

# ACCESSORIES

SPEED TIGER



# Collet 筒夾

## SGER & ER # COLLET

筒夾是筒夾刀桿的主要部件之一  
用於夾持刀具讓螺帽鎖固於筒夾刀桿上  
但是要生產精準的筒夾並不是很簡單  
需要注意的有:

### 1. 材質的選擇

使用材質不正確會減短筒夾壽命  
震虎使用軸承鋼生產筒夾  
這類的材料生產出來的筒夾有較長的壽命與穩定的重複精度

### 2. 筒夾的真圓度

真圓度不佳的筒夾組合刀桿會降低組合精度  
震虎生產的筒夾真圓度是0.001mm

### 3. 筒夾的同心度

同心度不佳的筒夾組合刀桿會降低組合精度  
震虎生產的AA級筒夾同心度是0.001mm  
震虎生產的筒夾同心度是0.003mm

### 4. 筒夾組合刀桿與螺帽的組合精度

AA級ER筒夾+SGER螺帽組合精度0.003mm @3°d  
AA級ER筒夾+ERM螺帽&ER螺帽組合精度0.005mm @3°d  
ER筒夾+SGER螺帽組合精度0.006mm @3°d  
ER筒夾+ERM螺帽&ER螺帽組合精度0.010mm @3°d

### 5. 筒夾的表面處理

為了避免生鏽而造成筒夾的毀損  
震虎生產的ER筒夾全面做防鏽鍍層處理

## SGER & ER # COLLET

Collet is one of the main parts for collet chuck  
It holds the tool for nut to tighten it on the collet chuck  
However, it is never easy to produce an accurate one  
There are some points to notice

### 1. Material

Life of collet will be shortened if produced with WRONG material  
SPEED TIGER produce collet with bearing steel  
Life of collet with such steel is longer and repeat accuracy is good

### 2. Roundness of collet

Collet with poor roundness will reduce the accuracy when assemble with the chuck  
SPEED TIGER produce the collet with roundness 0.001mm

### 3. Concentricity

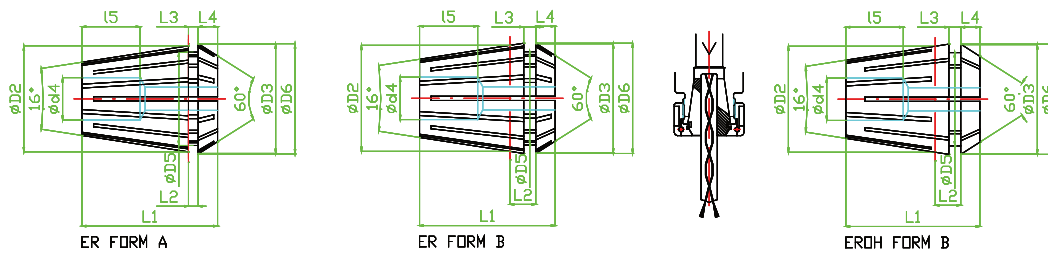
Collet with poor concentricity will reduce the accuracy when assemble with the chuck  
SPEED TIGER produce the AA grade collet with concentricity 0.001mm  
SPEED TIGER produce collet with concentricity 0.003mm

### 4. Assembly accuracy of collet with chuck and nut

AA grade ER collet + SGER nut assembly runout 0.003mm @3°d  
AA grade ER collet + ERM nut & ER nut assembly runout 0.005mm @3°d  
ER collet + SGER nut assembly runout 0.006mm @3°d  
ER collet + ERM nut & ER nut assembly runout 0.010mm @3°d

### 5. Surface treatment of collet

To prevent the rust damaging the collet  
all ER collets produced in SPEED TIGER are with "RUSTPROOF" coating



ER COLLET	ER11	ER16	ER20	ER25	ER32	ER40						
FORM A	1.0-2.5	3.0-4.0	1.0-4.5	5.0-10.0	1.0-4.5	7.0-13.0	1.0-7.5	8.0-16.0	2.0-7.5	8.0-20.0	3.0-8.5	9.0-26.0
OD2	11	16	20	25	32	40						
OD3 0/-0.2	11.30	16.74	20.74	25.74	32.74	40.74						
OD4	5.0	7.0	9.0	10.0	12.0	14.0						
OD5	9.5	13.8	17.4	22.0	29.2	36.2						
OD6	11.6	17.1	21.1	26.1	33.1	41.1						
L1 max.	18.0	27.5	31.5	34.0	40.0	46.0						
L2	2.0	2.3	2.4	2.5	2.7	3.5						
L3	2.0	2.3	2.4	2.5	2.7	3.5						
L4 +/-0.2	2.5	4.0	4.8	5.0	5.5	7.0						
L5 min.	9	9.0	12.0	13.0	15	18						

ER COLLET	ER11	ER16	ER20	ER25	ER32	ER40						
FORM B	1.0-2.5	3.0-7.0	1.0-4.5	5.0-10.0	1.0-4.5	7.0-13.0	1.0-7.5	8.0-16.0	2.0-7.5	8.0-20.0	3.0-8.5	9.0-26.0
OD2	11	16	20	25	32	40						
OD3 0/-0.2	11.5	17.0	21.0	26.0	33.0	41.0						
OD4	5.0	7.5	10.0	12.0	15.0	20.0						
OD5	9.5	13.8	17.4	22.0	29.2	36.2						
OD6	11.70	17.25	21.30	26.30	33.35	41.40						
L1 max.	18.0	27.5	31.5	34.0	40.0	46.0						
L2	3.80	6.26	6.36	6.66	7.16	7.66						
L3	2.0	2.7	2.8	3.1	3.6	4.1						
L4 +/-0.2	2.5	4.0	4.8	5.0	5.5	7.0						
L5 min.	9	9.0	12.0	13.0	15	18						

# ER Collet 筒夾

## SPEED TIGER

防鏽鍍層AA級ER筒夾 DIN6499B/ISO15488B

AA級ER筒夾+SGER螺帽組合精度0.003mm @3\*d

AA級ER筒夾+ERM螺帽&ER螺帽組合精度0.005mm @3\*d

Rustproof coating AA grade ER collet DIN6499B/ISO15488B

AA grade ER collet + SGER nut assembly runout 0.003mm @3\*d

AA grade ER collet + ERM nut & ER nut assembly runout 0.005mm @3\*d

ER11AA (0.01kg/pc)			ER16AA (0.03kg/pc)			ER20AA (0.040kg/pc)		
Ød range	CODE	STOCK	CODE	STOCK	CODE	STOCK	CODE	STOCK
1.0~0.5	JARF ER11AA-010	◎	JARF ER16AA-010	◎	JARF ER20AA-010	◎		
1.5~2.0	JARF ER11AA-015	◎						
2.0~1.5	JARF ER11AA-020	◎						
2.5~2.0	JARF ER11AA-025	◎						
3.0~2.5	JARF ER11AA-030	◎						
3.5~3.0	JARF ER11AA-035	◎						
4.0~3.5	JARF ER11AA-040	◎						
4.5~4.0	JARF ER11AA-045	◎						
5.0~4.5	JARF ER11AA-050	◎						
5.5~5.0	JARF ER11AA-055	◎						
6.0~5.5	JARF ER11AA-060	◎						
6.5~6.0	JARF ER11AA-065	◎						
7.0~6.5	JARF ER11AA-070	◎						
2.0~1.0			JARF ER16AA-020	◎	JARF ER20AA-020	◎		
3.0~2.0			JARF ER16AA-030	◎	JARF ER20AA-030	◎		
4.0~3.0			JARF ER16AA-040	◎	JARF ER20AA-040	◎		
5.0~4.0			JARF ER16AA-050	◎	JARF ER20AA-050	◎		
6.0~5.0			JARF ER16AA-060	◎	JARF ER20AA-060	◎		
7.0~6.0			JARF ER16AA-070	◎	JARF ER20AA-070	◎		
8.0~7.0			JARF ER16AA-080	◎	JARF ER20AA-080	◎		
9.0~8.0			JARF ER16AA-080	◎	JARF ER20AA-090	◎		
10.0~9.0			JARF ER16AA-100	◎	JARF ER20AA-100	◎		
11.0~10.0					JARF ER20AA-110	◎		
12.0~11.0					JARF ER20AA-120	◎		
13.0~12.0					JARF ER20AA-130	◎		
ER25AA (0.09kg/pc)			ER32AA (0.16kg/pc)			ER40AA (0.30kg/pc)		
Ød range	CODE	STOCK	CODE	STOCK	CODE	STOCK	CODE	STOCK
1.0~0.5	JARF ER25AA-010	◎						
2.0~1.0	JARF ER25AA-020	◎						
3.0~2.0	JARF ER25AA-030	◎	JARF ER32AA-030	◎				
4.0~3.0	JARF ER25AA-040	◎	JARF ER32AA-040	◎	JARF ER40AA-040	◎		
5.0~4.0	JARF ER25AA-050	◎	JARF ER32AA-050	◎	JARF ER40AA-050	◎		
6.0~5.0	JARF ER25AA-060	◎	JARF ER32AA-060	◎	JARF ER40AA-060	◎		
7.0~6.0	JARF ER25AA-070	◎	JARF ER32AA-070	◎	JARF ER40AA-070	◎		
8.0~7.0	JARF ER25AA-080	◎	JARF ER32AA-080	◎	JARF ER40AA-080	◎		
9.0~8.0	JARF ER25AA-090	◎	JARF ER32AA-090	◎	JARF ER40AA-090	◎		
10.0~9.0	JARF ER25AA-100	◎	JARF ER32AA-100	◎	JARF ER40AA-100	◎		
11.0~10.0	JARF ER25AA-110	◎	JARF ER32AA-110	◎	JARF ER40AA-110	◎		
12.0~11.0	JARF ER25AA-120	◎	JARF ER32AA-120	◎	JARF ER40AA-120	◎		
13.0~12.0	JARF ER25AA-130	◎	JARF ER32AA-130	◎	JARF ER40AA-130	◎		
14.0~13.0	JARF ER25AA-140	◎	JARF ER32AA-140	◎	JARF ER40AA-140	◎		
15.0~14.0	JARF ER25AA-150	◎	JARF ER32AA-150	◎	JARF ER40AA-150	◎		
16.0~15.0	JARF ER25AA-160	◎	JARF ER32AA-160	◎	JARF ER40AA-160	◎		
17.0~16.0			JARF ER32AA-170	◎	JARF ER40AA-170	◎		
18.0~17.0			JARF ER32AA-180	◎	JARF ER40AA-180	◎		
19.0~18.0			JARF ER32AA-190	◎	JARF ER40AA-190	◎		
20.0~19.0			JARF ER32AA-200	◎	JARF ER40AA-200	◎		
21.0~20.0					JARF ER40AA-210	◎		
22.0~21.0					JARF ER40AA-220	◎		
23.0~22.0					JARF ER40AA-230	◎		
24.0~23.0					JARF ER40AA-240	◎		
25.0~24.0					JARF ER40AA-250	◎		
26.0~25.0					JARF ER40AA-260	◎		

# ER Collet 筒夾

防鏽鍍層ER筒夾 DIN6499B/ISO15488B

ER筒夾+SGER螺帽組合精度0.006mm @3°d

ER筒夾+ERM螺帽&ER螺帽組合精度0.010mm @3°d

Rustproof coating ER collet DIN6499B/ISO15488B

ER collet + SGER nut assembly runout 0.006mm @3°d

ER collet + ERM nut & ER nut assembly runout 0.010mm @3°d

ER11 (0.01kg/pc)			ER16 (0.03kg/pc)			ER20 (0.04kg/pc)		
Od range	CODE	STOCK	CODE	STOCK	CODE	STOCK	CODE	STOCK
1.0-0.5	GFRF ER11-010	☺	GFRF ER16-010	☺	GFRF ER20-010	☺		
1.5-2.0	GFRF ER11-015	☺						
2.0-1.5	GFRF ER11-020	☺						
2.5-2.0	GFRF ER11-025	☺						
3.0-2.5	GFRF ER11-030	☺						
3.5-3.0	GFRF ER11-035	☺						
4.0-3.5	GFRF ER11-040	☺						
4.5-4.0	GFRF ER11-045	☺						
5.0-4.5	GFRF ER11-050	☺						
5.5-5.0	GFRF ER11-055	☺						
6.0-5.5	GFRF ER11-060	☺						
6.5-6.0	GFRF ER11-065	☺						
7.0-6.5	GFRF ER11-070	☺						
2.0-1.0			GFRF ER16-020	☺	GFRF ER20-020	☺		
3.0-2.0			GFRF ER16-030	☺	GFRF ER20-030	☺		
4.0-3.0			GFRF ER16-040	☺	GFRF ER20-040	☺		
5.0-4.0			GFRF ER16-050	☺	GFRF ER20-050	☺		
6.0-5.0			GFRF ER16-060	☺	GFRF ER20-060	☺		
7.0-6.0			GFRF ER16-070	☺	GFRF ER20-070	☺		
8.0-7.0			GFRF ER16-080	☺	GFRF ER20-080	☺		
9.0-8.0			GFRF ER16-090	☺	GFRF ER20-090	☺		
10.0-9.0			GFRF ER16-100	☺	GFRF ER20-100	☺		
11.0-10.0					GFRF ER20-110	☺		
12.0-11.0					GFRF ER20-120	☺		
13.0-12.0					GFRF ER20-130	☺		
ER25 (0.09kg/pc)			ER32 (0.16kg/pc)			ER40 (0.30kg/pc)		
Od range	CODE	STOCK	CODE	STOCK	CODE	STOCK	CODE	STOCK
1.0-0.5	GFRF ER25-010	☺						
2.0-1.0	GFRF ER25-020	☺						
3.0-2.0	GFRF ER25-030	☺	GFRF ER32-030	☺				
4.0-3.0	GFRF ER25-040	☺	GFRF ER32-040	☺	GFRF ER40-040	☺		
5.0-4.0	GFRF ER25-050	☺	GFRF ER32-050	☺	GFRF ER40-050	☺		
6.0-5.0	GFRF ER25-060	☺	GFRF ER32-060	☺	GFRF ER40-060	☺		
7.0-6.0	GFRF ER25-070	☺	GFRF ER32-070	☺	GFRF ER40-070	☺		
8.0-7.0	GFRF ER25-080	☺	GFRF ER32-080	☺	GFRF ER40-080	☺		
9.0-8.0	GFRF ER25-090	☺	GFRF ER32-090	☺	GFRF ER40-090	☺		
10.0-9.0	GFRF ER25-100	☺	GFRF ER32-100	☺	GFRF ER40-100	☺		
11.0-10.0	GFRF ER25-110	☺	GFRF ER32-110	☺	GFRF ER40-110	☺		
12.0-11.0	GFRF ER25-120	☺	GFRF ER32-120	☺	GFRF ER40-120	☺		
13.0-12.0	GFRF ER25-130	☺	GFRF ER32-130	☺	GFRF ER40-130	☺		
14.0-13.0	GFRF ER25-140	☺	GFRF ER32-140	☺	GFRF ER40-140	☺		
15.0-14.0	GFRF ER25-150	☺	GFRF ER32-150	☺	GFRF ER40-150	☺		
16.0-15.0	GFRF ER25-160	☺	GFRF ER32-160	☺	GFRF ER40-160	☺		
17.0-16.0			GFRF ER32-170	☺	GFRF ER40-170	☺		
18.0-17.0			GFRF ER32-180	☺	GFRF ER40-180	☺		
19.0-18.0			GFRF ER32-190	☺	GFRF ER40-190	☺		
20.0-19.0			GFRF ER32-200	☺	GFRF ER40-200	☺		
21.0-20.0					GFRF ER40-210	☺		
22.0-21.0					GFRF ER40-220	☺		
23.0-22.0					GFRF ER40-230	☺		
24.0-23.0					GFRF ER40-240	☺		
25.0-24.0					GFRF ER40-250	☺		
26.0-25.0					GFRF ER40-260	☺		

# EROH Collet 筒夾

## SPEED TIGER

防鍍鍍層AA級EROH止水筒夾 DIN6499B/ISO15488B Rustproof coating AA grade EROH coolant collet DIN6499B/ISO15488B  
 AA級EROH筒夾+SGER螺帽組合精度0.003mm @3\*d AA grade EROH collet + SGER nut assembly runout 0.003mm @3\*d  
 AA級EROH筒夾+ERM螺帽&ER螺帽組合精度0.005mm @3\*d AA grade EROH collet + ERM nut & ER nut assembly runout 0.005mm @3\*d

Ød range	ER11OHAA (0.01kg/pc)		ER16OHAA (0.03kg/pc)		ER20OHAA (0.04kg/pc)	
	CODE	STOCK	CODE	STOCK	CODE	STOCK
3.0~2.9	JARF ER11OHAA-030		JARF ER16OHAA-030			
3.5~3.4	JARF ER11OHAA-035		JARF ER16OHAA-035			
4.0~3.9	JARF ER11OHAA-040		JARF ER16OHAA-040			
4.5~4.4	JARF ER11OHAA-045		JARF ER16OHAA-045			
5.0~4.9	JARF ER11OHAA-050		JARF ER16OHAA-050		JARF ER20OHAA-050	
5.5~5.4	JARF ER11OHAA-055					
6.0~5.9	JARF ER11OHAA-060					
6.5~6.4	JARF ER11OHAA-065					
7.0~6.9	JARF ER11OHAA-070					
5.5~5.0			JARF ER16OHAA-055		JARF ER20OHAA-055	
6.0~5.5			JARF ER16OHAA-060		JARF ER20OHAA-060	
6.5~6.0			JARF ER16OHAA-065		JARF ER20OHAA-065	
7.0~6.5			JARF ER16OHAA-070		JARF ER20OHAA-070	
7.5~7.0			JARF ER16OHAA-075		JARF ER20OHAA-075	
8.0~7.5			JARF ER16OHAA-080		JARF ER20OHAA-080	
8.5~8.0			JARF ER16OHAA-085		JARF ER20OHAA-085	
9.0~8.5			JARF ER16OHAA-090		JARF ER20OHAA-090	
9.5~9.0			JARF ER16OHAA-095		JARF ER20OHAA-095	
10.0~9.5			JARF ER16OHAA-100		JARF ER20OHAA-100	
10.5~10.0					JARF ER20OHAA-105	
11.0~10.5					JARF ER20OHAA-110	
11.5~11.0					JARF ER20OHAA-115	
12.0~11.5					JARF ER20OHAA-120	
12.5~12.0					JARF ER20OHAA-125	
13.0~12.5					JARF ER20OHAA-130	

STOCK ☐=無庫存產品 # STOCK ☐=regular stock | STOCK ☐=少量庫存產品 # STOCK ☐=few stock | STOCK 無標 ☐=標準生產產品 # STOCK BLANK=on request

# EROH Collet 筒夾

AA級EROH筒夾+ERM螺帽&ER螺帽組合精度0.005mm @3\*d AA grade EROH collet + ERM nut & ER nut assembly runout 0.005mm @3\*d

Od range	ER25OHAA (0.09kg/pc)		ER32OHAA (0.16kg/pc)		ER40OHAA (0.30kg/pc)	
	CODE	STOCK	CODE	STOCK	CODE	STOCK
6.0~5.5	JARF ER25OHAA-060					
6.5~6.0	JARF ER25OHAA-065					
7.0~6.5	JARF ER25OHAA-070					
7.5~7.0	JARF ER25OHAA-075					
8.0~7.5	JARF ER25OHAA-080		JARF ER32OHAA-080			
8.5~8.0	JARF ER25OHAA-085		JARF ER32OHAA-085			
9.0~8.5	JARF ER25OHAA-090		JARF ER32OHAA-090			
9.5~9.0	JARF ER25OHAA-095		JARF ER32OHAA-095			
10.0~9.5	JARF ER25OHAA-100		JARF ER32OHAA-100		JARF ER40OHAA-100	
10.5~10.0	JARF ER25OHAA-105		JARF ER32OHAA-105		JARF ER40OHAA-105	
11.0~10.5	JARF ER25OHAA-110		JARF ER32OHAA-110		JARF ER40OHAA-110	
11.5~11.0	JARF ER25OHAA-115		JARF ER32OHAA-115		JARF ER40OHAA-115	
12.0~11.5	JARF ER25OHAA-120		JARF ER32OHAA-120		JARF ER40OHAA-120	
12.5~12.0	JARF ER25OHAA-125		JARF ER32OHAA-125		JARF ER40OHAA-125	
13.0~12.5	JARF ER25OHAA-130		JARF ER32OHAA-130		JARF ER40OHAA-130	
13.5~13.0	JARF ER25OHAA-135		JARF ER32OHAA-135		JARF ER40OHAA-135	
14.0~13.5	JARF ER25OHAA-140		JARF ER32OHAA-140		JARF ER40OHAA-140	
14.5~14.0	JARF ER25OHAA-145		JARF ER32OHAA-145		JARF ER40OHAA-145	
15.0~14.5	JARF ER25OHAA-150		JARF ER32OHAA-150		JARF ER40OHAA-150	
15.5~15.0	JARF ER25OHAA-155		JARF ER32OHAA-155		JARF ER40OHAA-155	
16.0~15.5	JARF ER25OHAA-160		JARF ER32OHAA-160		JARF ER40OHAA-160	
16.5~16.0			JARF ER32OHAA-165		JARF ER40OHAA-165	
17.0~16.5			JARF ER32OHAA-170		JARF ER40OHAA-170	
17.5~17.0			JARF ER32OHAA-175		JARF ER40OHAA-175	
18.0~17.5			JARF ER32OHAA-180		JARF ER40OHAA-180	
18.5~18.0			JARF ER32OHAA-185		JARF ER40OHAA-185	
19.0~18.5			JARF ER32OHAA-190		JARF ER40OHAA-190	
19.5~19.0			JARF ER32OHAA-195		JARF ER40OHAA-195	
20.0~19.5			JARF ER32OHAA-200		JARF ER40OHAA-200	
20.5~20.0					JARF ER40OHAA-205	
21.0~20.5					JARF ER40OHAA-210	
21.5~21.0					JARF ER40OHAA-215	
22.0~21.5					JARF ER40OHAA-220	
22.5~22.0					JARF ER40OHAA-225	
23.0~22.5					JARF ER40OHAA-230	
23.5~23.0					JARF ER40OHAA-235	
24.0~23.5					JARF ER40OHAA-240	
24.5~24.0					JARF ER40OHAA-245	
25.0~24.5					JARF ER40OHAA-250	
25.5~25.0					JARF ER40OHAA-255	
26.0~25.5					JARF ER40OHAA-260	

STOCK ◻=標準在庫品 # STOCK ◻=regular stock | STOCK ◻=少量在庫品 # STOCK ◻=few stock | STOCK ◻=備有現貨 # STOCK ◻=現貨在途 # STOCK ◻=BLANK=on request

# EROH Collet 筒夾

## SPEED TIGER

EROH筒夾+ERM螺帽&ER螺帽組合精度0.010mm @3\*d

EROH collet + ERM nut & ER nut assembly runout 0.010mm @3\*d

Ød range	ER11OH (0.01kg/pc)		ER16OH (0.03kg/pc)		ER20OH (0.04kg/pc)	
	CODE	STOCK	CODE	STOCK	CODE	STOCK
3.0~2.9	JARF ER11OH-030		JARF ER16OH-030			
3.5~3.4	JARF ER11OH-035		JARF ER16OH-035			
4.0~3.9	JARF ER11OH-040		JARF ER16OH-040			
4.5~4.4	JARF ER11OH-045		JARF ER16OH-045			
5.0~4.9	JARF ER11OH-050		JARF ER16OH-050		JARF ER20OH-050	
5.5~5.4	JARF ER11OH-055					
6.0~5.9	JARF ER11OH-060					
6.5~6.4	JARF ER11OH-065					
7.0~6.9	JARF ER11OH-070					
5.5~5.0			JARF ER16OH-055		JARF ER20OH-055	
6.0~5.5			JARF ER16OH-060		JARF ER20OH-060	
6.5~6.0			JARF ER16OH-065		JARF ER20OH-065	
7.0~6.5			JARF ER16OH-070		JARF ER20OH-070	
7.5~7.0			JARF ER16OH-075		JARF ER20OH-075	
8.0~7.5			JARF ER16OH-080		JARF ER20OH-080	
8.5~8.0			JARF ER16OH-085		JARF ER20OH-085	
9.0~8.5			JARF ER16OH-090		JARF ER20OH-090	
9.5~9.0			JARF ER16OH-095		JARF ER20OH-095	
10.0~9.5			JARF ER16OH-100		JARF ER20OH-100	
10.5~10.0					JARF ER20OH-105	
11.0~10.5					JARF ER20OH-110	
11.5~11.0					JARF ER20OH-115	
12.0~11.5					JARF ER20OH-120	
12.5~12.0					JARF ER20OH-125	
13.0~12.5					JARF ER20OH-130	

STOCK ○=標準在庫品 # STOCK □=regular stock | STOCK ●=少量在庫品 # STOCK ◐=few stock | STOCK 無標記=標準生產品 # STOCK BLANK=on request

# EROH Collet 筒夾

Ød range	CODE	STOCK	CODE	STOCK	CODE	STOCK
6.0~5.5	JARF ER25OH-060					
6.5~6.0	JARF ER25OH-065					
7.0~6.5	JARF ER25OH-070					
7.5~7.0	JARF ER25OH-075					
8.0~7.5	JARF ER25OH-080		JARF ER32OH-080			
8.5~8.0	JARF ER25OH-085		JARF ER32OH-085			
9.0~8.5	JARF ER25OH-090		JARF ER32OH-090			
9.5~9.0	JARF ER25OH-095		JARF ER32OH-095			
10.0~9.5	JARF ER25OH-100		JARF ER32OH-100		JARF ER40OH-100	
10.5~10.0	JARF ER25OH-105		JARF ER32OH-105		JARF ER40OH-105	
11.0~10.5	JARF ER25OH-110		JARF ER32OH-110		JARF ER40OH-110	
11.5~11.0	JARF ER25OH-115		JARF ER32OH-115		JARF ER40OH-115	
12.0~11.5	JARF ER25OH-120		JARF ER32OH-120		JARF ER40OH-120	
12.5~12.0	JARF ER25OH-125		JARF ER32OH-125		JARF ER40OH-125	
13.0~12.5	JARF ER25OH-130		JARF ER32OH-130		JARF ER40OH-130	
13.5~13.0	JARF ER25OH-135		JARF ER32OH-135		JARF ER40OH-135	
14.0~13.5	JARF ER25OH-140		JARF ER32OH-140		JARF ER40OH-140	
14.5~14.0	JARF ER25OH-145		JARF ER32OH-145		JARF ER40OH-145	
15.0~14.5	JARF ER25OH-150		JARF ER32OH-150		JARF ER40OH-150	
15.5~15.0	JARF ER25OH-155		JARF ER32OH-155		JARF ER40OH-155	
16.0~15.5	JARF ER25OH-160		JARF ER32OH-160		JARF ER40OH-160	
16.5~16.0			JARF ER32OH-165		JARF ER40OH-165	
17.0~16.5			JARF ER32OH-170		JARF ER40OH-170	
17.5~17.0			JARF ER32OH-175		JARF ER40OH-175	
18.0~17.5			JARF ER32OH-180		JARF ER40OH-180	
18.5~18.0			JARF ER32OH-185		JARF ER40OH-185	
19.0~18.5			JARF ER32OH-190		JARF ER40OH-190	
19.5~19.0			JARF ER32OH-195		JARF ER40OH-195	
20.0~19.5			JARF ER32OH-200		JARF ER40OH-200	
20.5~20.0					JARF ER40OH-205	
21.0~20.5					JARF ER40OH-210	
21.5~21.0					JARF ER40OH-215	
22.0~21.5					JARF ER40OH-220	
22.5~22.0					JARF ER40OH-225	
23.0~22.5					JARF ER40OH-230	
23.5~23.0					JARF ER40OH-235	
24.0~23.5					JARF ER40OH-240	
24.5~24.0					JARF ER40OH-245	
25.0~24.5					JARF ER40OH-250	
25.5~25.0					JARF ER40OH-255	
26.0~25.5					JARF ER40OH-260	

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ER螺帽是DIN6499/ISO15488規範  
與DIN6499/ISO15488規範的A型&B型ER筒夾組合使用  
螺帽是筒夾刀桿的主要部件之一  
用於將夾持刀具的筒夾鎖固於筒夾刀桿上  
但是要生產精準的螺帽並不是很簡單  
需要注意的有:

ER nut is in the norm DIN6499/ISO15488  
It assembles with form A & form B ER collet in the norm of DIN6499/ISO15488  
Nut is one of the main parts for collet chuck  
It tightens the collet with tool on the collet chuck  
However, it is never easy to produce an accurate one  
There are some points to notice

## 1. 材質的選用 1. Material

使用滲碳用鋼材生產的螺帽容易脆裂  
震虎使用調質鋼生產ERM螺帽&ER螺帽  
震虎使用軸承鋼生產SGER螺帽  
這類的鋼材生產出來的螺帽不易脆裂

It will easily crack if produce the nut with carburizing material  
SPEED TIGER produce ERM nut & ER nut with through hardening steel  
SPEED TIGER produce SGER nut with bearing steel  
It will not crack easily with such material

## 2. 螺帽的真圓度 2. Roundness of nut

真圓度不佳的螺帽組合刀桿會降低組合精度  
震虎生產的螺帽真圓度是0.002mm

Nut with poor roundness will reduce the accuracy when assemble with the chuck  
SPEED TIGER produce the nut with roundness 0.002mm

## 3. 螺帽的同心率 3. Concentricity

同心度不佳的螺帽組合刀桿會降低組合精度  
震虎生產的螺帽同心度是0.002mm

Nut with poor concentricity will reduce the accuracy when assemble with the chuck  
SPEED TIGER produce the nut with concentricity 0.002mm

## 4. 螺帽內牙的公差 4. Tolerance of internal thread

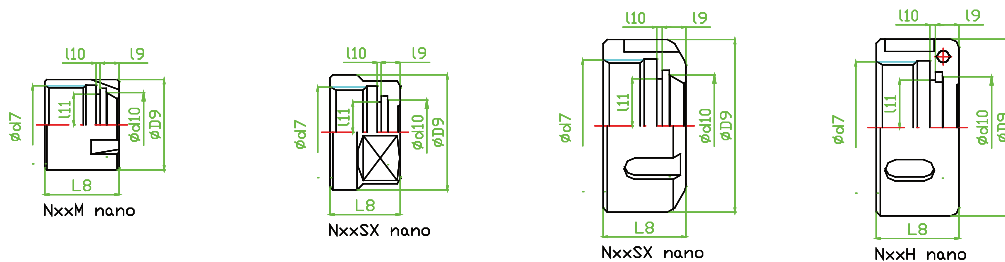
螺帽牙部精度要求在DIN6499/ISO15488規範是ISO6H  
震虎生產的標準是ISO5H

Accuracy of nut at thread part in the norm DIN6499/ISO15488 is ISO6H  
SPEED TIGER produce it ISO5H

## 5. 螺帽組合刀桿與筒夾的組合精度 5. Assembly accuracy of nut with chuck and collet

SGER螺帽+AA級ER筒夾組合精度0.003mm @3\*d  
ERM螺帽&ER螺帽+AA級ER筒夾組合精度0.005mm @3\*d  
SGER螺帽+ER筒夾組合精度0.006mm @3\*d  
ERM螺帽&ER螺帽+ER筒夾組合精度0.010mm @3\*d

SGER nut + AA grade ER collet assembly runout 0.003mm @3\*d  
ERM nut & ER nut + AA grade ER collet assembly runout 0.005mm @3\*d  
SGER nut + ER collet assembly runout 0.006mm @3\*d  
ERM nut & ER nut + ER collet assembly runout 0.010mm @3\*d



ER NUT	ER11M N11MX nano	ER16M N16MX nano	ER20M N20MX nano	ER25M N25MX nano
ød7 ISO5H	M13*P0.75	M19*P1.0	M24*P1.0	M30*P1.0
ØD9	16	22	28	35
Ød10 +0.1/0	12.3	17.7	21.7	27.0
L8	12	18	19	20
I9	3.6	4.6	5.6	5.8
I10 0/-0.2	1.0	1.1	1.2	1.3
I11 max.	5.0	7.2	9.2	11.5

ER NUT	ER11 N11SX nano	ER16 N16SX nano	ER20 N20SX nano	ER25 N25SX nano	ER32 N32SX nano	ER40 N40SX nano
ød7 ISO5H	M14*P0.75	M22*P1.5	M25*P1.5	M32*P1.5	M40*P1.5	M50*P1.5
ØD9	19	28	34	42	50	63
Ød10 +0.1/0	12.3	17.7	21.7	27.0	34.0	42.0
L8	11.5	17.0	19.0	20.0	23.0	26.0
I9	3.1	4.6	5.6	5.8	6.3	7.5
I10 0/-0.2	1.0	1.1	1.2	1.3	1.6	2.1
I11 max.	5.0	7.2	9.2	11.5	14.9	18.5
W 0/-0.2	17	25	30			
NUT	N16H		N20H	N25H	N32H	N40H
ØD9	32		36	43	51	63

# ER NUT 螺帽

ER螺帽鎖緊力表

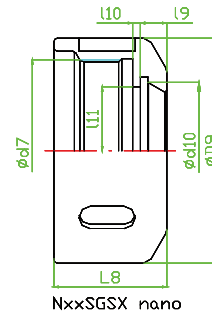
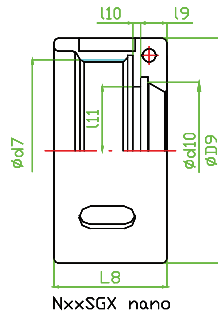
ER螺帽 ER NUT	ER筒夾 ER COLLET	最大鎖緊力 MAX. TORQUE
N11MX nano	ER11(1.0~2.5)	10Nm
	ER11(3.0~0.0)	12Nm
N16MX nano	ER16(1.0~4.5)	15Nm
	ER16(5.0~10.0)	17Nm
N20MX nano	ER20(1.0~6.5)	21Nm
	ER20(7.0~13.0)	23Nm
N25MX nano	ER25(1.0~6.5)	24Nm
	ER25(7.0~16.0)	40Nm

ER nut clamping torque chart

ER螺帽 ER NUT	ER筒夾 ER COLLET	最大鎖緊力 MAX. TORQUE
N11SX nano	ER11(1.0~2.5)	12Nm
	ER11(3.0~0.0)	25Nm
N16SX nano	ER16(1.0~4.5)	30Nm
	ER16(5.0~10.0)	55Nm
N20SX nano	ER20(1.0~6.5)	45Nm
	ER20(7.0~13.0)	80Nm
N25SX nano	ER25(1.0~6.5)	55Nm
	ER25(7.0~16.0)	100Nm
N32SX nano	ER32(2.0~6.5)	70Nm
	ER32(7.0~20.0)	135Nm
N40SX nano	ER40(3.0~7.5)	100Nm
	ER40(8.0~26.0)	170Nm

NxxMX(SX) nano與NxxMX(SX)使用相同扭力值

NxxMX(SX) nano & NxxMX(SX) are with the same torque



SGER	SGER16	SGER20	SGER25	SGER32	SGER40
NUT	N16SGX nano N16SGSX nano	N20SGX nano N20SGSX nano	N25SGX nano N25SGSX nano	N32SGX nano N32SGSX nano	N40SGX nano N40SGSX nano
Ød7 ISO5H	M24*P1.0	M28*P1.0	M34*P1.0	M42*P1.0	M52*P1.0
ØD9	34	38	44	52	62
Ød10 +0.1/0	17.7	21.7	27.0	34.0	42.0
L8	20.6	22.5	24.0	26.0	29.0
l9	4.6	5.6	5.8	6.3	7.5
l10 0/-0.2	1.1	1.2	1.3	1.6	2.1
l11 max.	7.2	9.2	11.5	14.9	18.5

SGER螺帽鎖緊力表 // SGER nut clamping torque chart

SGER螺帽 SGER NUT	ER筒夾 ER COLLET	最大鎖緊力 MAX. TORQUE
N16SGX	ER16(1.0~4.5)	30Nm
	ER16(5.0~10.0)	55Nm
N20SGX	ER20(1.0~6.5)	45Nm
	ER20(7.0~13.0)	80Nm
N25SGX	ER25(1.0~6.5)	55Nm
	ER25(7.0~16.0)	100Nm
N32SGX	ER32(2.0~6.5)	70Nm
	ER32(7.0~20.0)	135Nm
N40SGX	ER40(3.0~7.5)	100Nm
	ER40(8.0~26.0)	170Nm

NxxSGX nano與NxxSGSX nano使用相同扭力值

NxxSGX nano & NxxSGSX nano are with the same torque

# ERM & ER NUT

SPEED TIGER

## ERM高速平衡奈米螺帽NxMX nano // ERM balanced nano nut NxMX nano

STOCK	CODE	Ød7 ISO5H	Ød9	l8	max. Nm	W(KG)
⊙	N08MX nano	M10*P0.75	12	10.8	5Nm	0.004
⊙	N11MX nano	M13*P0.75	16	12.0	12Nm	0.008
⊙	N16MX nano	M19*P1.0	22	18.0	17Nm	0.016
⊙	N20MX nano	M24*P1.0	28	19.0	23Nm	0.030
⊙	N25MX nano	M30*P1.0	35	20.0	40Nm	0.050

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## ERM高速平衡螺帽NxMX // ERM balanced nut NxMX

STOCK	CODE	Ød7 ISO5H	Ød9	l8	max. Nm	W(KG)
⊙	N08MX	M10*P0.75	12	10.8	5Nm	0.004
⊙	N11MX	M13*P0.75	16	12.0	12Nm	0.008
⊙	N16MX	M19*P1.0	22	18.0	17Nm	0.016
⊙	N20MX	M24*P1.0	28	19.0	23Nm	0.030
⊙	N25MX	M30*P1.0	35	20.0	40Nm	0.050

STOCK ⊙=標準在庫品 # STOCK ⊙=regular stock | STOCK ⊙=少量在庫品 # STOCK ⊙=few stock | STOCK ⊙=標示=標準生產品 # STOCK BLANK=on request



## ER高速平衡奈米螺帽NxSX nano // ER balanced nano nut NxSX nano

STOCK	CODE	Ød7 ISO5H	Ød9	l8	max. Nm	W(KG)
⊙	N11SX nano	M14*P0.75	19	11.5	25Nm	0.012
⊙	N16SX nano	M22*P1.5	28	17.0	55Nm	0.035
⊙	N20SX nano	M25*P1.5	34	19.0	80Nm	0.060
⊙	N16MN nano	M19*P1.0	24	18.0	17Nm	0.020
⊙	N16CC nano	M22*P1.5	28	13.0	55Nm	0.030

STOCK ⊙=標準在庫品 # STOCK ⊙=regular stock | STOCK ⊙=少量在庫品 # STOCK ⊙=few stock | STOCK ⊙=標示=標準生產品 # STOCK BLANK=on request



## ER高速平衡螺帽NxSX // ER balanced nut NxSX

STOCK	CODE	Ød7 ISO5H	Ød9	l8	max. Nm	W(KG)
⊙	N11SX	M14*P0.75	19	11.5	25Nm	0.012
⊙	N16SX	M22*P1.5	28	17.0	55Nm	0.035
⊙	N20SX	M25*P1.5	34	19.0	80Nm	0.060
⊙	N16MN	M19*P1.0	24	18.0	17Nm	0.020
⊙	N16CC	M22*P1.5	28	13.0	55Nm	0.030

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## ER高速平衡奈米螺帽NxSX nano // ER balanced nano nut NxSX nano

STOCK	CODE	Ød7 ISO5H	Ød9	l8	max. Nm	W(KG)
⊙	N25SX nano	M32*P1.5	42	20.0	100Nm	0.090
⊙	N32SX nano	M40*P1.5	50	23.0	135Nm	0.150
⊙	N40SX nano	M50*P1.5	63	26.0	170Nm	0.260

## ER高速平衡螺帽NxSX // ER balanced nut NxSX

STOCK	CODE	Ød7 ISO5H	Ød9	l8	max. Nm	W(KG)
⊙	N25SX	M32*P1.5	42	20.0	100Nm	0.090
⊙	N32SX	M40*P1.5	50	23.0	135Nm	0.150
⊙	N40SX	M50*P1.5	63	26.0	170Nm	0.260

STOCK ⊙=標準在庫品 # STOCK ⊙=regular stock | STOCK ⊙=少量在庫品 # STOCK ⊙=few stock | STOCK ⊙=標示=標準生產品 # STOCK BLANK=on request



## ER高速平衡鋼珠螺帽NxXH // ER ball bearing nut NxXH

STOCK	CODE	Ød7 ISO5H	Ød9	l8	max. Nm	W(KG)
⊙	N16H	M22*P1.5	34	17.0	55Nm	0.10
⊙	N20H	M25*P1.5	36	19.0	80Nm	0.15
⊙	N25H	M32*P1.5	43	20.0	100Nm	0.20
⊙	N32H	M40*P1.5	51	23.0	135Nm	0.25
⊙	N40H	M50*P1.5	63	26.0	170Nm	0.40

STOCK ⊙=標準在庫品 # STOCK ⊙=regular stock | STOCK ⊙=少量在庫品 # STOCK ⊙=few stock | STOCK ⊙=標示=標準生產品 # STOCK BLANK=on request



# SGER NUT



supERgrip SGER 高速平衡奈米調球螺帽 NxxSGX

supERgrip SGER balanced nano ball bearing nut NxxSGX

STOCK	CODE	Ød7 ISO6H	Ød9	l8	max. Nm	W(KG)
⊙	N16SGX nano	M24*P1.0	34	20.6	55Nm	0.10
⊙	N20SGX nano	M28*P1.0	38	22.5	80Nm	0.15
⊙	N25SGX nano	M34*P1.0	44	24.0	100Nm	0.20
⊙	N32SGX nano	M42*P1.0	52	26.0	135Nm	0.25
⊙	N40SGX nano	M52*P1.0	62	29.0	170Nm	0.40

STOCK ⊙=標準在庫品 # STOCK ○=regular stock | STOCK ⊖=少量在庫品 # STOCK ⊘=few stock | STOCK ⊙=標準在庫品 # STOCK BLANK=on request

supERgrip SGER 高速平衡奈米螺帽 NxxSGSX

supERgrip SGER balanced nano nut NxxSGSX

STOCK	CODE	Ød7 ISO6H	Ød9	l8	max. Nm	W(KG)
⊙	N16SGSX nano	M24*P1.0	34	20.6	55Nm	0.10
⊙	N20SGSX nano	M28*P1.0	38	22.5	80Nm	0.15
⊙	N25SGSX nano	M34*P1.0	44	24.0	100Nm	0.20
⊙	N32SGSX nano	M42*P1.0	52	26.0	135Nm	0.25
⊙	N40SGSX nano	M52*P1.0	62	29.0	170Nm	0.40

STOCK ⊙=標準在庫品 # STOCK ○=regular stock | STOCK ⊖=少量在庫品 # STOCK ⊘=few stock | STOCK ⊙=標準在庫品 # STOCK BLANK=on request

### 熱膨脹燒結刀桿附件

#### Shrink fit chucks accessories

##### 中心出水止動螺絲 / coolant through backup screw

STOCK	CODE		W(KG)
◎	BK-EZ-M05*P0.8	FOR EZ06	0.01
◎	BK-EZ-M06*P1.0	FOR EZ08	0.01
◎	BK-EZ-M08*P1.0	FOR EZ10	0.02
◎	BK-EZ-M10*P1.0	FOR EZ12/EZ14	0.02
◎	BK-EZ-M12*P1.0	FOR EZ16/EZ18	0.03
◎	BK-EZ-M16*P1.0	FOR EZ20/EZ25/EZ32	0.04

STOCK ◎=標準在庫品 # STOCK ○=regular stock



##### 中心出水止動螺絲 / coolant through backup screw

STOCK	CODE		W(KG)
◎	BK-EZKK-M05*P0.8	FOR EZ06KK	0.01
◎	BK-EZKK-M06*P1.0	FOR EZ08KK	0.01
◎	BK-EZKK-M08*P1.0	FOR EZ10KK	0.02
◎	BK-EZKK-M10*P1.0	FOR EZ12KK/EZ14KK	0.02
◎	BK-EZKK-M12*P1.0	FOR EZ16KK/EZ18KK	0.03
◎	BK-EZKK-M16*P1.0	FOR EZ20KK/EZ25KK/EZ32KK	0.04

STOCK ◎=標準在庫品 # STOCK ○=regular stock



##### 中心出水止動螺絲(僅適用BT30AD-EZ, BT40AD-EZX, BT50AD-EZX系列)

##### coolant through backup screw for BT30AD-EZ, BT40AD-EZX, BT50AD-EZX

STOCK	CODE		W(KG)
◎	BK-EZ-M05*P0.8	FOR EZ06	0.01
◎	BK-EZ-M06*P1.0	FOR EZ08	0.01
◎	BK-EZ-M08*P1.25	FOR EZ10	0.02
◎	BK-EZ-M10*P1.5	FOR EZ12/EZ14	0.02
◎	BK-EZ-M12*P1.75	FOR EZ16/EZ18	0.03
◎	BK-EZ-M16*P2.0	FOR EZ20/EZ25/EZ32	0.04

STOCK ◎=標準在庫品 # STOCK ○=regular stock



##### 長度調整器 / length setting adaptor

STOCK	CODE	W(KG)
	EZ-AA-06	1.00
	EZ-AA-08	1.00
	EZ-AA-10	1.00
	EZ-AA-12	1.00
	EZ-AA-14	1.00
	EZ-AA-16	1.00
	EZ-AA-18	1.00
	EZ-AA-20	1.00
	EZ-AA-25	1.00
	EZ-AA-32	1.00

STOCK ◎=標準在庫品 # STOCK ○=regular stock | STOCK ◐=少量在庫品 # STOCK ◑=few stock | STOCK 無標示=標準生產品 # STOCK BLANK=on request



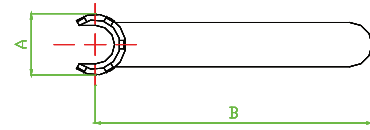
# Accessories

## 配件

### ERM螺帽扳手 NxxMX nano & NxxMX // ERM nut wrench for NxxMX nano & NxxMX

STOCK	CODE	A	B	W(KG)
	W-ER08M (N08M nano, N08M)	12.4	70	0.03
◎	W-ER11M (N11M nano, N11M)	16.8	90	0.04
◎	W-ER16M (N16M nano, N16M)	22.8	110	0.06
◎	W-ER20M (N20M nano, N20M)	29.0	120	0.07
	W-ER25M (N25M nano, N25M)	36.0	130	0.12

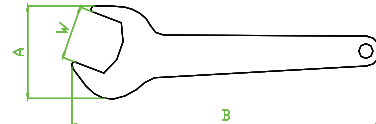
STOCK ◎=標準在庫品 # STOCK ○=regular stock | STOCK ⇨=少量在庫品 # STOCK ⇨=few stock | STOCK 無標示=標準生產品 # STOCK BLANK=on request



### ER螺帽扳手 NxxSX nano & NxxSX // ER nut wrench for NxxSX nano & NxxSX

STOCK	CODE	W	A	B	W(KG)
	W-ER11 (N11SX nano, N11S)	17	32	95	0.13
◎	W-ER16 (N11SX nano, N11S)	25	44	145	0.15
◎	W-ER20 (N11SX nano, N11S)	30	52	170	0.20

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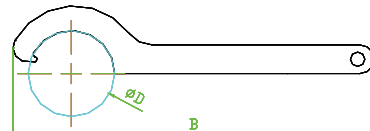


### ER螺帽&ER鋼珠螺帽扳手 NxxSX nano & NxxSX & NxxH

#### ER nut wrench for NxxSX nano & NxxSX & NxxH

STOCK	CODE	ØD	B	W(KG)
◎	W-FK04 (N16H)	32	170	0.07
◎	W-FK05 (N20H)	36	170	0.10
◎	W-FK06 (N25H, N25SX nano, N25SX)	43	170	0.11
◎	W-FK08 (N32H, N32SX nano, N32SX)	51	210	0.19
◎	W-FK09 (N40H, N40SX nano, N40SX)	63	230	0.27

STOCK ◎=標準在庫品 # STOCK ○=regular stock | STOCK ⇨=少量在庫品 # STOCK ⇨=few stock | STOCK 無標示=標準生產品 # STOCK BLANK=on request

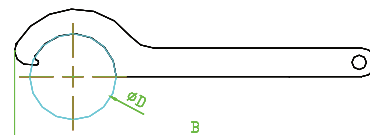


### supERgrip SGER 奈米鋼珠螺帽 & SGER 奈米螺帽扳手 NxxSGX & NxxSGSX

#### supERgrip SGER nut wrench for NxxSGX & NxxSGSX

STOCK	CODE	ØD	B	W(KG)
◎	W-FK04 (N16SGX nano) (N16SGSX nar)	32	170	0.07
◎	W-FK05 (N20SGX nano) (N20SGSX nar)	36	170	0.10
◎	W-FK06 (N25SGX nano) (N25SGSX nar)	43	170	0.11
◎	W-FK08 (N32SGX nano) (N32SGSX nar)	51	210	0.19
◎	W-FK09 (N40SGX nano) (N40SGSX nar)	63	230	0.27

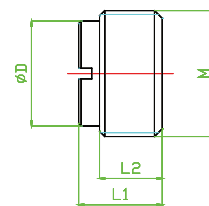
STOCK ◎=標準在庫品 # STOCK ○=regular stock | STOCK ⇨=少量在庫品 # STOCK ⇨=few stock | STOCK 無標示=標準生產品 # STOCK BLANK=on request



### 止動螺絲 // Backup screw

STOCK	CODE	ØD	L1	L2	W(KG)
◎	BK-ER11-M08*P1.0	6	10	7	0.01
◎	BK-ER16-M11*P1.0	8	12	9	0.01
◎	BK-ER20-M14*P1.0	11	13	9	0.02
◎	BK-ER25-M18*P1.5	15	14	10	0.02
◎	BK-ER32-M24*P1.5	20	16	12	0.03
◎	BK-ER40-M28*P1.5	25	18	14	0.04

STOCK ◎=標準在庫品 # STOCK ○=regular stock | STOCK ⇨=少量在庫品 # STOCK ⇨=few stock | STOCK 無標示=標準生產品 # STOCK BLANK=on request



### 中心出水止動螺絲 // Coolant though backup screw

STOCK	CODE	ØD	L1	L2	W(KG)
◎	BK-ER11C-M08*P1.0	6	10	7	0.01
◎	BK-ER16C-M11*P1.0	8	12	9	0.01
◎	BK-ER20C-M14*P1.0	11	13	9	0.02
◎	BK-ER25C-M18*P1.5	15	14	10	0.02
◎	BK-ER32C-M24*P1.5	20	16	12	0.03
◎	BK-ER40C-M28*P1.5	25	18	14	0.04

STOCK ◎=標準在庫品 # STOCK ○=regular stock | STOCK ⇨=少量在庫品 # STOCK ⇨=few stock | STOCK 無標示=標準生產品 # STOCK BLANK=on request

