


GMT GLOBAL INC.
Made in Taiwan



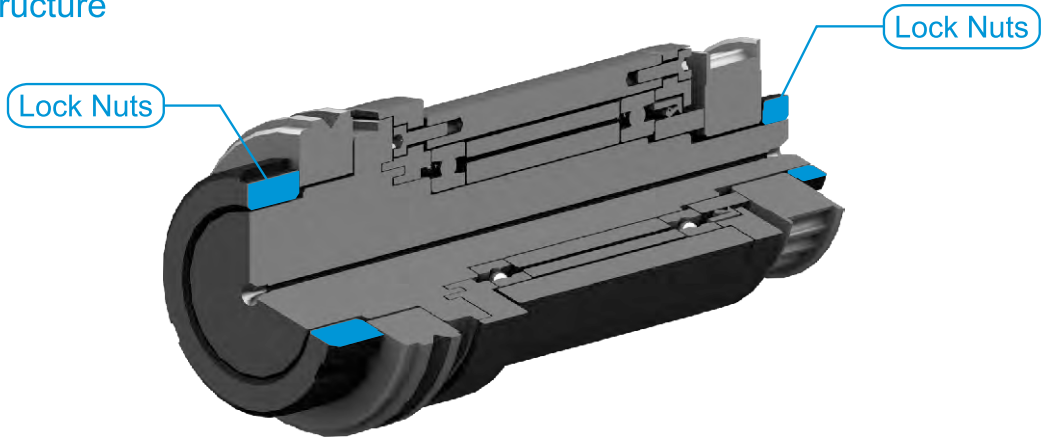
مهتره قفل كن GMT ساخت تايوان

Applications and Directions of Use

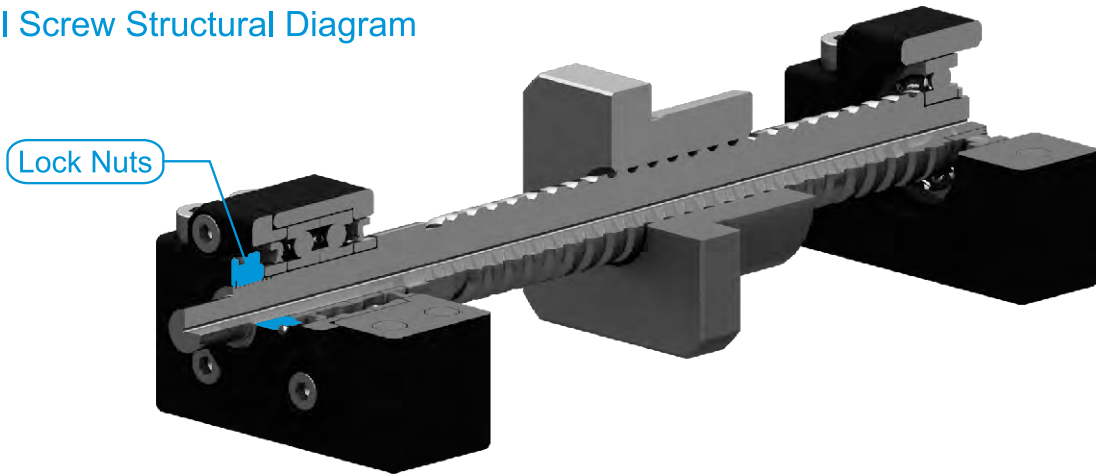
GMT Lock nut is able to effectively improve the deflection of said shaft and lead screw during rotary motion while applied to the mechanical tooling to secure them from loosening, and increase assembly precision and to simplify mounting process and extend usage life.

GMT Lock nut is able to effectively improve the deformation after locking the threads and ease the difficulty in adjustment and calibration in case applied to other facilities.

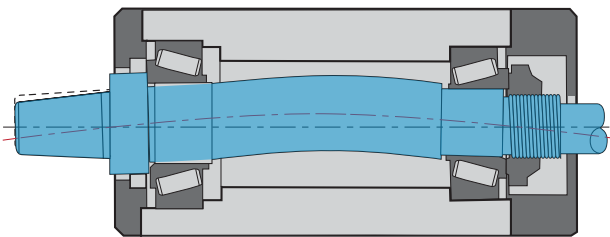
Shaft Structure



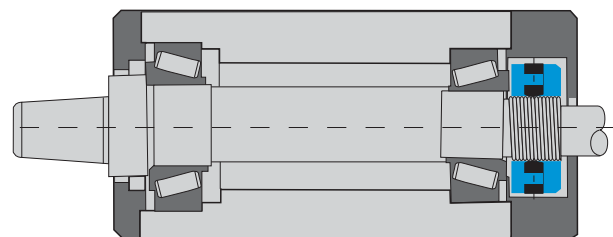
Ball Screw Structural Diagram



Advantages of Using Precision Nut



Ordinary sun nut (crown nut) : Causing deflection, deforming of Rotation Shaft and easier loosening.



GMT precision lock nut : Avoiding deflection of Rotation Shaft and prevent from loosening.



Quality Inspection Process

The precision nut is configured with “higher locking force”, “higher precision” and “higher stability”, and listed below are its main features :

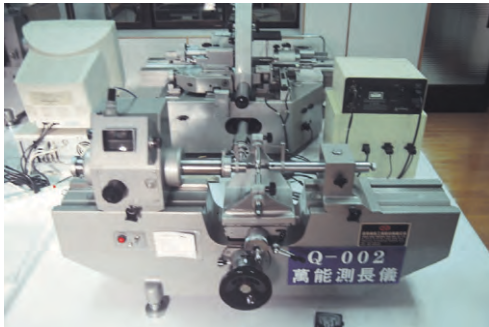
- Thread accuracy meeting ISO 4H in providing tighter securing force to prevent loosening.
- This product is designed with higher precision and stability. It helps the customer achieve higher precision and tightness in product assembly.
- It is used directly with the bearing to save the need of a washer. Easy to assemble while presenting stronger locking force to reduce the uncertainties affecting the accuracy and causing the loosening.
- It can effectively avoid the deflection and deformation of Shaft and Guide Stud during the assembly.
- As the product is manufactured according to specifications, there is no need to order other nuts, thus saving cost and shortening process time.
- Easier for assembly. Extend the service life of bearing and machine.
- Correct assembly procedure and can be repeatedly used.
- ID Ø6~Ø200mm is also available on request.



Material

- Material identification : The materials are selected in accordance with JIS SCM 440 / DIN 42CrMo4 / AISI 4140.
- It meets the prohibition order specified in EU ROHS and REACH SVHC and relevant inspection certificate.

Inspection Instrument



Universal Length Measuring Gauge



Universal Tool Microscope



Profile Equipment Measuring

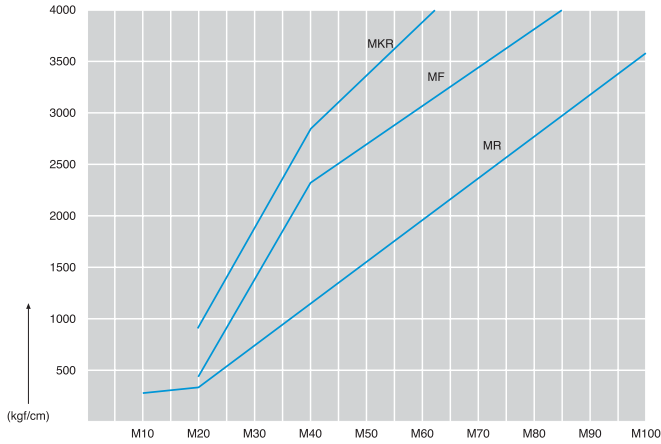


Loosen Torque of Angle Displacement

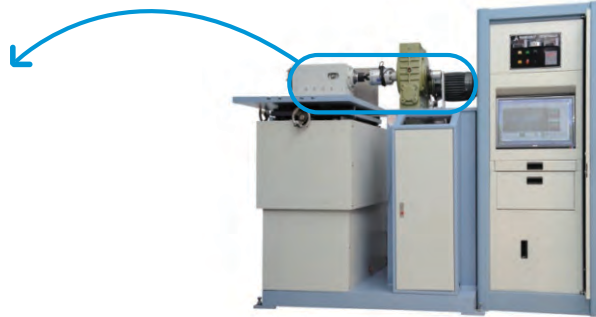
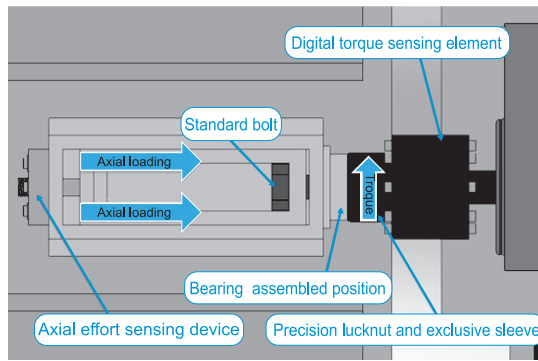
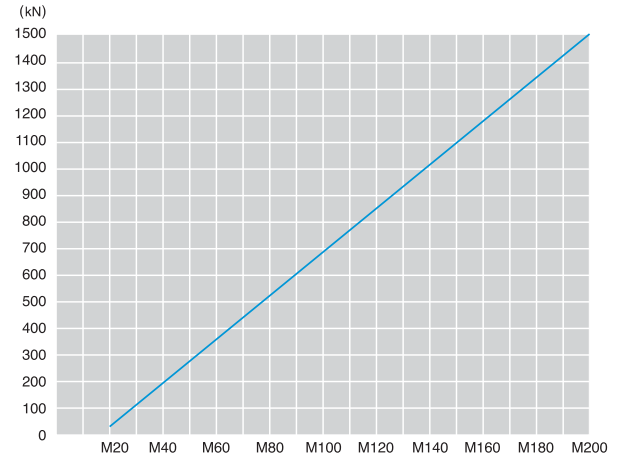
Remarks :

(a) The data are for reference only

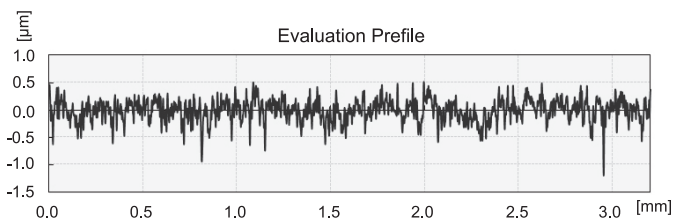
(b) $1\text{Nm} = 10.2\text{kgf}\cdot\text{cm} = 0.73\text{lb}\cdot\text{ft}$



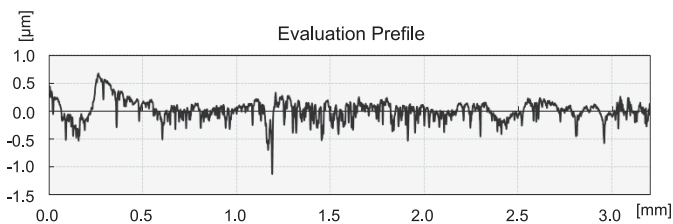
Axial Loading



Surface Roughness



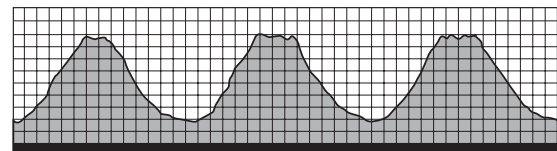
Before Test



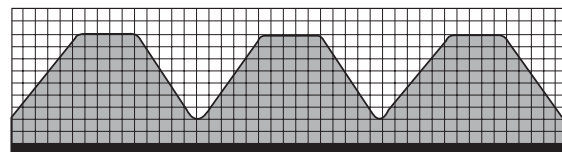
After Test

Surface Profile

Specify that the turned thread will present coarser surface, which will lead to the reduced pre-stress after collapsing as to cause the loosening of nut in a more serious situation.



Thread surface contour of conventional milled nut.

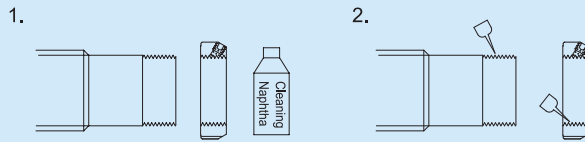


The thread surface contour after grinding the G MF, GMR series precision nuts.



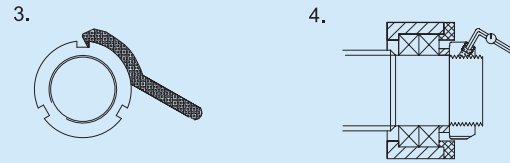
Nut Assembled Procedure

Example : GMF, GMR Series



Step 1 : Blow and clean the Shaft, Guide Stud and Nut.

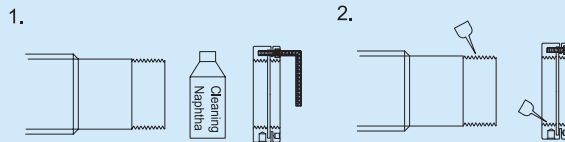
Step 2 : Apply lubricant oil in the thread area of Shaft, Guide Stud and Nut.



Step 3 : Fasten with appropriate tool and torque wrench to the specified torque.

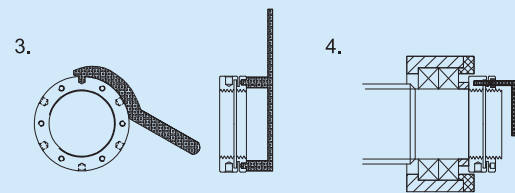
Step 4 : Fasten the lock screw.

Example : GMKR Series



Step 1 : Blow and clean the Shaft, Guide Stud and Nut and then loosen the screw attached to the nut.

Step 2 : Apply lubricant oil in the thread area of Shaft, Guide Stud and Nut.

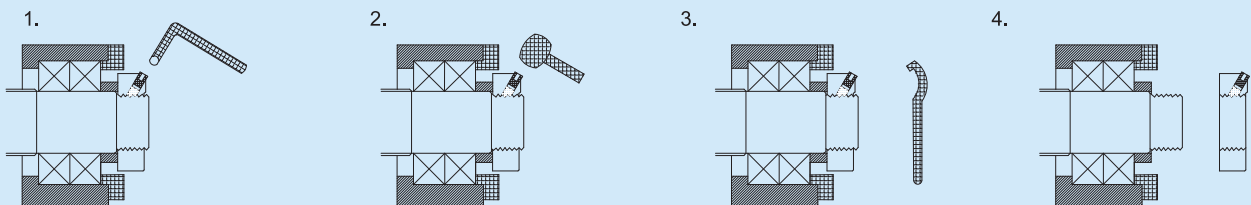


Step 3 : Fasten with appropriate tool and torque wrench to the specified torque.

Step 4 : Fasten the lock screw.

Nut Released Procedure

Example : GMF, GMR Series



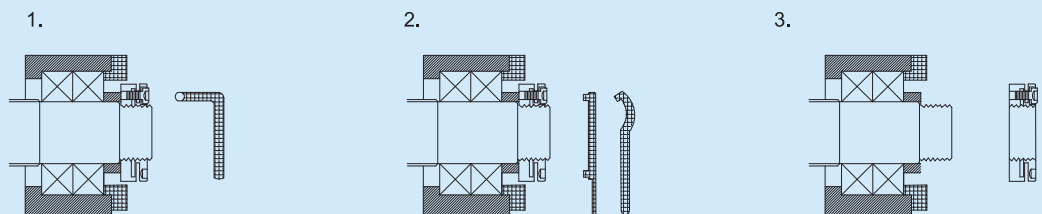
Step 1 : Loosen the lock screw and then clean the thread belly of Shaft and Guide Stud.

Step 2 : Tap the upper part of 3 locking screws on the nut.

Step 3 : Loosen the nut with appropriate tool and wrench.

Step 4 : Remove the nut.

Example : GMKR Series



Step 1 : Loosen the hexagonal socket screw.

Step 2 : Loosen the nut with appropriate tool and wrench.

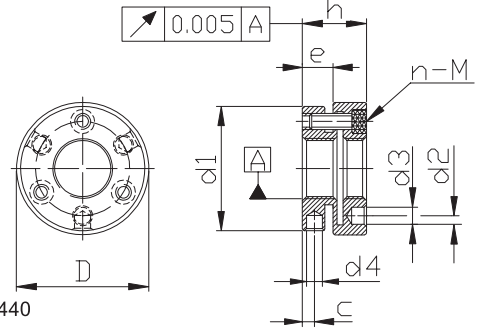
Step 3 : Remove the nut.



GMKR



- This product is mainly used in the fabrication of precision plane grinding. It is designed by focusing on the braking function, allowing the screw surface contour to tightly bond against the male threads through the deformation of the nut itself to create stronger brake performance.
- No need of locking washer and keyway.
- Correct assembly procedure and can also be repeatedly used.

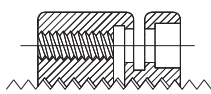


- Material : SCM 440
- Hardness : HRC 28-32
- Accuracy : ISO 4H

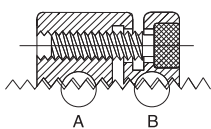
Specification Description

Model No.	Dimensions								Spiral Angle	Screw Torque		
	D	h	e	d1	d2	d3	d4	c		DIN	n	Max. kgf-cm
GMKR 10 x 0.75P	24	14	6.6	22	17	3.2	2.5	2.5	1.44	M3 x10	3	20
GMKR 10 x 1.0P				25	19		3		1.95			
GMKR 12 x 1.0P				26	15		25		19			
GMKR 12 x 1.5P	32	16	7.6	30	22.5	4	3	3	2.10	M4 x10	3	20
GMKR 14 x 1.5P				31	23.5				1.27			
GMKR 15 x 1.0P	33	18	N/A	N/A	24.5	4.3	4	5	1.82	M4 x12	4	30
GMKR 16 x 1.5P	34				25.5				1.21			
GMKR 17 x 1.0P	35				26.5				1.61			
GMKR 18 x 1.5P	36				30.5				0.94			
GMKR 20 x 1.0P	40				32.5				1.44			
GMKR 20 x 1.5P					33				1.30			
GMKR 22 x 1.5P	42				36.5				1.19			
GMKR 24 x 1.5P					45				38.5			
GMKR 25 x 1.5P	46				40.5				1.09			
GMKR 26 x 1.5P					48				42.5			
GMKR 28 x 1.5P	48	45.5	0.94									
GMKR 30 x 1.5P		50	48.5	0.88								
GMKR 32 x 1.5P	50	50.5	0.80									
GMKR 35 x 1.5P		53	52.5	0.74								
GMKR 38 x 1.5P	58	58	0.70									
GMKR 40 x 1.5P		58	55.5	0.67								
GMKR 42 x 1.5P	60	59.5	0.62									
GMKR 45 x 1.5P		68	58	0.58								
GMKR 48 x 1.5P	70	59.5	0.56									
GMKR 50 x 1.5P		70	61.5	0.54								
GMKR 52 x 1.5P	72	63.5	0.51									
GMKR 55 x 1.5P		75	66.5	0.68								
GMKR 55 x 2.0P	75											

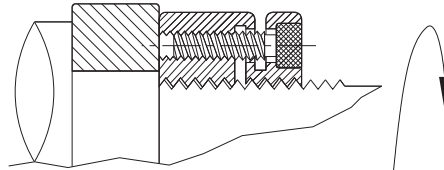
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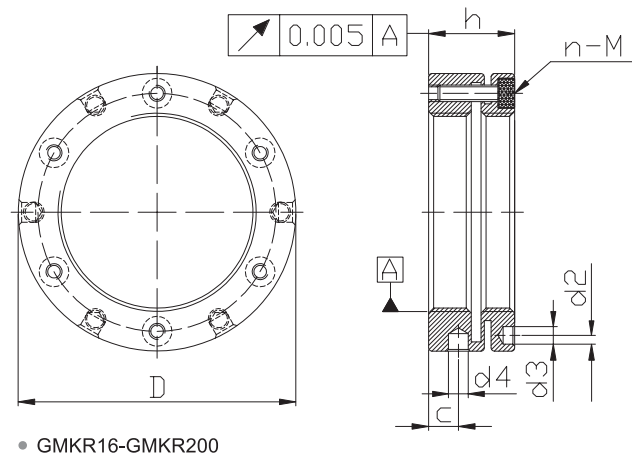


2.



3.





Specification Description

Model No.	Dimensions									Spiral Angle	Screw Torque				
	D	h	e	d1	d2	d3	d4	c	DIN		n	Max. kgf-cm			
GMKR 58 x 1.5P	82	26	N/A	N/A	72.5	5.3	6	9	0.48	M5 x18	61				
GMKR 60 x 1.5P	84				74.5							10.5	0.46		
GMKR 60 x 2.0P	86				76.5									0.62	
GMKR 62 x 1.5P	88	78.5			0.45										
GMKR 65 x 1.5P	95	83													0.43
GMKR 65 x 2.0P	98	85													
GMKR 68 x 1.5P	95	86			9.5	0.41									
GMKR 70 x 1.5P	100	88					0.40								
GMKR 70 x 2.0P	110	95			0.53										
GMKR 72 x 1.5P	115	100				0.39									
GMKR 75 x 1.5P	120	108			8.5		0.37								
GMKR 75 x 2.0P	125	113				0.50									
GMKR 80 x 2.0P	130	118			11		0.46								
GMKR 85 x 2.0P	135	123				0.44									
GMKR 90 x 2.0P	140	128			0.41										
GMKR 95 x 2.0P	145	133	0.39												
GMKR 100 x 2.0P	155	140		13	0.37										
GMKR 105 x 2.0P	160	148	0.31												
GMKR 110 x 2.0P	165	153		0.29											
GMKR 115 x 2.0P	180	165	0.43												
GMKR 120 x 2.0P	190	175		12	0.40										
GMKR 125 x 2.0P	205	185	0.37												
GMKR 130 x 3.0P	215	195		10	0.35										
GMKR 140 x 3.0P	230	210	0.33												
GMKR 150 x 3.0P	240	224		14	0.31										
GMKR 160 x 3.0P	245	229	0.29												
GMKR 170 x 3.0P				8.4	0.28										
GMKR 180 x 3.0P			10			0.31									
GMKR 190 x 3.0P				14	0.29										
GMKR 200 x 3.0P			8			0.28									

Instructions of Ordering :

Before ordering the aforesaid product, please indicate the desired model number. For example : GMKR25 x 1.5P.

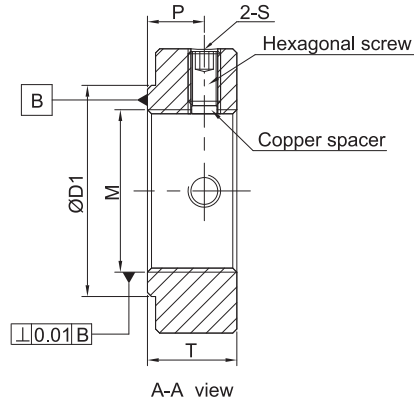
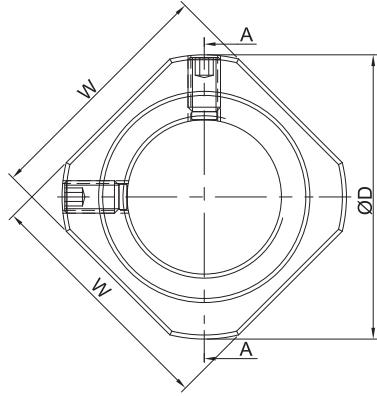
- To order special left-hand thread precision nut, please indicate "-L". For example : GMKR25x1.5P-L.
- To order special precision nut with UK-system threads, please indicate "-U20" (i.e., 20 threads per inch). For example : GMKR25-U20.
- The in-stock inventories are not available for the aforesaid special parts. To purchase, please place the order in advance for the convenience of using.



GRLN-B



GRLN-N



Specification (Material : S50C)

Unit : mm

Model No.		M	W ⁰ _{-0.04}	T	ØD	ØD1	P	S
Black Dyed	Ni Plating							
GRLN06-B	GRLN06-N	M6*P0.75	12	5	14.5	9	2.7	M3
GRLN08-B	GRLN08-N	M8*P1.0	14	6.5	17	13	4	
GRLN10-B	GRLN10-N	M10*P1.0	16	8	19	14	5.5	
GRLN12-B	GRLN12-N	M12*P1.0	19	8	22	17	5.5	
GRLN15-B	GRLN15-N	M15*P1.0	22	8	25	21	4.5	M4
GRLN17-B	GRLN17-N	M17*P1.0	24	13	30	25	9.5	
GRLN20-B	GRLN20-N	M20*P1.0	30	11	35	26	7	M5
GRLN25-B	GRLN25-N	M25*P1.5	35	15	43	33	10	M6
GRLN30-B	GRLN30-N	M30*P1.5	40	20	48	39	14	M8
GRLN35-B	GRLN35-N	M35*P1.5	50	21	60	46	14	M8
GRLN40-B	GRLN40-N	M40*P1.5	50	25	63	50	18	

