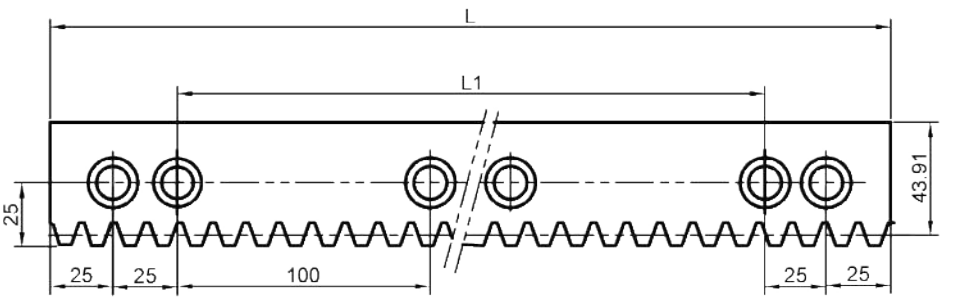


Rack



Code	L	L1	Module	P (mm)	Material	Precision grade	Bolt size
KGS90109	1000	900	5.093	16.0	S45C	DIN9	M12×45 8.8class
KGS90209	2000	1900	5.093	16.0	S45C	DIN9	M12×45 8.8class





Drive pinion



Code	Z	Module	P	Fig.	Precison grade	Weight KG
SGLP90-CP10	20	5.0930	16.0	1	DIN6	9
SGSP90-CP10	20	5.0930	16.0	2	DIN6	2.5

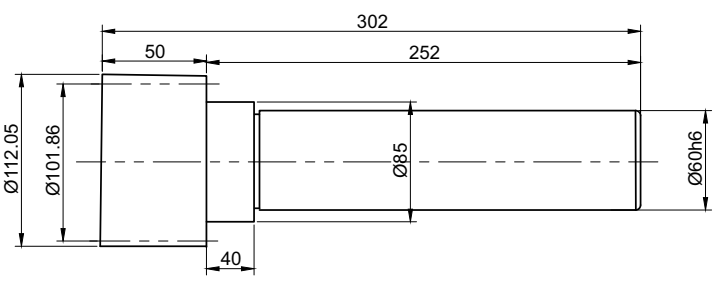


Fig.1

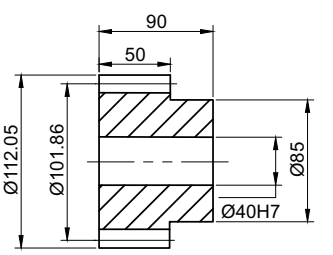
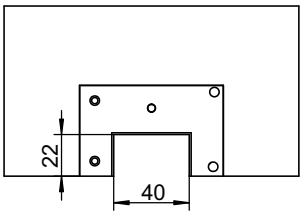
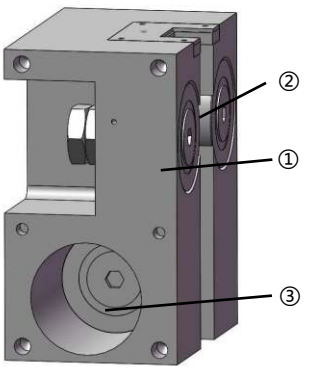


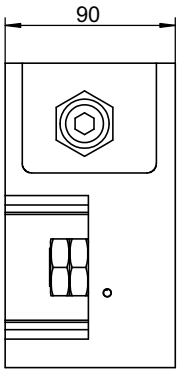
Fig.2

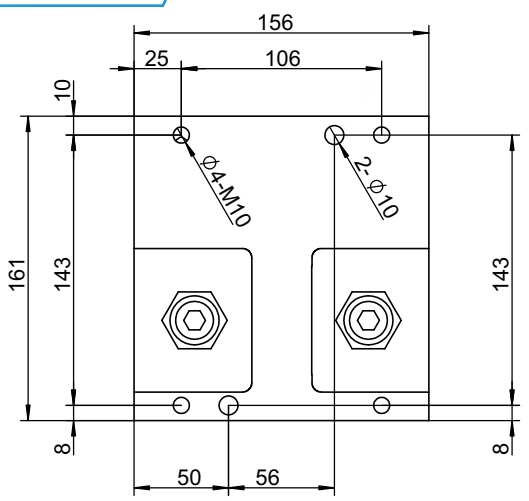
F52 type roller set

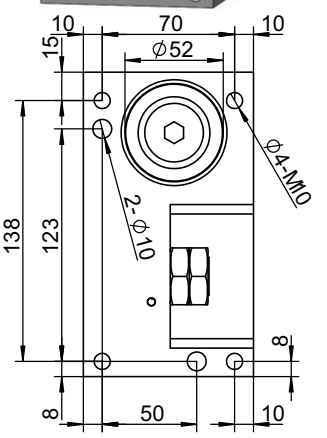




Roller support (right hand version)



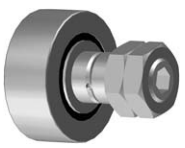




Code	①	②	③	M (kg)	C_{0W} (N)	C_W ① (N)	C_W ② (N)	Nmax (min^{-1})
KGA52.1R	GBR	GER	GER	4	28000	14000	3500	3800
KGA52.2R	GBR	GER	GBR	4	28000	14000	3500	3800
KGA52.3R	GER	GBR	GER	4	28000	14000	3500	3800

CW①: Normal service life 10^6m CW②: Normal service life 10^8m

Stud roller



Code	Fig.	Excenter (mm)	Weight (kg)	MA (Nm)
GBR52	1	-	0.47	120
GER52	2	1	0.47	120

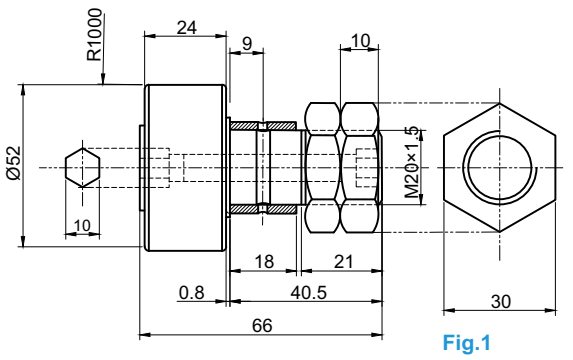


Fig.1

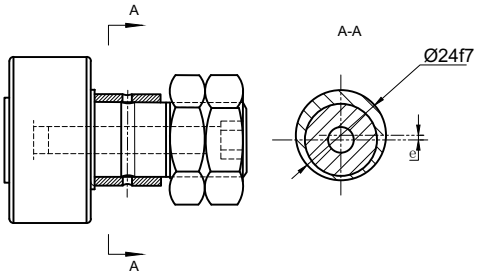
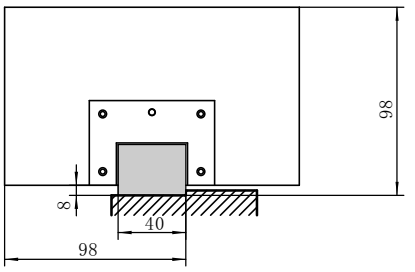
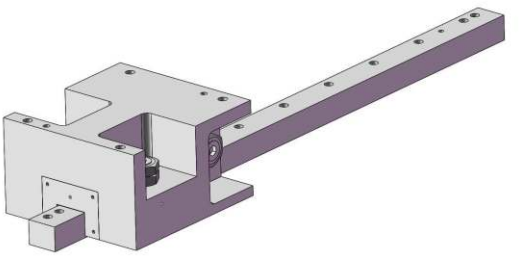


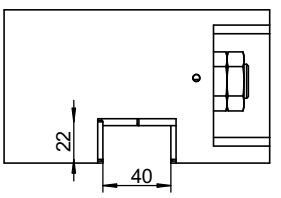
Fig.2

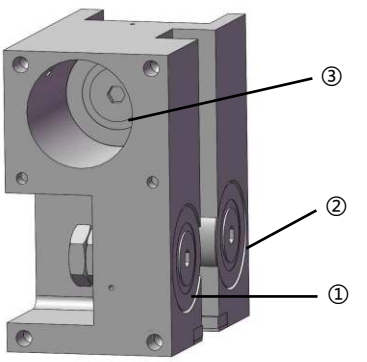
F52 type roller set

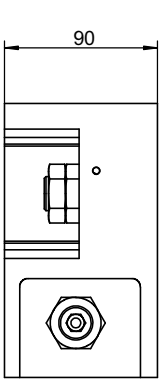


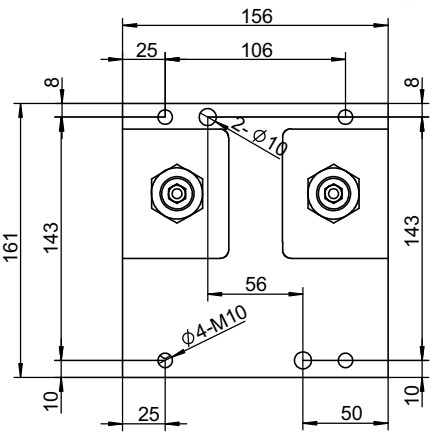


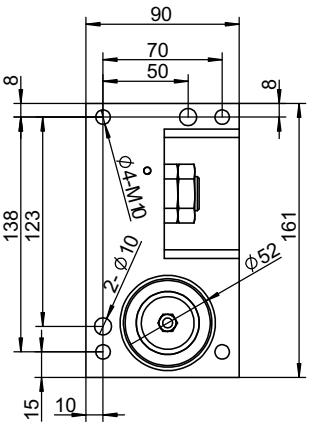
Roller support (left hand version)







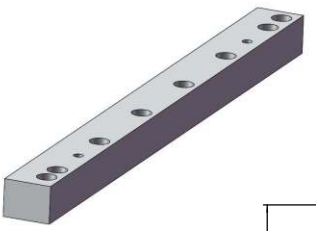




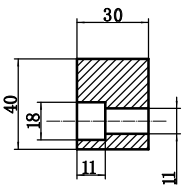
Code	①	②	③	M (kg)	C_{0W} (N)	C_W ① (N)	C_W ② (N)	Nmax (min^{-1})
KGA52.1L	GBR	GER	GER	4	28000	14000	3500	3800
KGA52.2L	GBR	GER	GBR	4	28000	14000	3500	3800
KGA52.3L	GER	GBR	GER	4	28000	14000	3500	3800

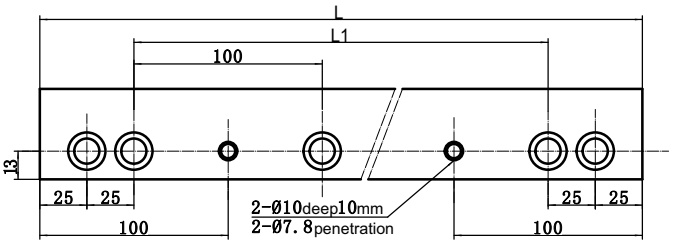
CW①: Normal service life 10 ^{6}m CW②: Normal service life 10 ^{8}m

Guideway fat rail

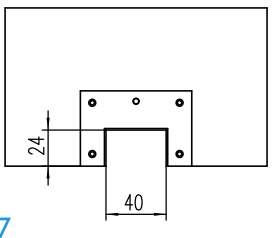


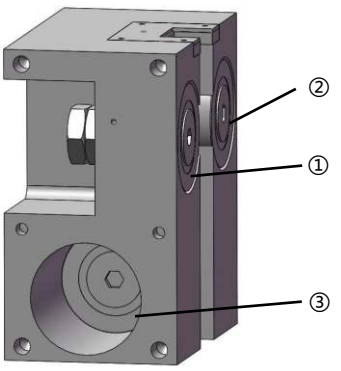
Code	L	L1	Material	Bolt size
KGF304010	1000	900	42CrMo	M10×40 8.8 class



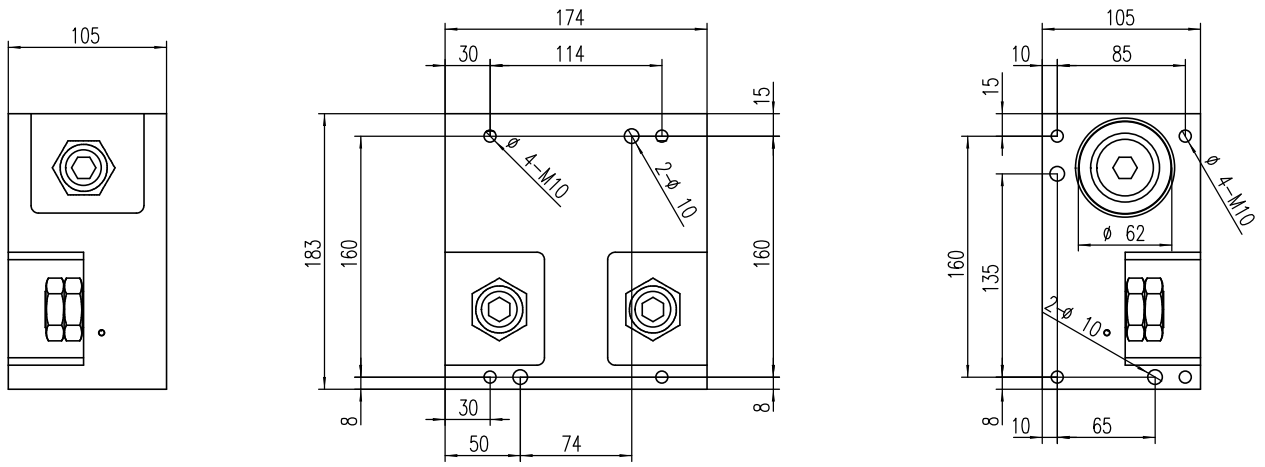


F62 type roller set





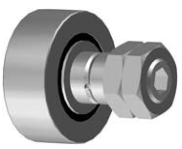
Roller support (right hand version)



Code	①	②	③	M (kg)	C_{0W} (N)	C_W ① (N)	C_W ② (N)	Nmax (min^{-1})
KGA62.1R	GBR	GER	GER	7	39500	21400	5400	2200
KGA62.2R	GBR	GER	GBR	7	39500	21400	5400	2200
KGA62.3R	GER	GBR	GER	7	39500	21400	5400	2200

CW①: Normal service life 10^6m CW②: Normal service life 10^8m

Stud roller



Code	Fig.	Excenter (mm)	Weight (kg)	MA (Nm)
GBR62	1	--	0.82	220
GER62	2	1	0.82	220

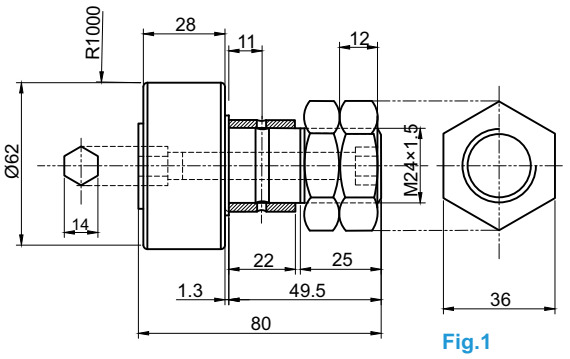


Fig.1

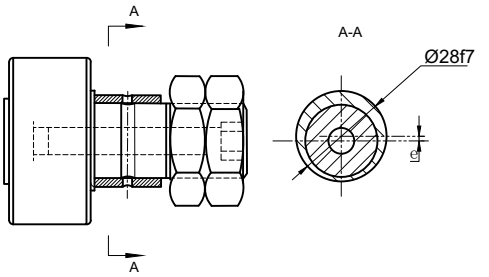
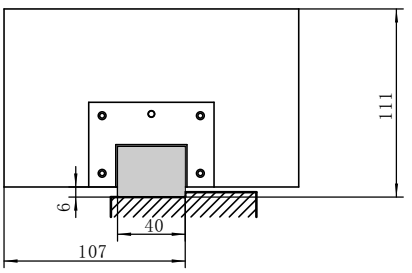
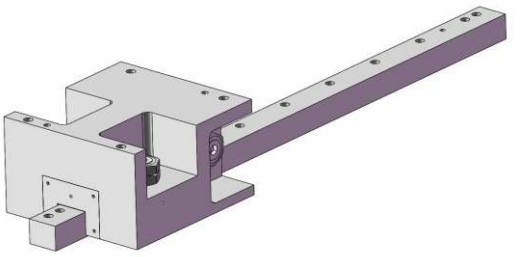
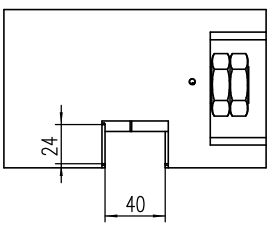


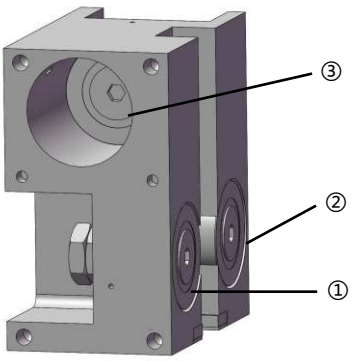
Fig.2

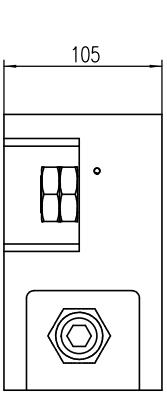


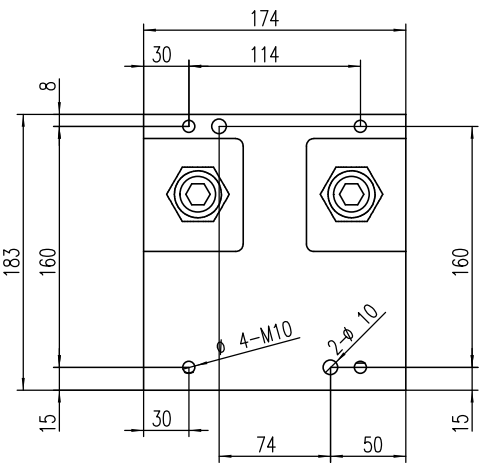


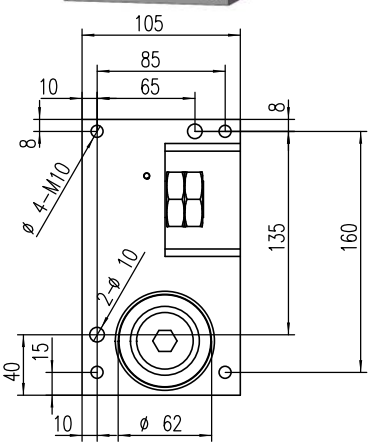
Roller support (left hand version)







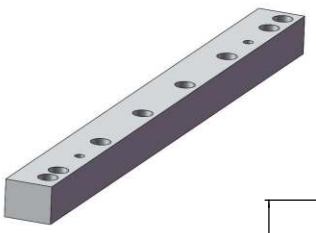




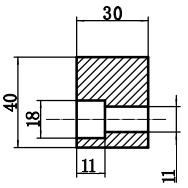
Code	①	②	③	M (kg)	C_{0w} (N)	C_w ① (N)	C_w ② (N)	Nmax (min^{-1})
KGA62.1L	GBR	GER	GER	7	39500	21400	5400	2200
KGA62.2L	GBR	GER	GBR	7	39500	21400	5400	2200
KGA62.3L	GER	GBR	GER	7	39500	21400	5400	2200

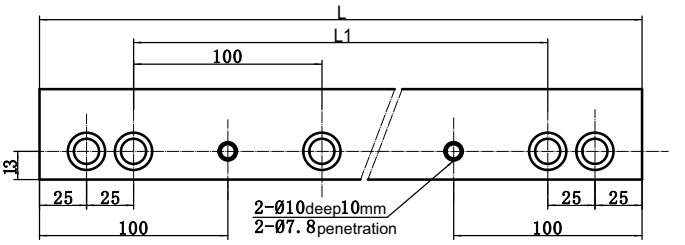
CW①: Normal service life 10 ^{6}m CW②: Normal service life 10 ^{8}m

Guideway fat rail

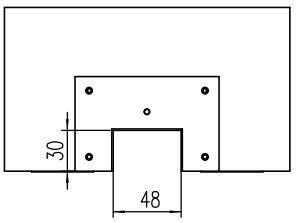


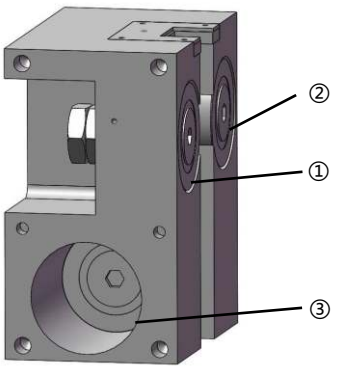
Code	L	L1	Material	Bolt size
KGF304010	1000	900	42CrMo	M10×40 8.8class



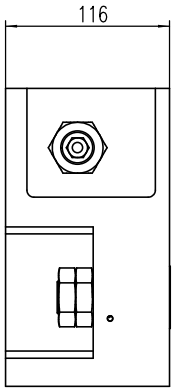


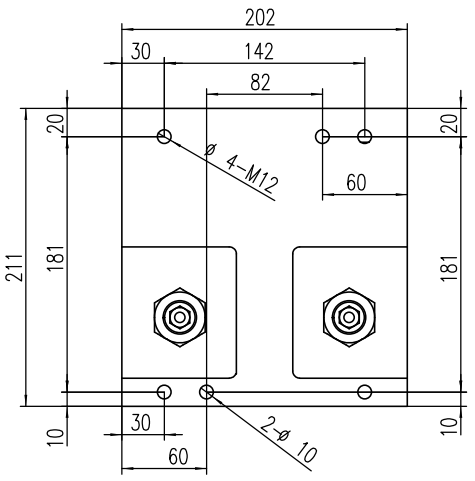
F72 type roller set

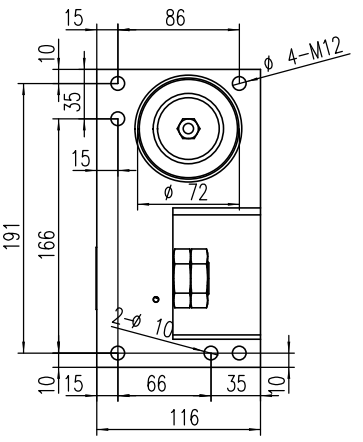




Roller support (right hand version)



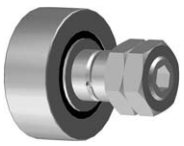




Code	①	②	③	M (kg)	C_{0w} (N)	C_w ① (N)	C_w ② (N)	Nmax (min^{-1})
KGA72.1R	GBR	GER	GER	9	46500	24600	6200	2200
KGA72.2R	GBR	GER	GBR	9	46500	24600	6200	2200
KGA72.3R	GER	GBR	GER	9	46500	24600	6200	2200

CW①: Normal service life 10^6m CW②: Normal service life 10^8m

Stud roller



Code	Fig.	Excenter (mm)	Weight (kg)	MA (Nm)
GBR72	1	--	1.05	220
GER72	2	1	1.05	220

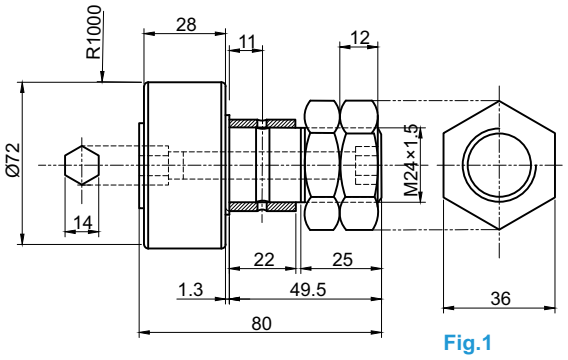


Fig.1

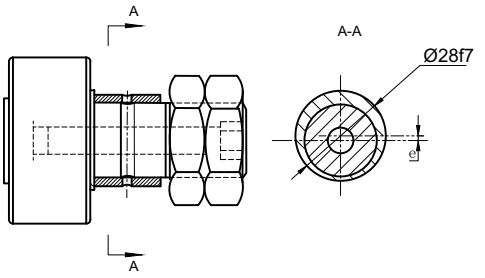
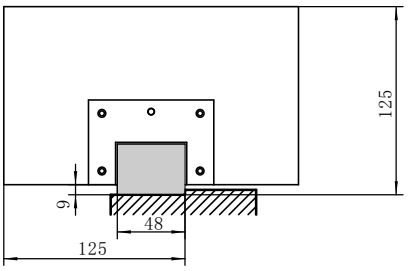
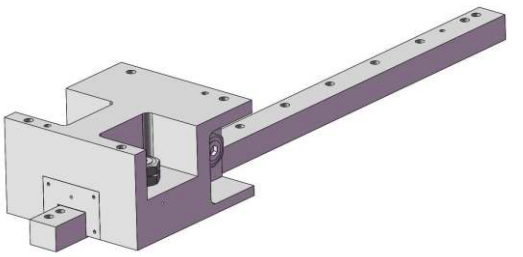
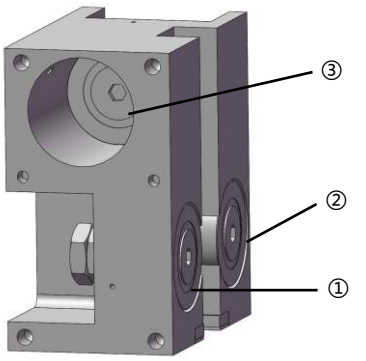


Fig.2

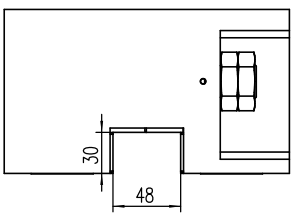
F72 type roller set

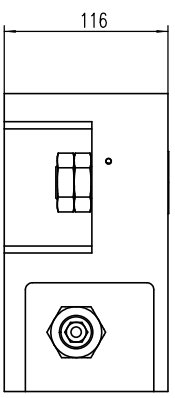


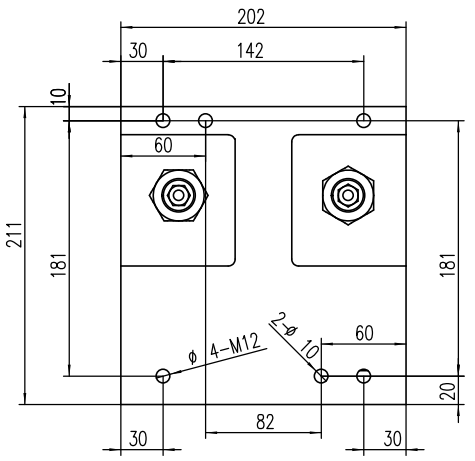


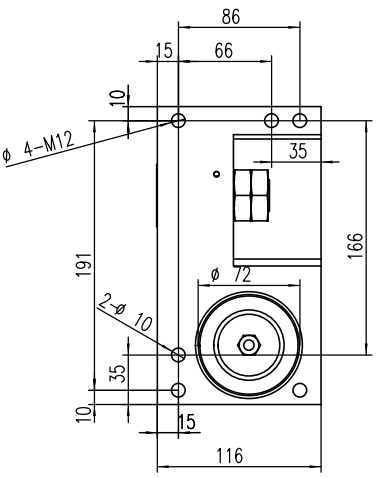


Roller support (left hand version)







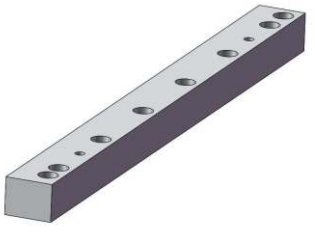


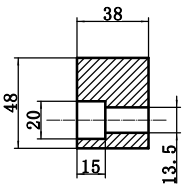
Code	①	②	③	M (kg)	C_{0w} (N)	C_w ① (N)	C_w ② (N)	Nmax (min^{-1})
KGA72.1L	GBR	GER	GER	12	46500	24600	6200	2200
KGA72.2L	GBR	GER	GBR	12	46500	24600	6200	2200
KGA72.3L	GER	GBR	GER	12	46500	24600	6200	2200

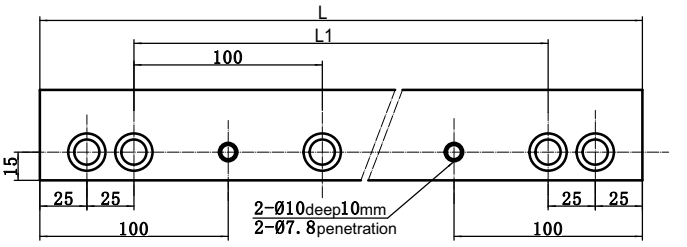
CW①: Normal service life 10^6m CW②: Normal service life 10^8m

Guideway fat rail

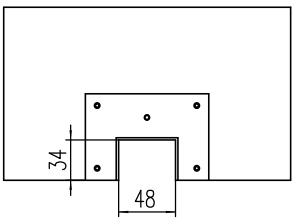
Code	L	L1	Material	Bolt size
KGF384810	1000	900	42CrMo	M12×50 8.8 class

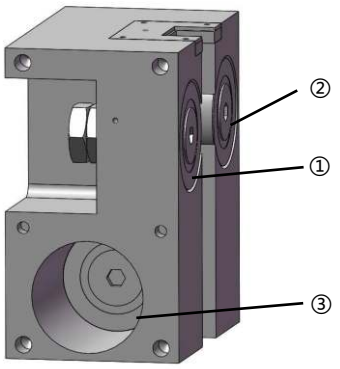




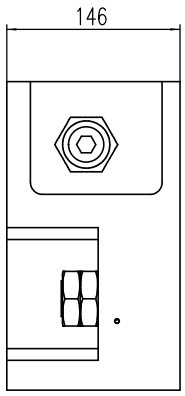


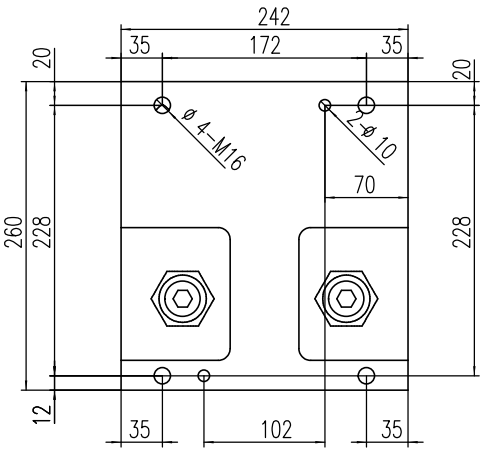
F90 type roller set

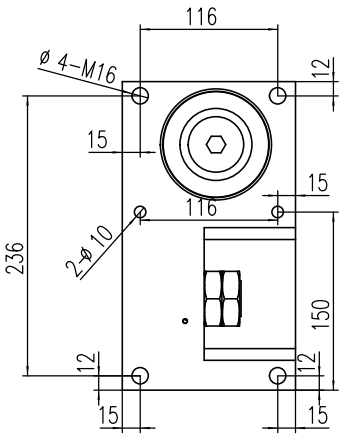




Roller support (right hand version)



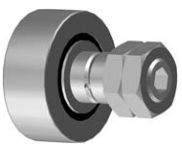




Code	①	②	③	M (kg)	C_{0W} (N)	C_W ① (N)	C_W ② (N)	Nmax (min^{-1})
KGA90.1R	GBR	GER	GER	15	82000	43100	10800	1800
KGA90.2R	GBR	GER	GBR	15	82000	43100	10800	1800
KGA90.3R	GER	GBR	GER	15	82000	43100	10800	1800

CW①: Normal service life 10 ^{6}m CW②: Normal service life 10 ^{8}m

Stud roller



Code	Fig.	Excenter (mm)	Weight (kg)	MA (Nm)
GBR90	1	--	2.02	450
GER90	2	1	2.02	450

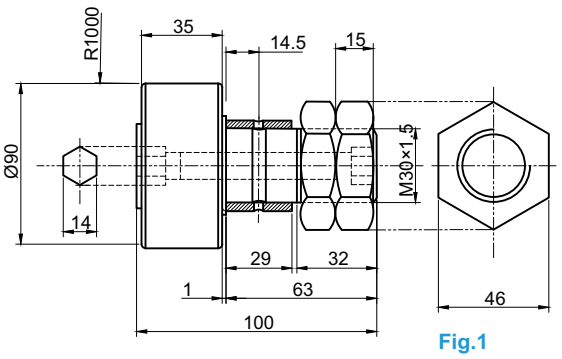


Fig.1

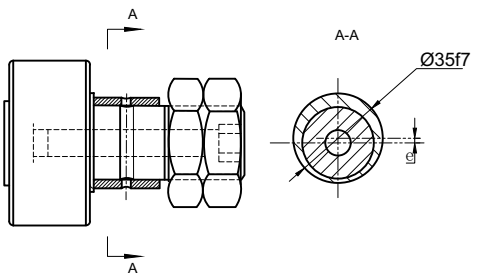
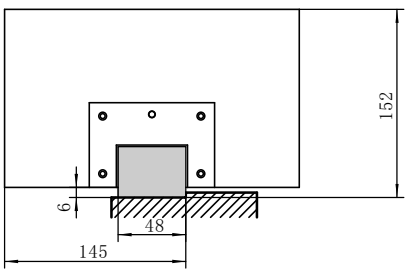
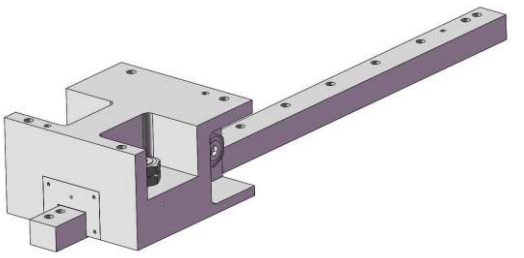


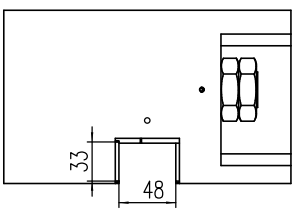
Fig.2

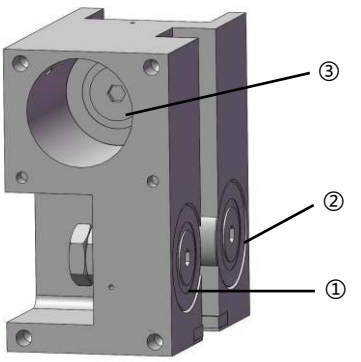
F90 type roller set

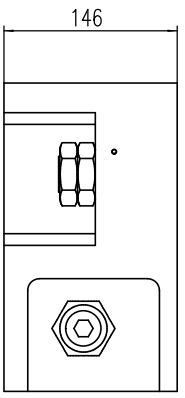


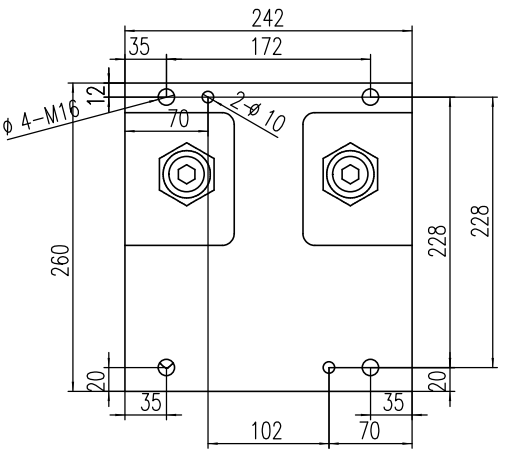


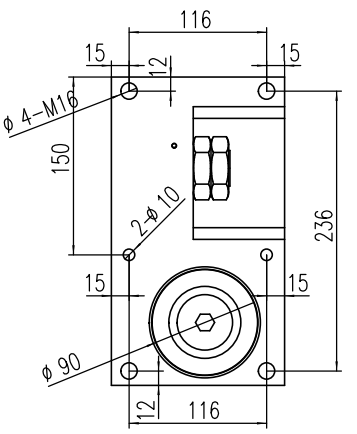
Roller support (left hand version)







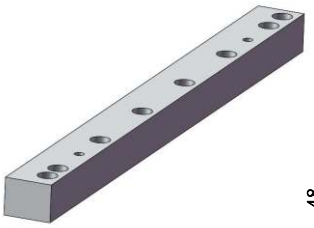


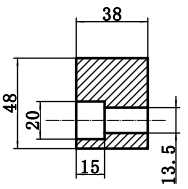


Code	①	②	③	M (kg)	C_{0w} (N)	C_w ① (N)	C_w ② (N)	Nmax (min^{-1})
KGA90.1L	GBR	GER	GER	15	82000	43100	10800	1800
KGA90.2L	GBR	GER	GBR	15	82000	43100	10800	1800
KGA90.3L	GER	GBR	GER	15	82000	43100	10800	1800

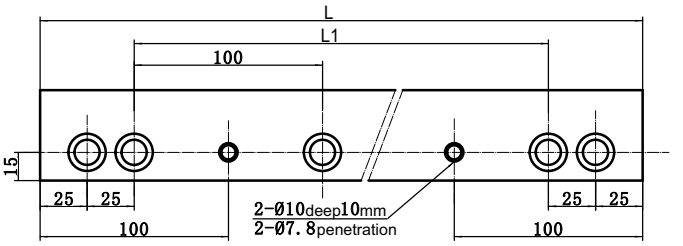
CW①: Normal service life 10^6m CW②: Normal service life 10^8m

Guideway fat rail





Code	L	L1	Material	Bolt size
KGF384810	1000	900	42CrMo	M12×50 8.8class



GUIDEWAY SYSTEM

FOR MEDIUM DUTY APPLICATIONS

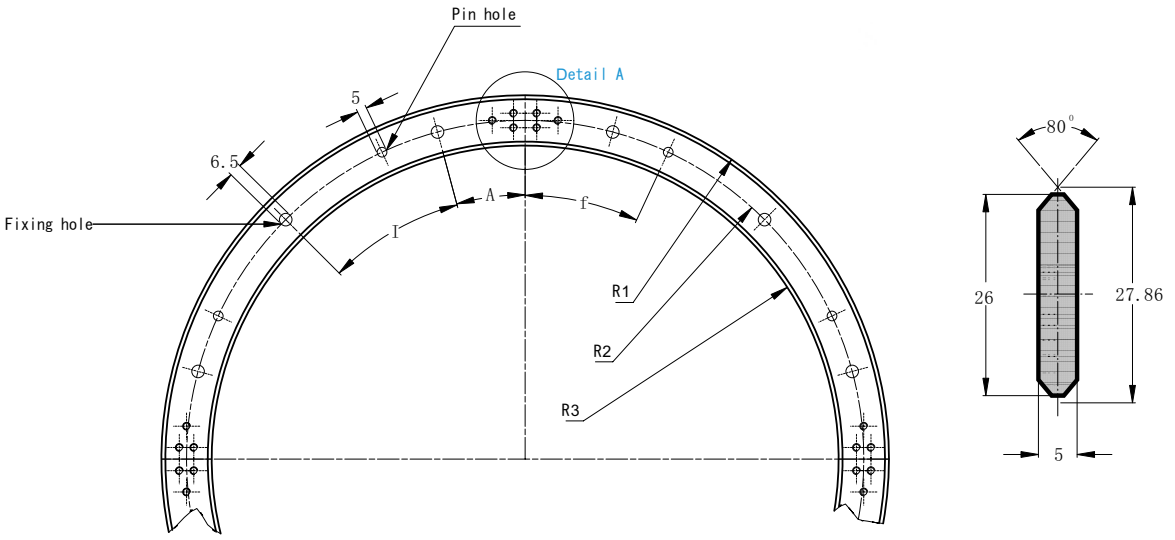


Arc guide rail

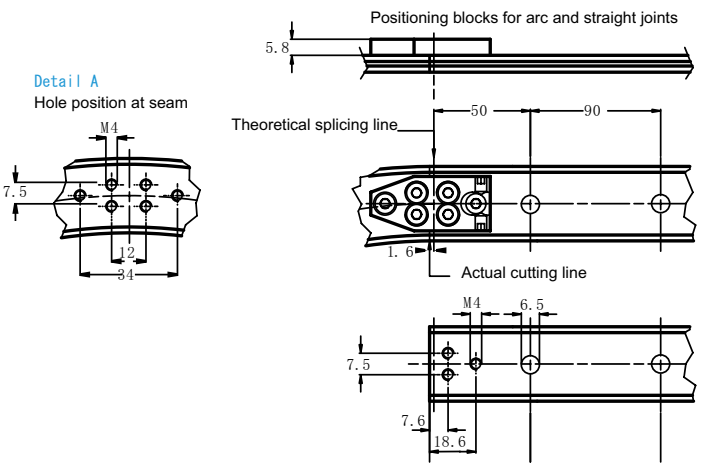
NSR 22 series arc guide rail and roller slide seat



Arc guide



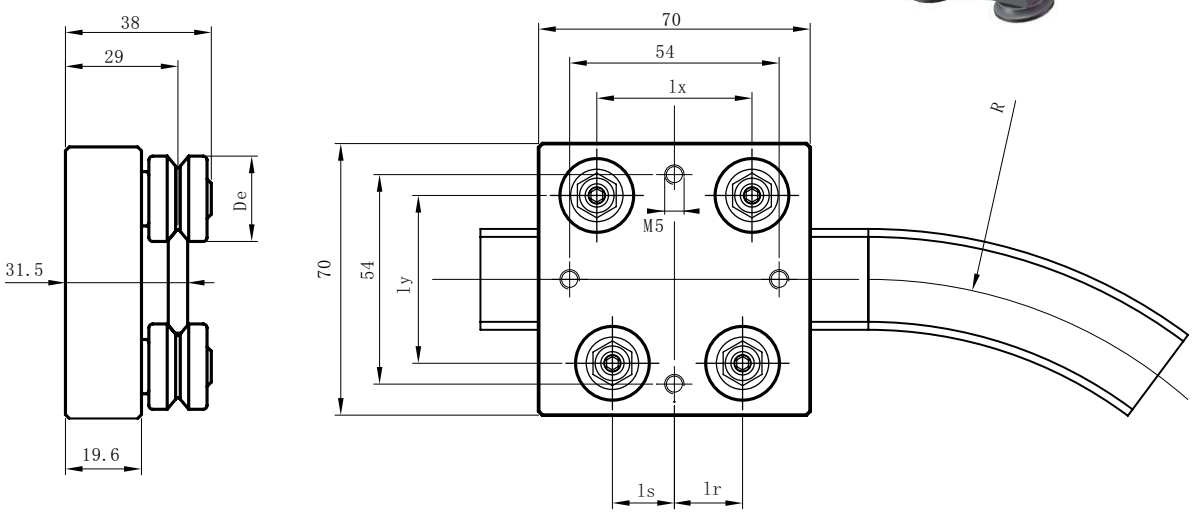
Code	Dimensions (mm)						n° fixing holes/360°	n° pin holes/360°
	A	I	f	R1	R2	R3		
NSR22M075	22.5°	45°	45°	88	75	62	8	4
NSR22M125	15°	30°	25°	138	125	112	12	8
NSR22M175	15°	30°	25°	188	175	162	12	8



NSR 22 series arc guide rail and roller slide seat

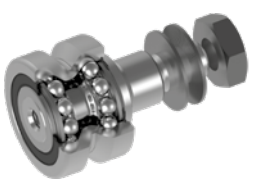


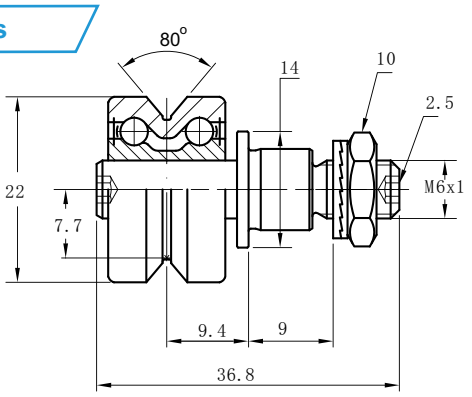
Slide seat

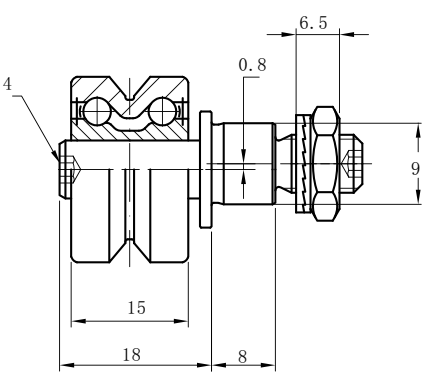


Code	Dimensions (mm)						Combinations
	R	lx	ls	lr	ly	De	
4R22M075NR22	75	40	14	15.6	43.3	22	NSR22M075
4R22M125NR22	125	40	16	17.6	43.3	22	NSR22M125
4R22M175NR22	175	40	16.9	18.5	43.3	22	NSR22M175

Roller for guideway V bars





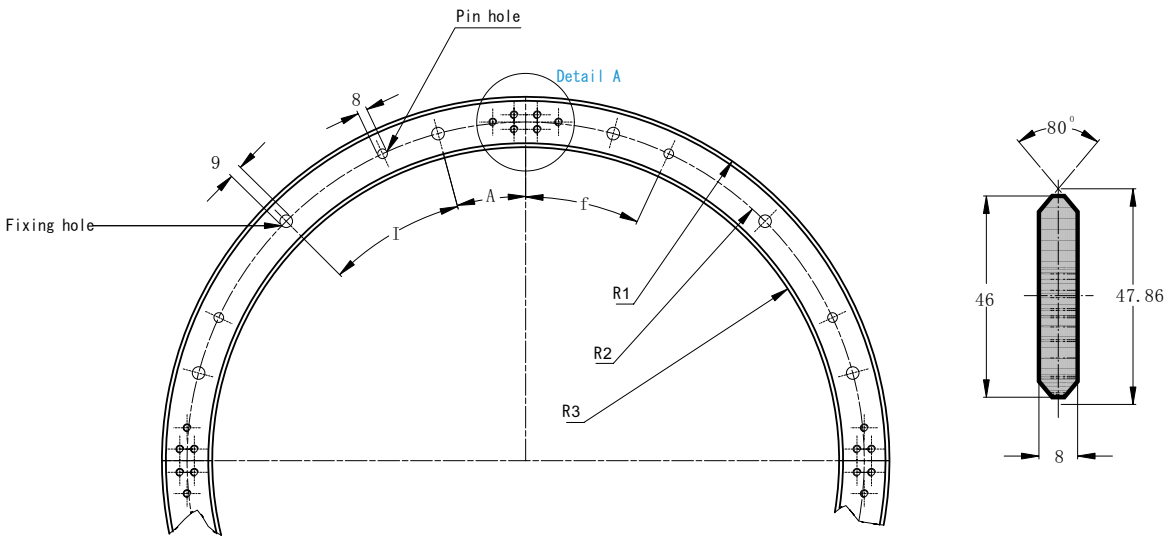


Code	Excenter	Cw(N)	Fr(N)	Fa(N)	(N.m)	(kg)
NR22	0	2900	1400	420	3	0.045
NR22R	0.8mm	2900	1400	420	3	0.045

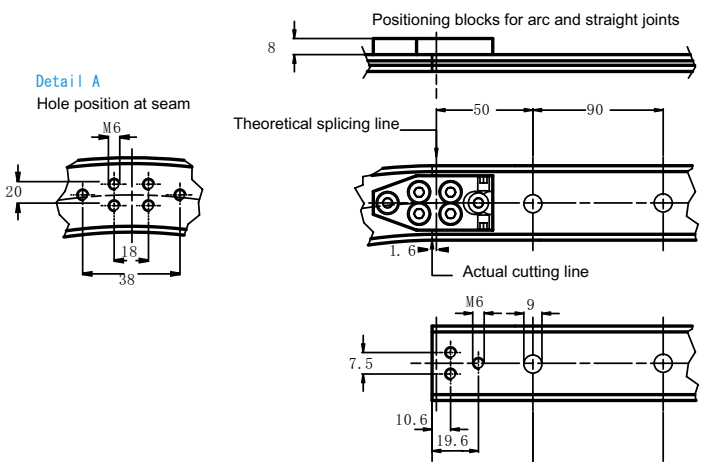
NSR 35 series arc guide rail and roller slide seat



Arc guide



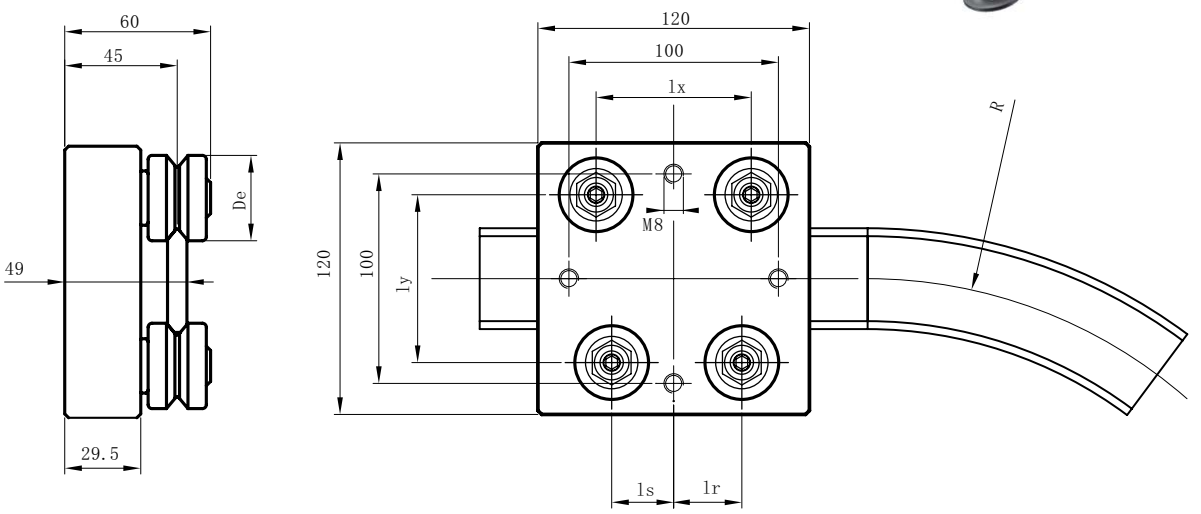
Code	Dimensions (mm)						n° fixing holes/360°	n° pin holes/360°
	A	I	f	R1	R2	R3		
NSR35M225	11.25°	22.5°	7.5°	248	225	202	16	8
NSR35M300	11.25°	22.5°	7.5°	323	300	277	16	8



NSR 35 series arc guide rail and roller slide seat



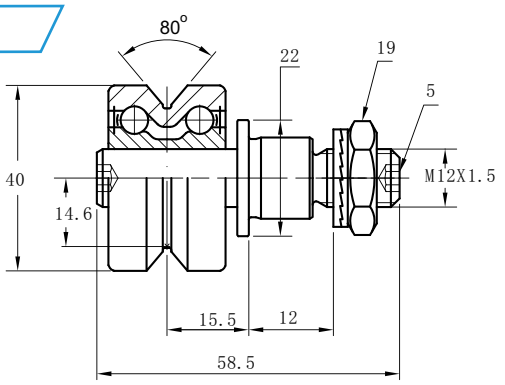
Slide seat

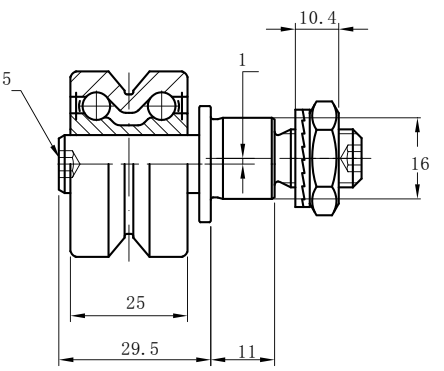


Code	Dimensions (mm)						Combinations
	R	lx	ls	lr	ly	De	
4R35M225NR40	225	75	30.5	32.5	77	40	NSR35M225
4R35M300NR40	300	75	31.9	33.9	77	40	NSR35M300

Roller for guideway V bars





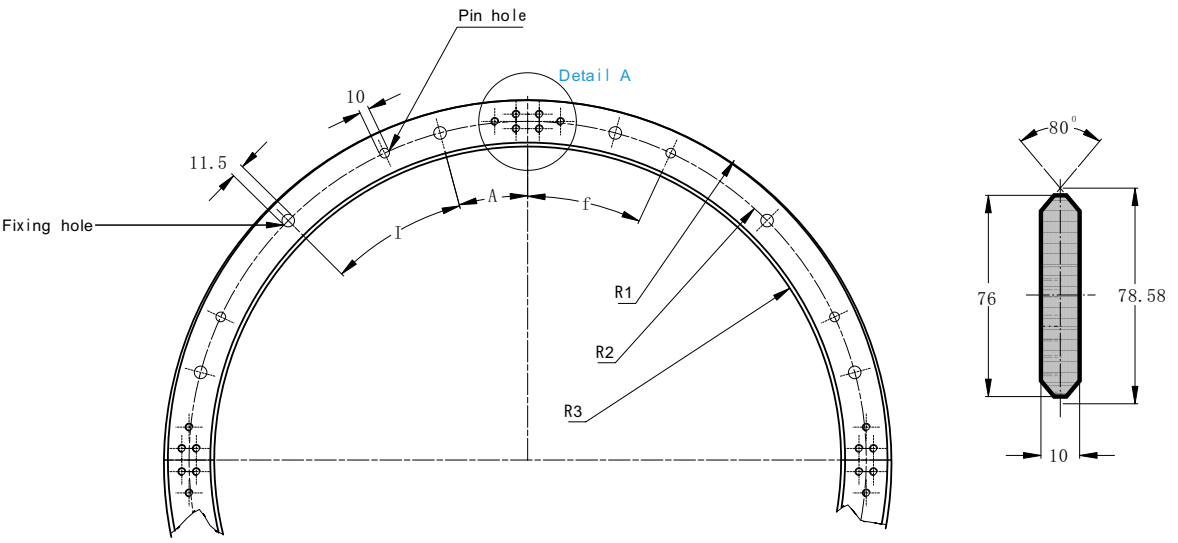


Code	Excenter	Cw(N)	Fr(N)	Fa(N)	(N.m)	(kg)
NR40	0	8500	3650	1400	26	0.23
NR40R	1mm	8500	3650	1400	26	0.23

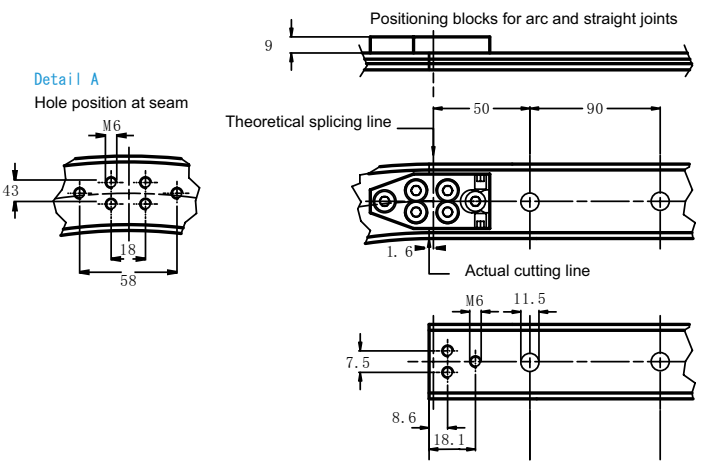
NSR 47 series arc guide rail and roller slide seat



Arc guide



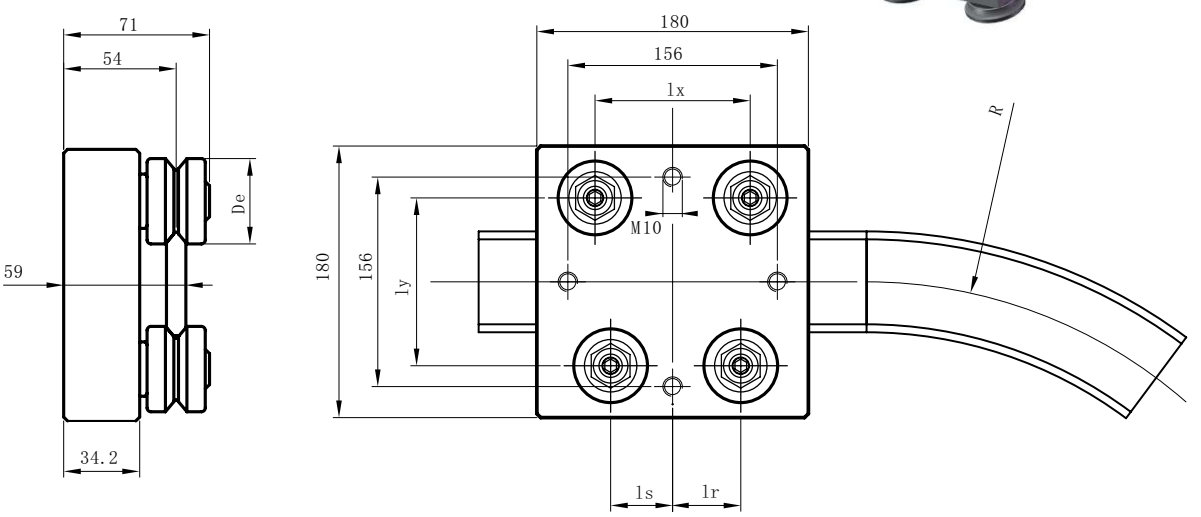
Code	Dimensions (mm)						n° fixing holes/360°	n° pin holes/360°
	A	I	f	R1	R2	R3		
NSR47M400	9°	18°	18°	438	400	362	20	8
NSR47M500	9°	18°	18°	538	500	462	20	8



NSR 47 series arc guide rail and roller slide seat

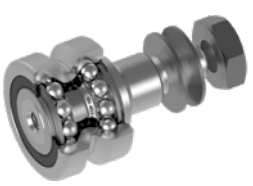


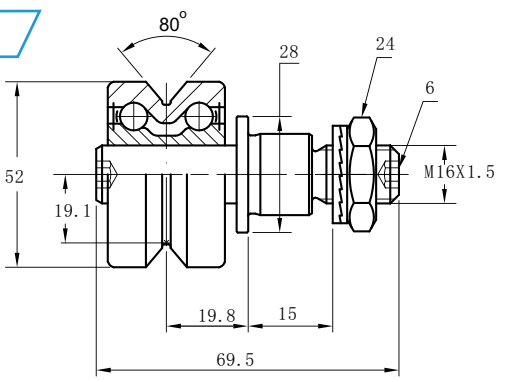
Slide seat

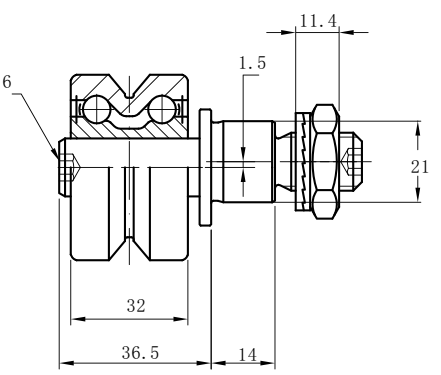


Code	Dimensions (mm)						Combinations
	R	lx	ls	lr	ly	De	
4R47M400NR52	400	110	46	49	116.8	52	NSR47M400
4R47M500NR52	500	110	47.4	50.4	116.8	52	NSR47M500

Roller for guideway V bars





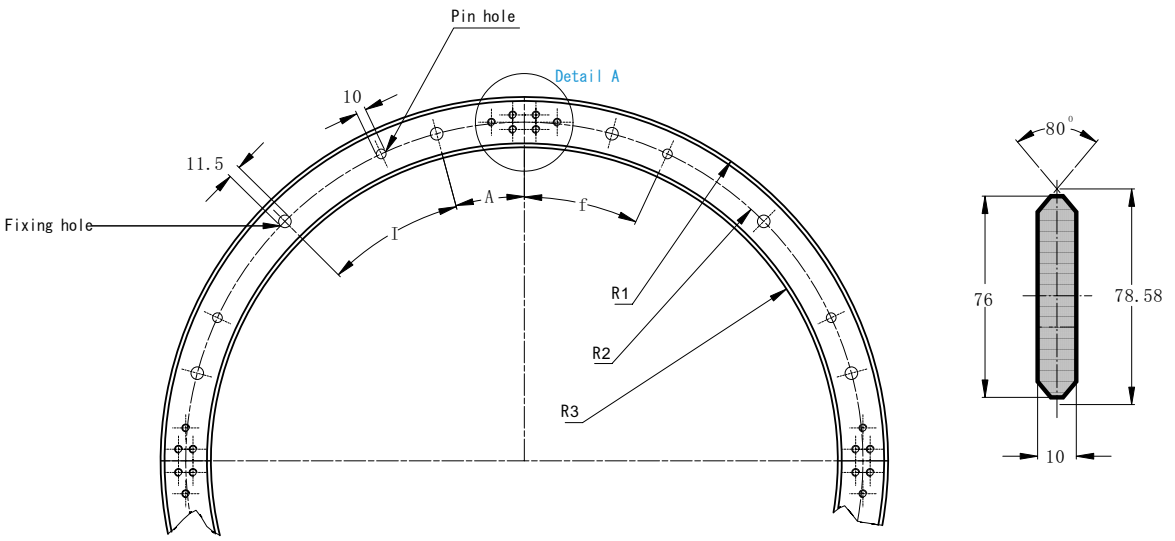


Code	Excenter	Cw(N)	Fr(N)	Fa(N)	(N.m)	(kg)
NR52	0	11700	8500	3000	64	0.51
NR52R	1.5mm	11700	8500	3000	64	0.51

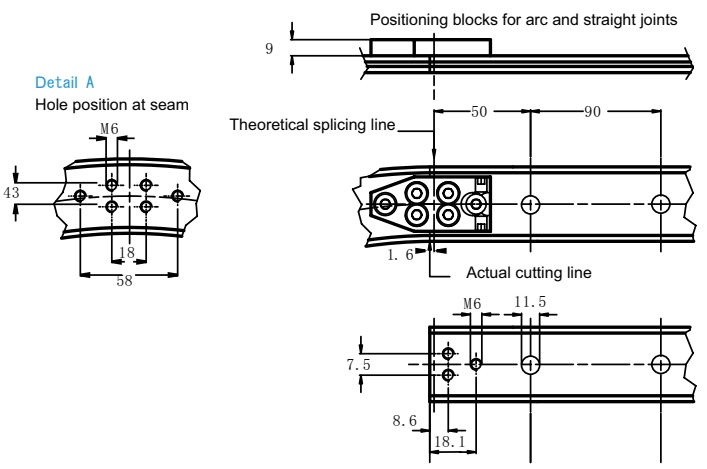
NSR 47 series arc guide rail and roller slide seat



Arc guide



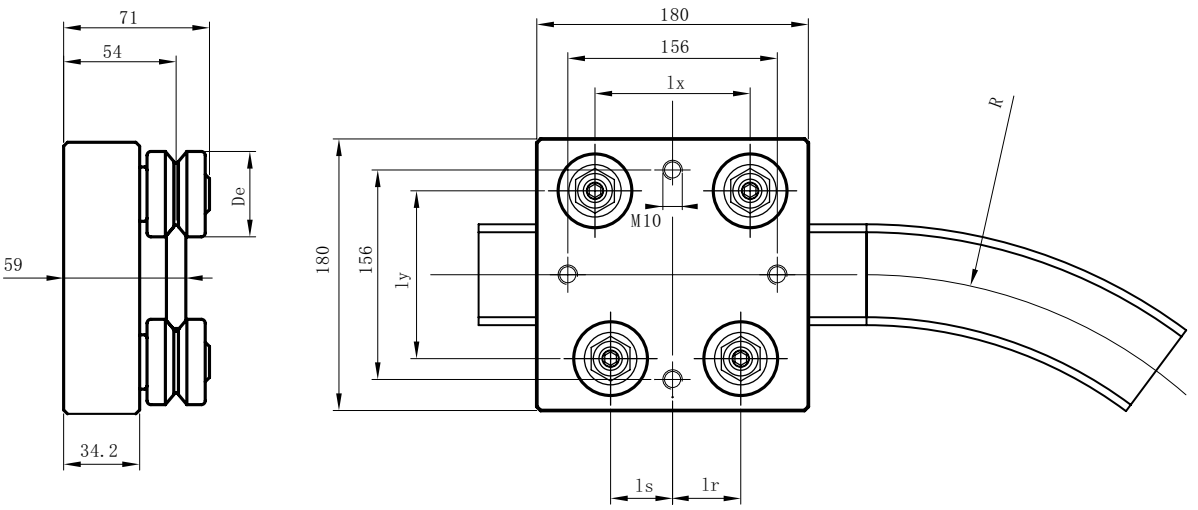
Code	Dimensions (mm)						n° fixing holes/360°	n° pin holes/360°
	A	I	f	R1	R2	R3		
NSR47M400	9°	18°	18°	438	400	362	20	8
NSR47M500	9°	18°	18°	538	500	462	20	8



NSR 47 series arc guide rail and roller slide seat

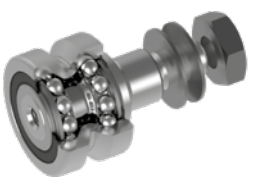


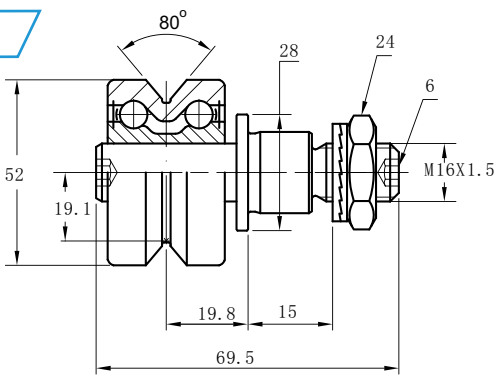
Slide seat

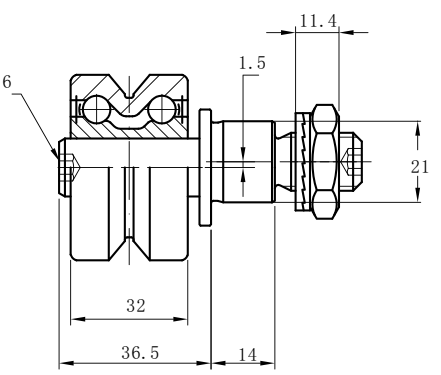


Code	Dimensions (mm)						Combinations
	R	Ix	Is	Ir	Iy	De	
4R47M400NR52	400	110	46	49	116.8	52	NSR47M400
4R47M500NR52	500	110	47.4	50.4	116.8	52	NSR47M500

Roller for guideway V bars



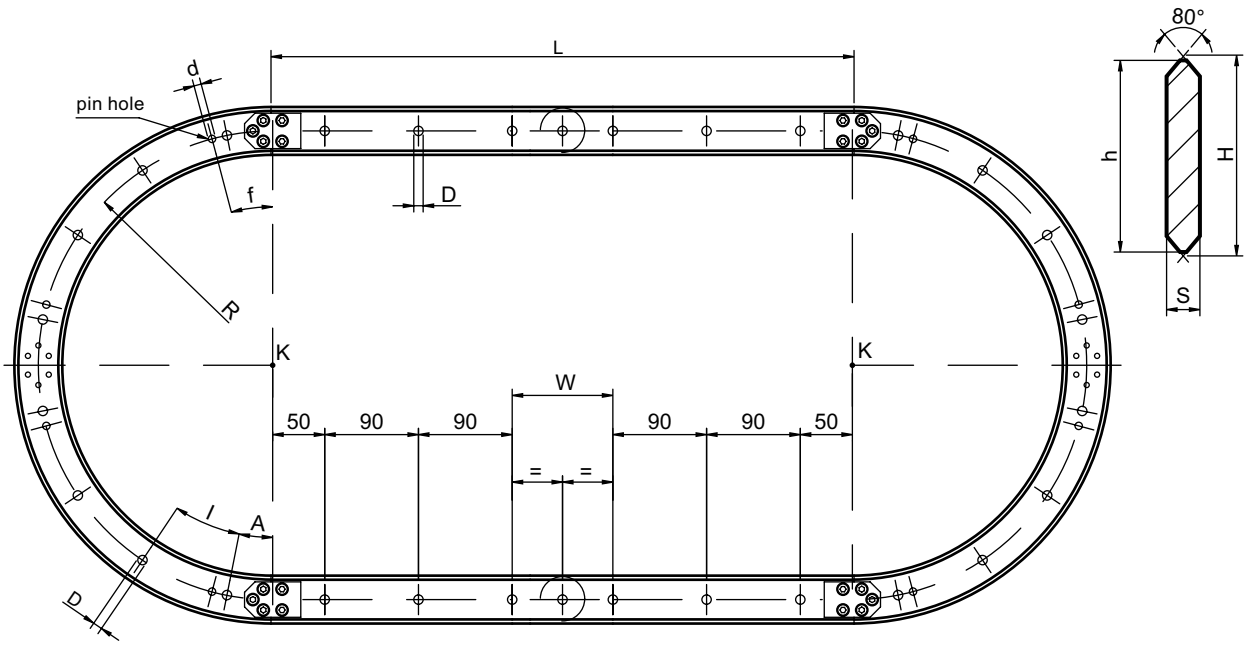




Code	Excenter	Cw(N)	Fr(N)	Fa(N)	(N.m)	(kg)
NR52	0	11700	8500	3000	64	0.51
NR52R	1.5mm	11700	8500	3000	64	0.51

NSR series arc and linear guideway combination





Code	Dimensions (mm)								
	A	l	f	R	D	d	S	h	H
NSRA22M075L...	22.5°	45°	45°	75	6.5	5	5	26	27.86
NSRA22M125L...	15°	30°	25°	125	6.5	5	5	26	27.86
NSRA22M175L...	15°	30°	25°	175	6.5	5	5	26	27.86
NSRA35M225L...	11.25°	22.5°	7.5°	225	9	8	8	46	47.86
NSRA35M300L...	11.25°	22.5°	7.5°	300	9	8	8	46	47.86
NSRA47M400L...	9°	18°	18°	400	11.5	10	10	76	78.58
NSRA47M500L...	9°	18°	18°	500	11.5	10	10	76	78.58

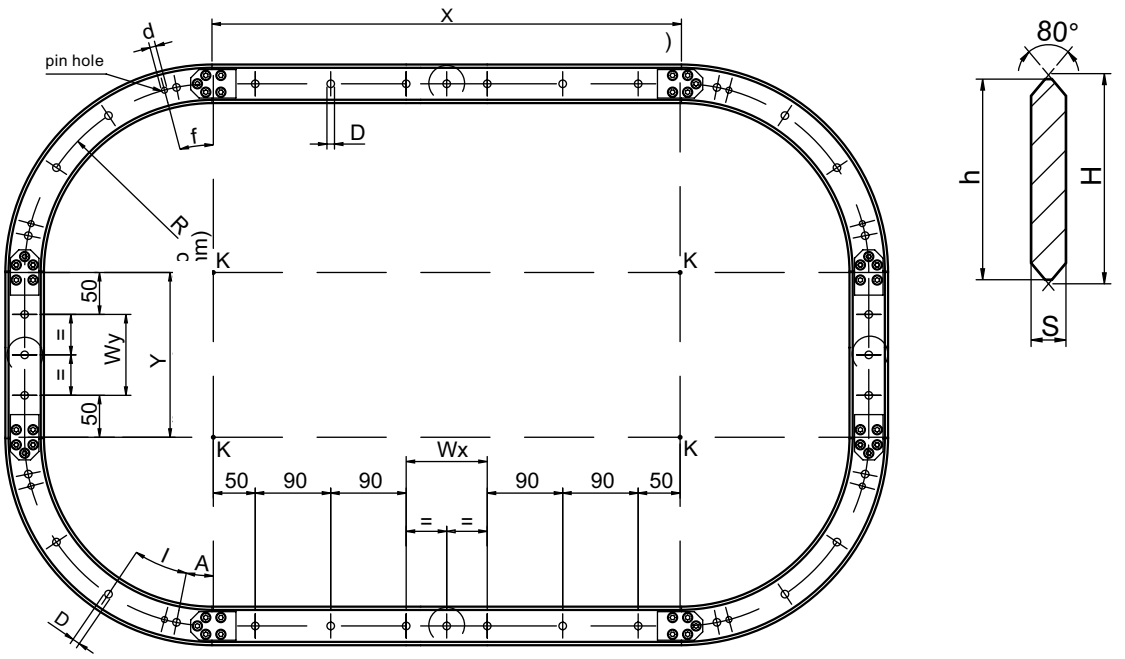
Model representation:

NSRA 35 M225 L2000

NSRA Model Series 35 Model Dimensions M225 Arc Track Radius L2000 Straight Track Length

NSR series arc and linear guideway combination





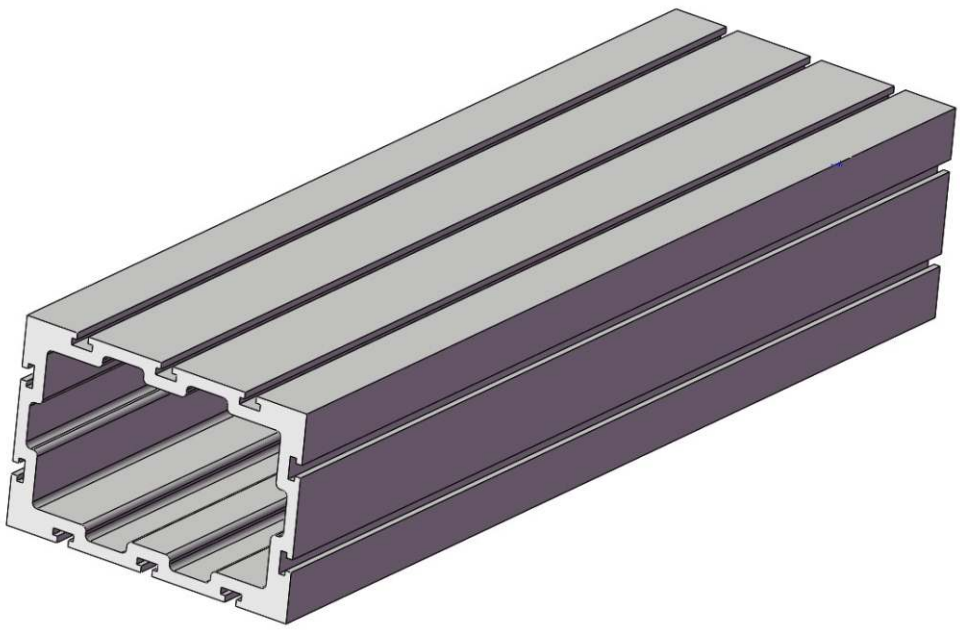
Code	Dimensions (mm)								
	A	l	f	R	D	d	S	h	H
NSRB22M075X...Y...	22.5°	45°	45°	75	6.5	5	5	26	27.86
NSRB22M125X...Y...	15°	30°	25°	125	6.5	5	5	26	27.86
NSRB22M175X...Y...	15°	30°	25°	175	6.5	5	5	26	27.86
NSRB35M225X...Y...	11.25°	22.5°	7.5°	225	9	8	8	46	47.86
NSRB35M300X...Y...	11.25°	22.5°	7.5°	300	9	8	8	46	47.86
NSRB47M400X...Y...	9°	18°	18°	400	11.5	10	10	76	78.58
NSRB47M500X...Y...	9°	18°	18°	500	11.5	10	10	76	78.58

Model representation:

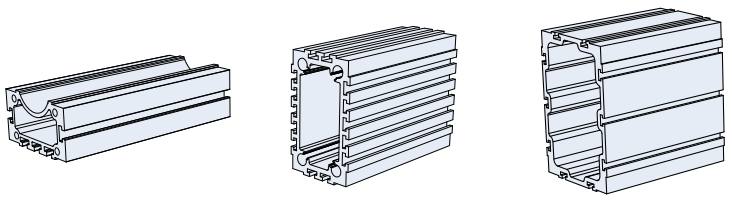
NSRB 35 M225 X1000 Y500

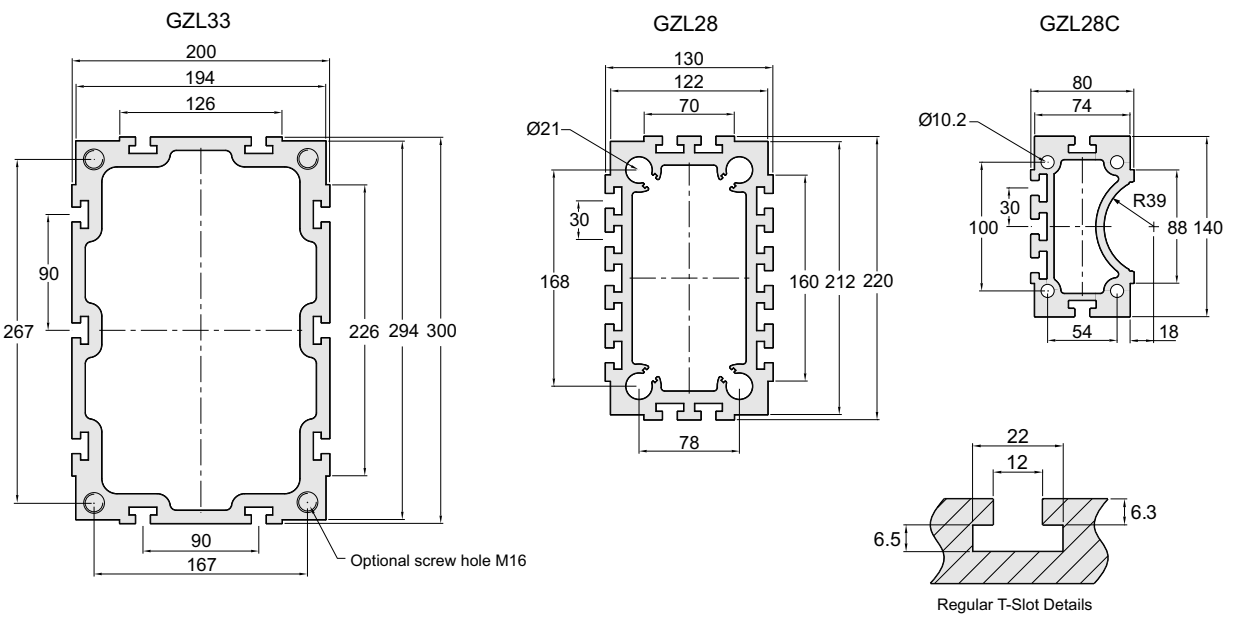
NSRB model series 35 model size M225 arc track radius X1000 is the linear track length in the X direction
Y500 is the linear track length in the Y direction

INDUSTRIAL ALUMINUM PROFILES



Structural beam





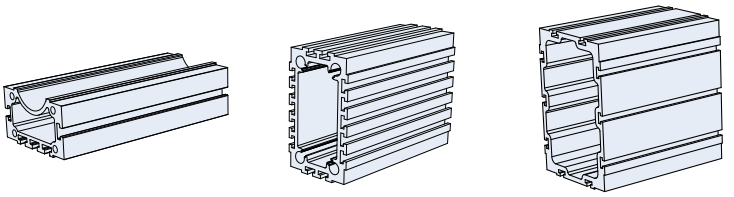
Parameter			GZL28C	GZL28	GZL33
Secondary turning torque	Ix-x	mm^4	$2.8x10^6$	$4.7x10^7$	$16.9x10^7$
	Iy-y		$10.2x10^6$	$1.8x10^7$	$8.4x10^7$
Weight	Q	Kg/m	11.3	24	37.5
Young's modulus	E	N/mm^2	66000		
Maximum allowable bending stress	σ	N/mm^2	90		

Ordering example

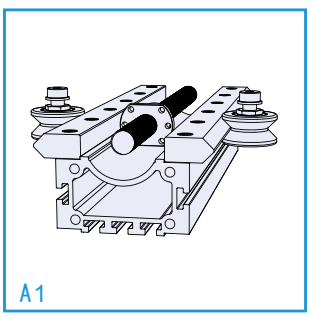
GZL 28C L3500
1 2 3

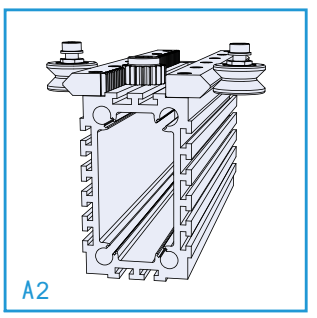
1. GZL represents structural beam
2. Specification 28C 28 33
3. Indicates length (maximum length 6000 mm)

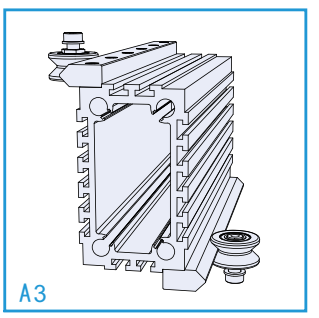
Structural beam

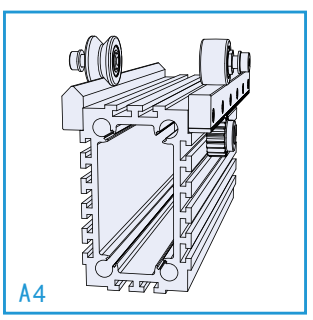


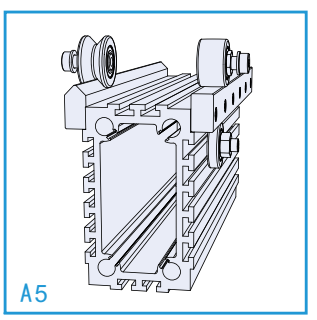
Combination form of structural beam and track

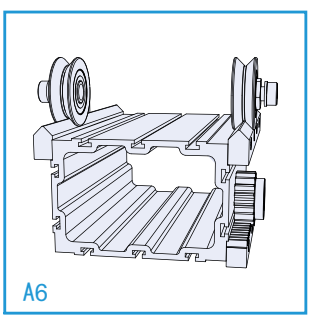


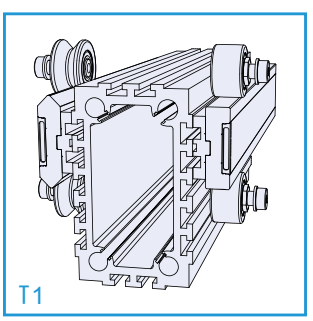


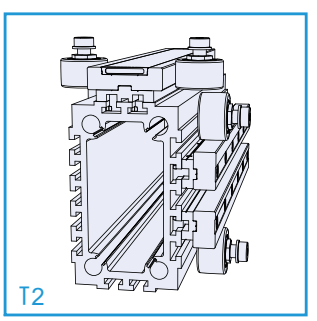


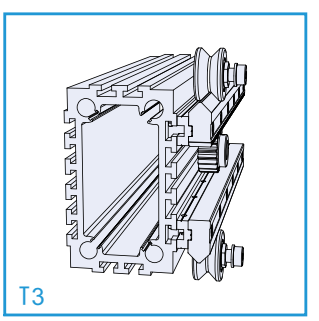


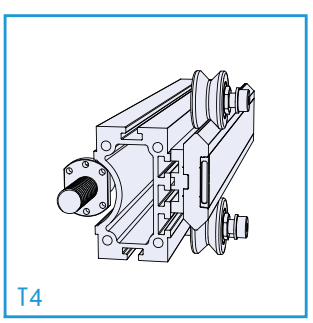


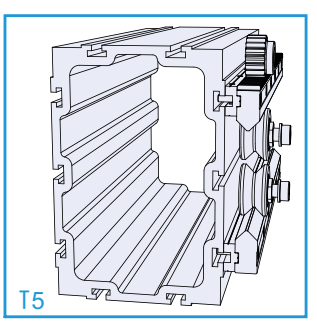




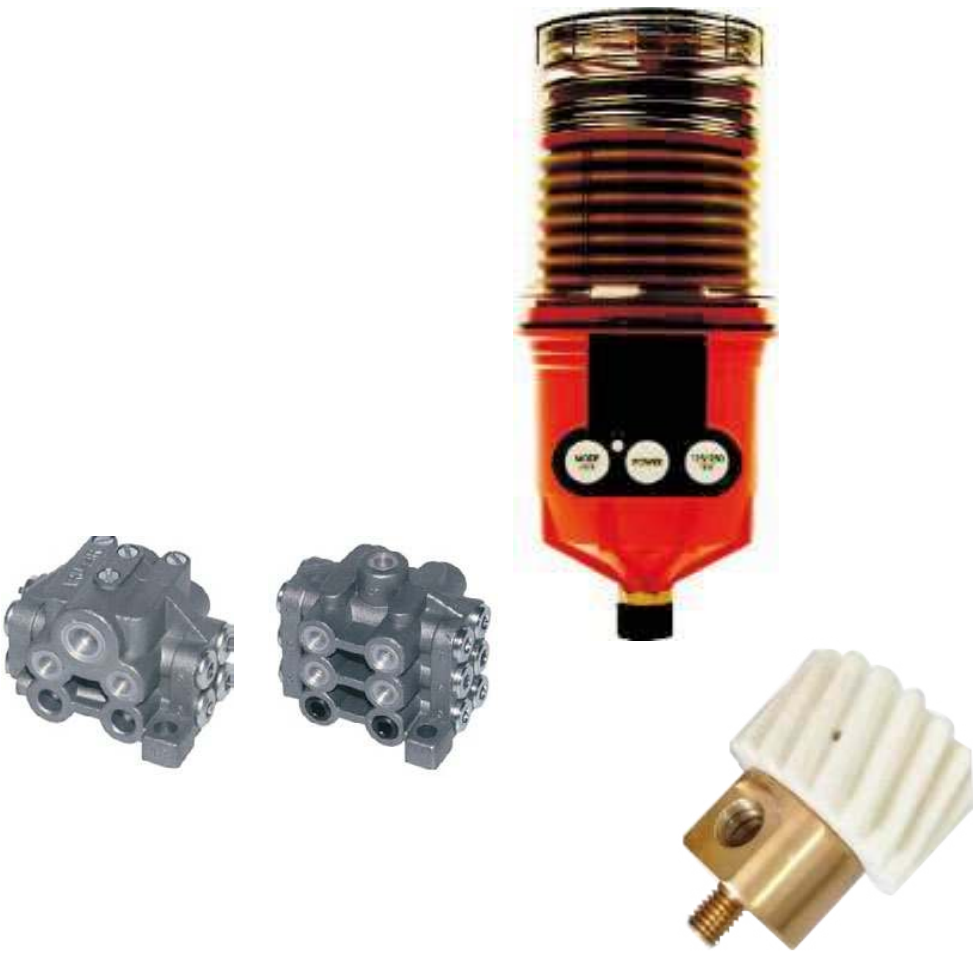






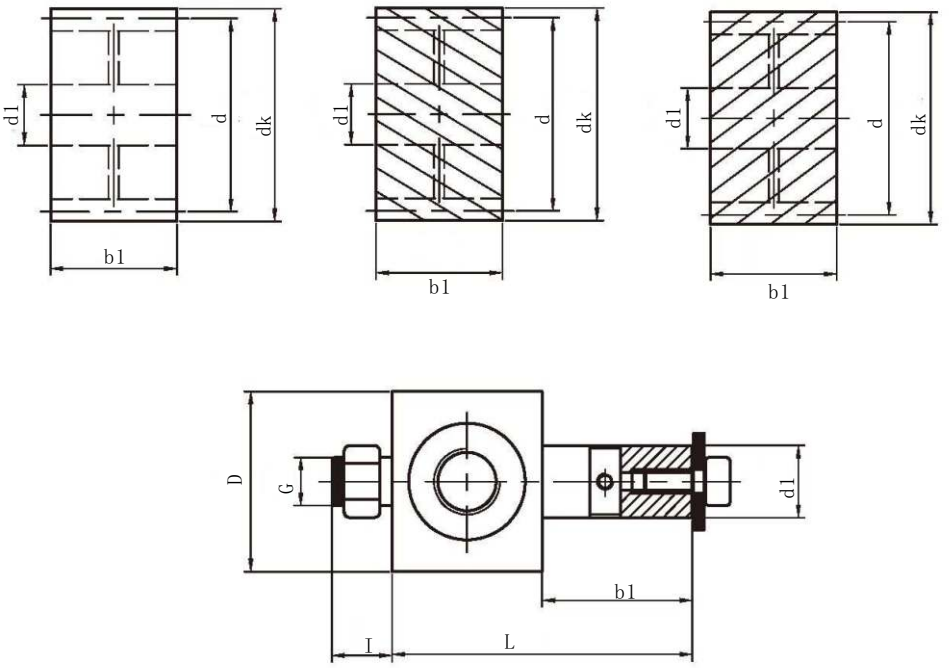


LUBRICATION SYSTEM



Felt pinion&Mounting axle





Code	Module	Z	Bore	Pitch dia	Out dia.	Width	Mounting axle				Fig.	Description
			d1	d	dk	b1	D	L	I	G	*	*****
MSG152620	1.5	26	12	39	42	20	*	*	*	*	1	Straight teeth
MHR152520	1.5	25	12	39.7	42.7	20	*	*	*	*	2	Helical gear right hand
MHL152520	1.5	25	12	39.7	42.7	20	*	*	*	*	3	Helical tooth spiral
M151245	1.5	*	12	*	*	20	30	45	10	M8	4	Mounting shaft
MSG021925	2	19	12	38	42	25	*	*	*	*	1	Straight teeth
MSR021825	2	18	12	38.2	42	25	*	*	*	*	2	Helical gear right hand
MHL021825	2	18	12	38.2	42	25	*	*	*	*	3	Helical tooth spiral
M021250	2	*	12	*	*	25	30	50	10	M8	4	Mounting shaft
MSG031930	3	19	12	57	63	30	*	*	*	*	1	Straight teeth
MHR031830	3	18	12	57.3	63	30	*	*	*	*	2	Helical gear right hand
MHL031830	3	18	12	57.3	63	30	*	*	*	*	3	Helical tooth spiral
M031255	3	*	12	*	*	30	30	55	10	M8	4	Mounting shaft
MSG041940	4	19	12	76	84	40	*	*	*	*	1	Straight teeth
MHR041840	4	18	12	76.5	84	40	*	*	*	*	2	Helical gear right hand
MHL041840	4	18	12	76.5	84	40	*	*	*	*	3	Helical tooth spiral
M041265	4	*	12	*	*	40	30	65	10	M8	4	Mounting shaft

Distributor





ARU-4R-M

Division of point
4R:4 point
6R:6 point
8R:8 point
10R:10 point
12R:12 point
Limit switch(Option)
M: Built-in
No mark:none

The ARU-R type is a distribution valve for a yellow stem pump, which can supply the amount of yellow stems spit out by the pump to the place where the moistening is needed.

The ARU-R-M type is a limit switch distribution valve, which can be operated by the limit switch to determine whether any abnormal conditions occur.

After the distributor operates for one cycle, the indicator rod will move forward and backward by one gear. Because no matter which outlet is blocked, the distribution valve will automatically stop operating.

Keep the temperature at -20℃ -70℃

Code	Discharge point	Discharge volume cc/min	Min.pressure Mpa	Max.pressure Mpa	Central pipe PF	Branch pipe PF	NLGI No.	Net weight kg
ARU-4R	4	0.3	1.5	15	1/4"	1/8"	#000-#1	0.64
ARU-6R	6	0.3	1.5	15	1/4"	1/8"	#000-#1	0.64
ARU-8R	8	0.3	1.5	15	1/4"	1/8"	#000-#1	0.64
ARU-10R	10	0.3	1.5	15	1/8"	1/8"	#000-#1	0.72
ARU-12R	12	0.3	1.5	15	1/8"	1/8"	#000-#1	0.72

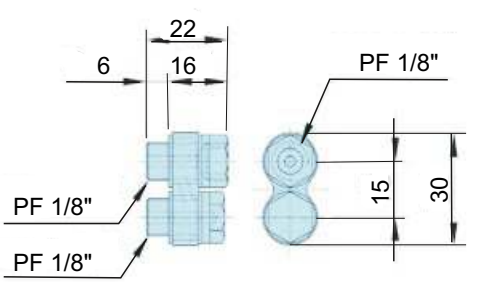
Assistant metal fittings

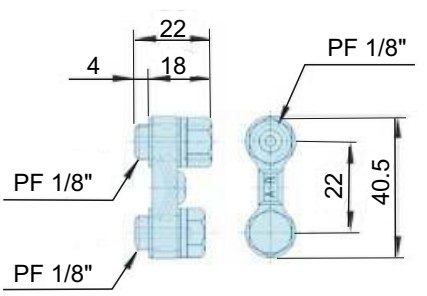


AU-16



AU-26

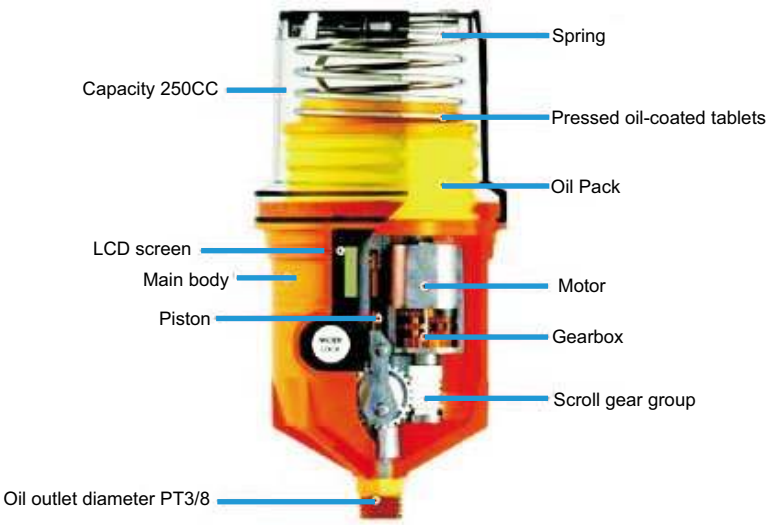




The ARU-R type distribution valve rotates clockwise. If only one discharge port is used, the other discharge port must not be blocked, and an auxiliary device must be used. The discharge volume will be twice as large as the cup.

Lubricator





Points

1. Automatic single-point lubricator with large LCD screen can display: oil supply cycle, oil pack replacement date, power shortage, motor overload, insufficient oil, etc., easy to view. Easy to view the operation and abnormality.

2. Automatic single-point lubricator contains a vertical pump, motor, gear box, so that the operating pressure can be up to 20-60kg/cm2, compared with the general single-point lubricator only 5-10kg/cm, obviously different, can lubricate the pipeline of the lubricator.

Obviously different from the general single-point lubricator only 5-10kg/cm, can lubricate the pipeline longer, more comfortable.

3. Six lubrication intervals, H (0.5 months), 1, 2, 3, 6 and 12 months to choose from.

4. With disposable oil pack and battery. Replacement at the end of the oil supply cycle, no time-consuming refueling, easier to operate and keep clean.

5. Anti-shock, not easy to break the design, the use of temperature range -15 ℃ to 60 ℃, can be applied to the environment is not ideal, not convenient for manual lubrication of the site and equipment.

6. Can be used with a variety of high-performance lubricants, such as mineral multi-effect oil, high load, high speed, high temperature and food grade synthetic lubricants.

Fully automatic single-point lubricant injector scope of application

1. Applicable to anti-wear or daily use of the environment with the danger of inconvenience, can not ensure the lubrication of the equipment.

2. Applicable to a wide range of lubrication equipment: including sliding frames, column shafts, conveyors, large motors, mixers, cranes, air-conditioning systems, dredgers and so on.

3. Commonly used industries include: steel, cement, automobile, petrochemical, pulp, paper, electronics, food and beverage, and so on.

Extended application multi-point lubrication

1. Automatic single-point lubricator can be matched with CV single-cycle dispenser to achieve the purpose of multi-point lubrication, the maximum lubrication can be up to 8 points.

2. Only one piston flows out the lubricating oil each time of single-cycle dispenser, and the lubricating oil flows through the first piston and then flows to the second piston, in order to form a lubricating cycle system. If one lubrication point is not lubricated or blocked, the whole lubrication system will stop, which can be detected visually by the inspection rod or by installing a microswitch.

3. The minimum starting pressure of CV distributor with grease is 15kg/cm2 and the maximum working pressure is 150kgf/cm2.

Code	Stem package quantity	Stem package quantity	Electric brown	Maximum output pressure	Suitable temperature range	Stem product
PM-250	250cc	DC4.5V (Replaceable)	20kgf/cm (280psi)	60kgf/cm (850psi)	-15℃ -60℃	NLGI1-2 Number
PM-500	500cc					

Code	Stem donor cycle	Supply stem fast	Supply	The donor stem is accurately pointed	Stem diameter	Weight
PM-250	0.5, 1, 2, 3, 6, 12 months	About 20 pcs/cycle	0.34cc/stroke	±3%	PT3/8	810g(Host) 1050g(Contains stalks)
PM-500						

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