

# BALL SCREWS



**ROLLCO**

SPECIALIZED  
ON LINEAR MOTION

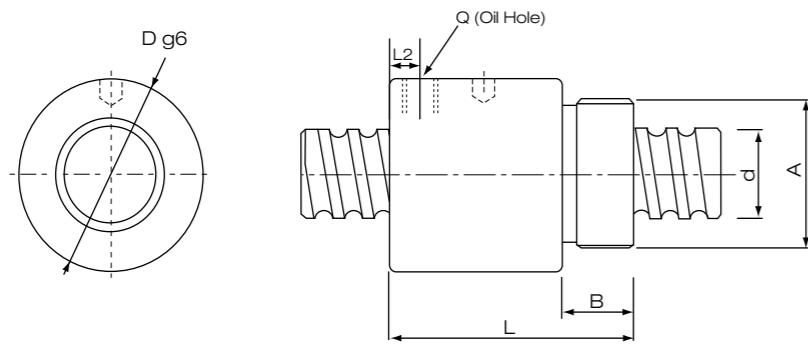
# Index

- Type SFKR - single nut with flange ..... 4
- Type RSWR - single nut, cylindrical with thread ..... 5
- Type RSCR - single nut, cylindrical with thread ..... 6
- Type FSCR - single nut with flange ..... 7
- Type FSER - single nut with flange, long lead ..... 8
- Type SFER - single nut with flange, overlead ..... 9
- Type FDCR - double nut with flange ..... 10
- Order code ..... 11
- Lead and travel accuracy & definition of terms for lead accuracy ..... 12
- Travel deviation and variation ..... 13
- Clearance in the axial direction of the rolled and ground ball screw ..... 14
- Mounting methods & buckling load ..... 15
- Critical speed ..... 16
- Calculation of lifetime, factor of safety & lubrication ..... 17
- Safety nut type SNFSCR ..... 18
- Support units and load capacity ..... 19
- Support unit type BK ..... 20
- Support unit type BF ..... 21
- Support unit type FK ..... 22
- Support unit type FF ..... 23
- Support unit type FK..DFF ..... 24
- Standard end journals ..... 25
- Housings for FSCR - type RNB ..... 26
- Product overview ..... 27





## Type RSCR Single Nut, Cylindrical with Thread, Internal Recirculation

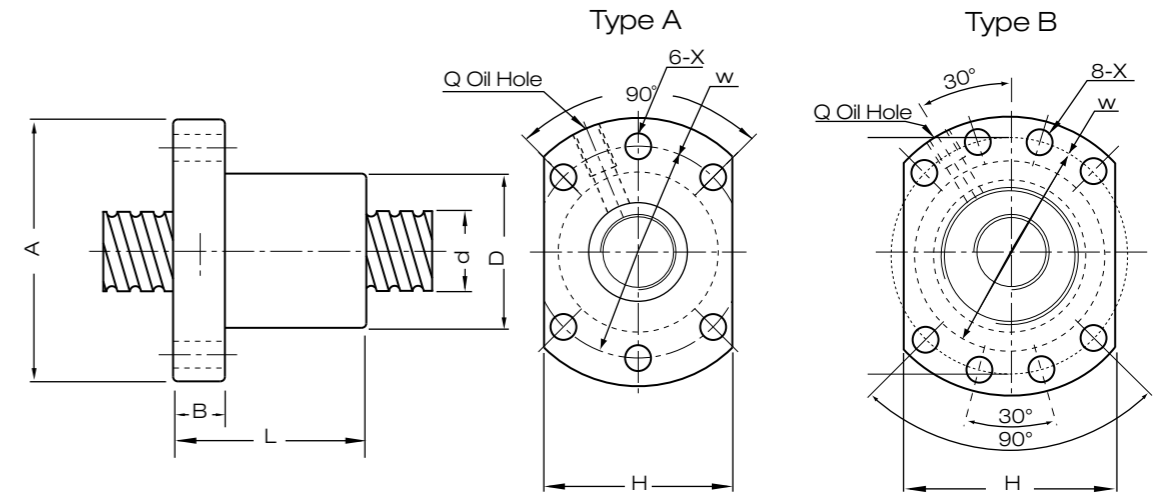


**I:** Lead  
**Ca:** Basic dynamic load rating (N)  
**Da:** Ball diameter  
**Coa:** Basic static load rating (N)  
**n:** Number of circuits

All other dimensions in mm.

Item No.	Dimensions											Basic load rating	
	d	I	Da	D g6	L	A	B	L2	Q	n	Ca	Coa	
RSCR1605	16	5	3,175	32	56	M30 x 1,5	16	6,5	M6	1 x 4	9800	16500	
RSCR2005	20	5	3,175	38	59,5	M35 x 1,5	16,5	7	M6	1 x 4	11000	22800	
RSCR2505	25	5	3,175	42	60	M40 x 1,5	17	7	M6	1 x 4	12500	30700	
RSCR2510	25	10	4,762	42	90	M40 x 1,5	17	10	M6	1 x 4	20700	42700	
RSCR3205	32	5	3,175	52	60	M48 x 1,5	19	7	M6	1 x 4	14000	40800	
RSCR3210	32	10	6,35	52	93	M48 x 1,5	19	12	M6	1 x 4	33400	70800	
RSCR4005	40	5	3,175	58	59	M56 x 1,5	19	6	M8	1 x 4	15750	52900	
RSCR4010	40	10	6,35	65	102	M60 x 2	27	12	M8	1 x 4	38500	94700	
RSCR5010	50	10	6,35	78	104	M72 x 2	29	12	M8	1 x 4	43900	124000	

## Type FSCR Single Nut with Flange (DIN 69051)



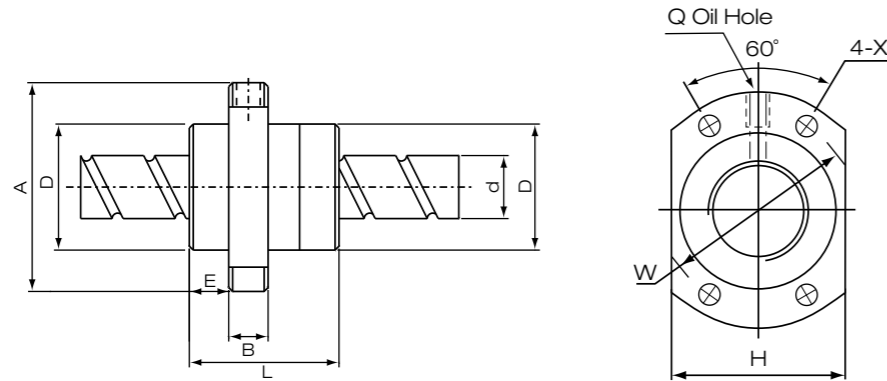
**I:** Lead  
**Ca:** Basic dynamic load rating (N)  
**Da:** Ball diameter  
**Coa:** Basic static load rating (N)  
**n:** Number of circuits

All other dimensions in mm.

Item No.	Dimensions														Basic load rating	
	d	I	Da	D	A	B	L	W	X	Type	H	Q	n	Ca	Coa	
FSCR1605	16	5	3,175	28	48	10	50	38	5,5	A	40	M6	4	9800	16500	
FSCR1610	16	10	3,175	28	48	12	65	38	5,5	A	40	M6	3	7600	12380	
FSCR2005	20	5	3,175	36	58	10	53	47	6,6	A	44	M6	4	11000	22800	
FSCR2505	25	5	3,175	40	62	10	53	51	6,6	A	48	M6	4	12500	30700	
FSCR2510	25	10	4,762	40	62	12	85	51	6,6	A	48	M6	4	20700	42700	
FSCR3205	32	5	3,175	50	80	12	53	65	9,0	A	62	M6	4	14000	40800	
FSCR3210	32	10	6,350	50	80	16	90	65	9,0	A	62	M6	4	33400	70800	
FSCR3220	32	20	3,969	50	80	13	78	65	9,0	A	62	M6	3	14610	35750	
FSCR4005	40	5	3,175	63	93	16	56	78	9,0	B	70	M8	4	15750	52900	
FSCR4010	40	10	6,350	63	93	18	93	78	9,0	B	70	M8	4	38500	94700	
FSCR4020	40	20	5,556	63	93	15	83	78	9,0	B	70	M8	3	25370	62040	
FSCR5010	50	10	6,350	75	110	18	93	93	11,0	B	85	M8	4	43900	124000	
FSCR6310	63	10	6,350	90	125	18	98	108	11,0	B	95	M8	4	50200	164500	

Left hand FSCL2005 (nut length 34 mm) and FSCL 3205 are in stock - other types on request. Please contact Rollco.

## Type FSER Single Nut with Flange, Long Lead



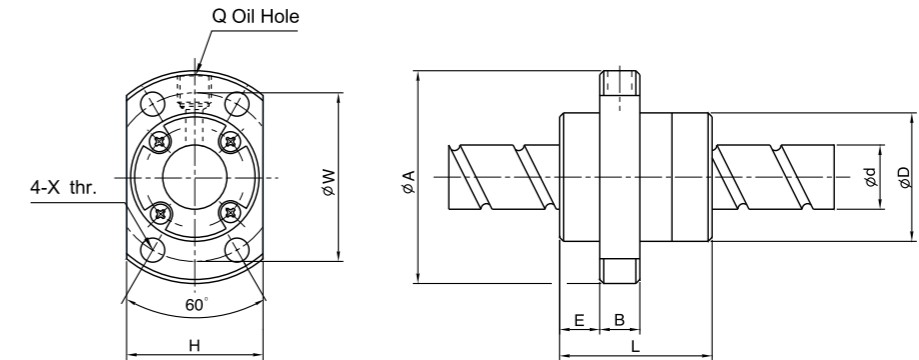
**l:** Lead                      **Da:** Ball diameter                      **n:** Number of circuits  
**Ca:** Basic dynamic load rating (N)                      **Coa:** Basic static load rating (N)

All other dimensions in mm.

Item No.	Dimensions													Basic load rating	
	d	l	Da	D	A	B	E	L	W	X	H	Q	n	Ca	Coa
FSER1616	16	16	3,175	32	53	10	10,5	48	42	4,5	38	M6	1.8x2	7000	14000
FSER2020	20	20	3,175	39	62	10	10,8	55	50	5,5	46	M6	1.8x2	11000	25000
FSER2525	25	25	3,969	47	74	12	11,2	67	60	6,6	56	M6	1.8x2	16500	39000
FSER3232	32	32	4,762	58	92	15	14,0	82	74	9,0	68	M6	1.8x2	23600	59400
FSER4040	40	40	6,350	73	114	17	17,0	100	93	11,0	84	M6	1.8x2	38600	99000
FSER5050	50	50	7,938	90	135	20	21,5	125	112	14,0	92	M6	1.8x2	42900	143500

Other types on request - please contact Rollco

## Type SFER Single Nut with Flange, Overlead



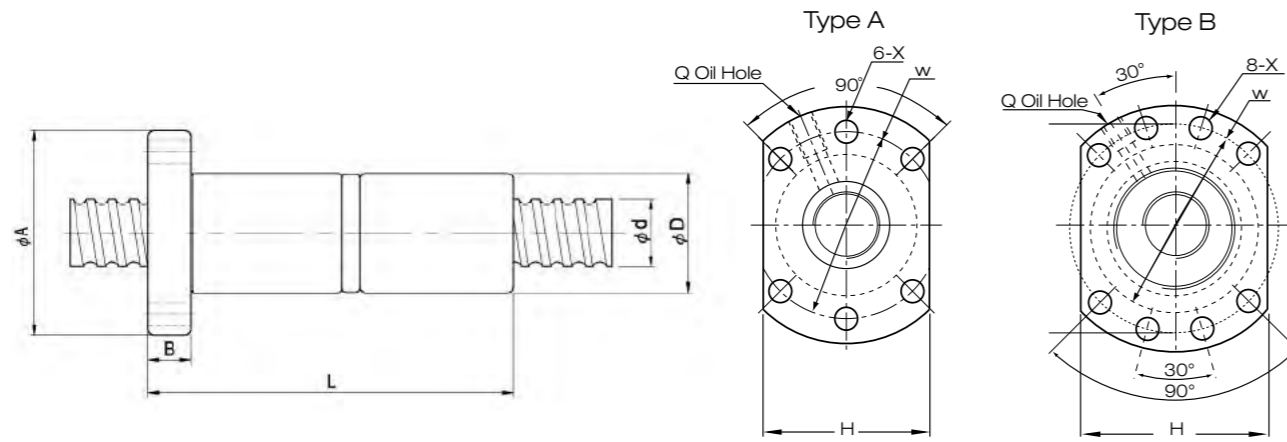
**l:** Lead                      **Da:** Ball diameter                      **n:** Number of circuits  
**Ca:** Basic dynamic load rating (N)                      **Coa:** Basic static load rating (N)

All other dimensions in mm.

Item No.	Dimensions													Basic load rating	
	d	l	Da	D	A	E	B	L	X	W	H	Q	n	Ca	Coa
SFER1632	16	32	2,778	34	55	10,5	10	34	5,5	45	36	M6	0,7x2	4390	9760
SFER2040	20	40	3,175	38	58	11	10	41	5,5	48	40	M6	0,7x2	5820	13970
SFER2550	25	50	3,969	46	70	13	12	50	6,6	58	48	M6	0,7x2	8700	21830

Standard nuts are without seals. Other types on request - please contact Rollco

# Type FDCR Double Nut with Flange (DIN 69051)



**l:** Lead                      **da:** Ball diameter                      **n:** Number of circuits  
**Ca:** Basic dynamic load rating (N)                      **Coa:** Basic static load rating (N)

All other dimensions in mm.

Item No.	Dimensions													Basic load rating	
	d	l	Da	D	A	B	L	W	X	Type	H	Q	n	Ca	Coa
FDCR1605	16	5	3,175	28	48	10	80	38	5,5	A	40	M6	3	7650	12400
FDCR2005	20	5	3,175	36	58	12	92	47	6,6	A	44	M6	4	11000	22800
FDCR2505	25	5	3,175	40	62	12	92	51	6,6	A	48	M6	4	12500	30700
FDCR2510	25	10	4,762	40	62	12	153	51	6,6	A	48	M6	4	19440	38770
FDCR3205	32	5	3,175	50	80	12	92	65	9,0	A	62	M6	4	14000	40800
FDCR3210	32	10	6,350	50	80	16	160	65	9,0	A	62	M6	4	33900	71700
FDCR4005	40	5	3,175	63	93	15	96	78	9,0	B	70	M8	4	15750	52900
FDCR4010	40	10	6,350	63	93	18	162	78	9,0	B	70	M8	4	38500	94700
FDCR5010	50	10	6,350	75	110	16	162	93	11,0	B	85	M8	4	43900	124000

We strongly recommend to use the preloaded double nut on C5 ball screw material. The preload in a FDCR nut is according to the catalogue table light preload (P2). If you need a double nut with clearance or a different type of screw material please contact Rollco.

## Order Code

FSC R 25 05 C7 - 1000 - P1

### Nut type codes

- SFK** = Single nut with flange, miniature
- RSW** = Single nut, cylindrical with thread
- RSC** = Single nut, cylindrical with thread
- FSC** = Single nut with flange
- FSE** = Single nut with flange long lead
- SFE** = Single nut with flange, overlead
- FDC** = Double nut with flange
- Other types on request

### Direction of helix

**R:** Right (standard)    **L:** Left

### Shaft dia. (mm)

### Lead (mm)

### Accuracy grade code

C0 ' C1 ' C2 ' C3 ' C5 ' C7 ' C10 (C7 is standard)

### Total length of shaft (mm)

Nuts and screw-shaft can be ordered separately in example FSCR2505 for the nut.  
 Screw shaft SR2505C7-1000 means right thread, length 1000 mm - accuracy C7

### Clearance (see page 12)

No letter = Standard clearance  
 P1 = Reduced clearance  
 P2 = Light preload

## Lead and Travel Accuracy

Lead accuracy of ball screws (grade C0-C5) is specified in 4 basic terms ( $E$ ,  $e$ ,  $e_{300}$ ,  $e_{2\pi}$ ). Accumulated travel deviations for grade C7 and C10 are specified only by the allowable value per 300 mm measured within any portion of the threaded length. They are 0.05 mm for C7 and 0.21 mm for C10.

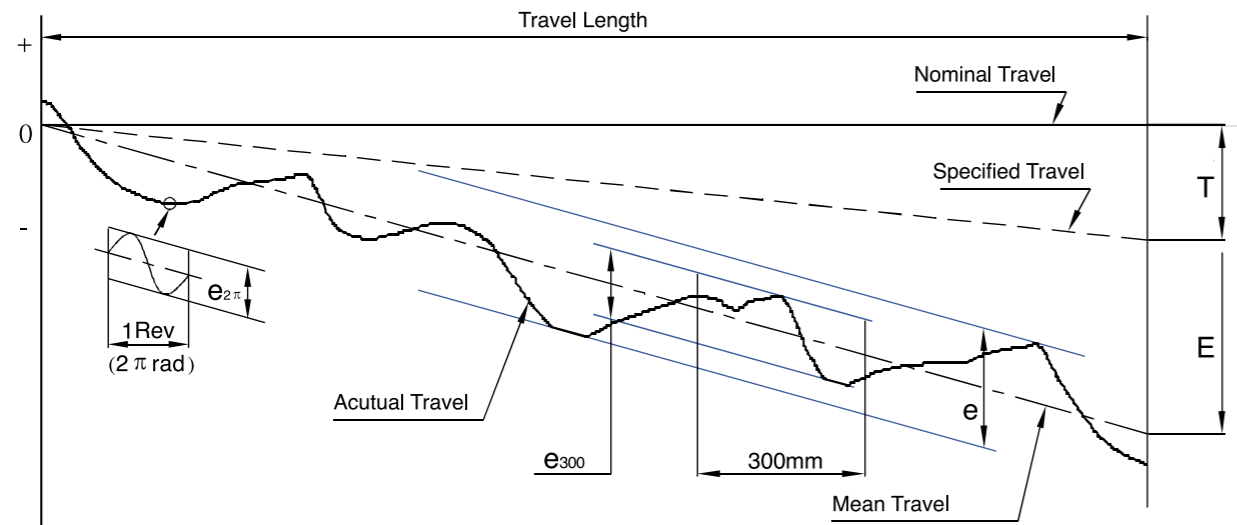


Diagram of Lead Accuracy

## Definition of Terms for Lead Accuracy

Terms	Reference	Definition
Travel compensation	T	Travel compensation is the difference between specified and nominal travel within the useful travel. A slightly smaller value compared to the nominal travel is often selected by the customer to compensate for an expected elongation caused by temperature rise or external load. Therefore "T" is usually a negative value. Note: If no compensation is needed, specified travel is the same as nominal travel.
Actual travel		Actual travel is the axial displacement of the nut relative to the screwshaft.
Mean travel		Mean travel is the linear best fit line. This line represents the tendency of actual travel.
Mean travel deviation	E	Mean travel deviation is the difference between mean travel and specified travel within travel length.
Travel variations		Travel variations is the band of 2 lines drawn parallel to the mean travel, on the plus and minus side.
	e	Maximum width of variation over the travel length.
	$e_{300}$	Actual width of variation for the length of 300 mm taken anywhere within the travel length.
	$e_{2\pi}$	Wobble error, actual width of variation for one revolution ( $2\pi$ radian).

## Mean Travel Deviation ( $\pm E$ ) and Travel Variation( $e$ ) (JIS B 1192)

Unit:  $\mu m$

Grade	C0	C1	C2	C3	C5	C7	C10						
								$\pm E$	e	$\pm E$	e	$\pm E$	e
Over	Incl.												
	100	3	3	3.5	5	5	7	8	8	18	18		
100	200	3.5	3	4.5	5	7	7	10	8	20	18		
200	315	4	3.5	6	5	8	7	12	8	23	18		
315	400	5	3.5	7	5	9	7	13	10	25	20		
400	500	6	4	8	5	10	7	15	10	27	20		
500	630	6	4	9	6	11	8	16	12	30	23		
630	800	7	5	10	7	13	9	18	13	35	25		
800	1000	8	6	11	8	15	10	21	15	40	27		
1000	1250	9	6	13	9	18	11	24	16	46	30	$\pm 50/$	$\pm 210/$
1250	1600	11	7	15	10	21	13	29	18	54	35	300mm	300mm
1600	2000			18	11	25	15	35	21	65	40		
2000	2500			22	13	30	18	41	24	77	46		
2500	3150			26	15	36	21	50	29	93	54		
3150	4000			30	18	44	25	60	35	115	65		
4000	5000					52	30	72	41	140	77		
5000	6300					65	36	90	50	170	93		
6300	8000							110	60	210	115		
8000	10000									260	140		
10000	12500									320	170		

## Clearance in the Axial Direction of the Rolled Ball Screw

Standard clearance		
Screw shaft $\phi d$	Rolled ball screw clearance in the axial direction (max)	
mm	mm	
4 ~ 14	0,05	small size of ball screw
15 ~ 49	0,08	middle size of ball screw
50 ~ 80	0,12	big size of ball screw

### Reduced clearance (P1)

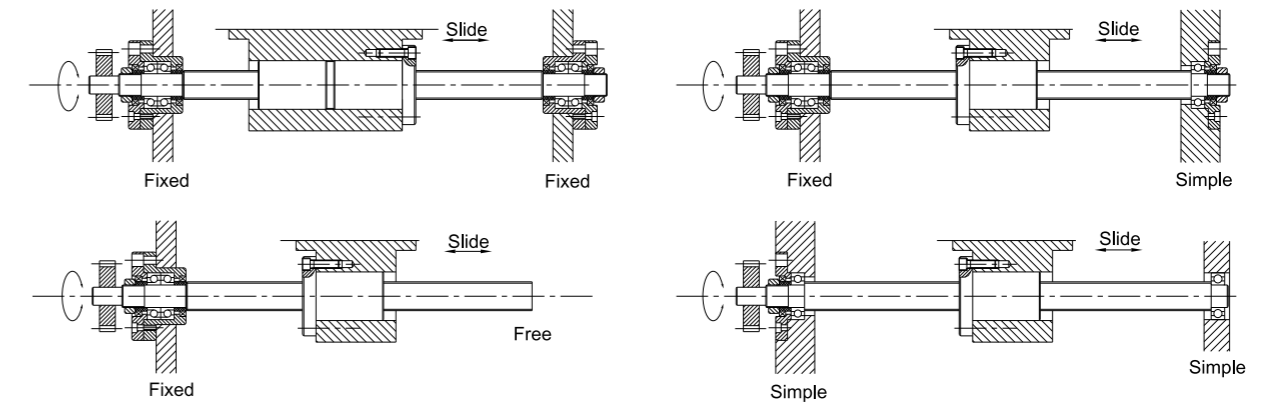
Max 0,02 mm clearance for all sizes

### Light preload (P2)

Article No.	Spring Force (Kg) Single Nut
1605	0,1 ~ 0,3
2005	0,1 ~ 0,3
2505	0,2 ~ 0,5
3205	0,2 ~ 0,5
4005	0,2 ~ 0,5
2510	0,2 ~ 0,5
3210	0,3 ~ 0,6
4010	0,3 ~ 0,6
5010	0,3 ~ 0,6
6310	0,6 ~ 1,0
8010	0,6 ~ 1,0

## Mounting Methods

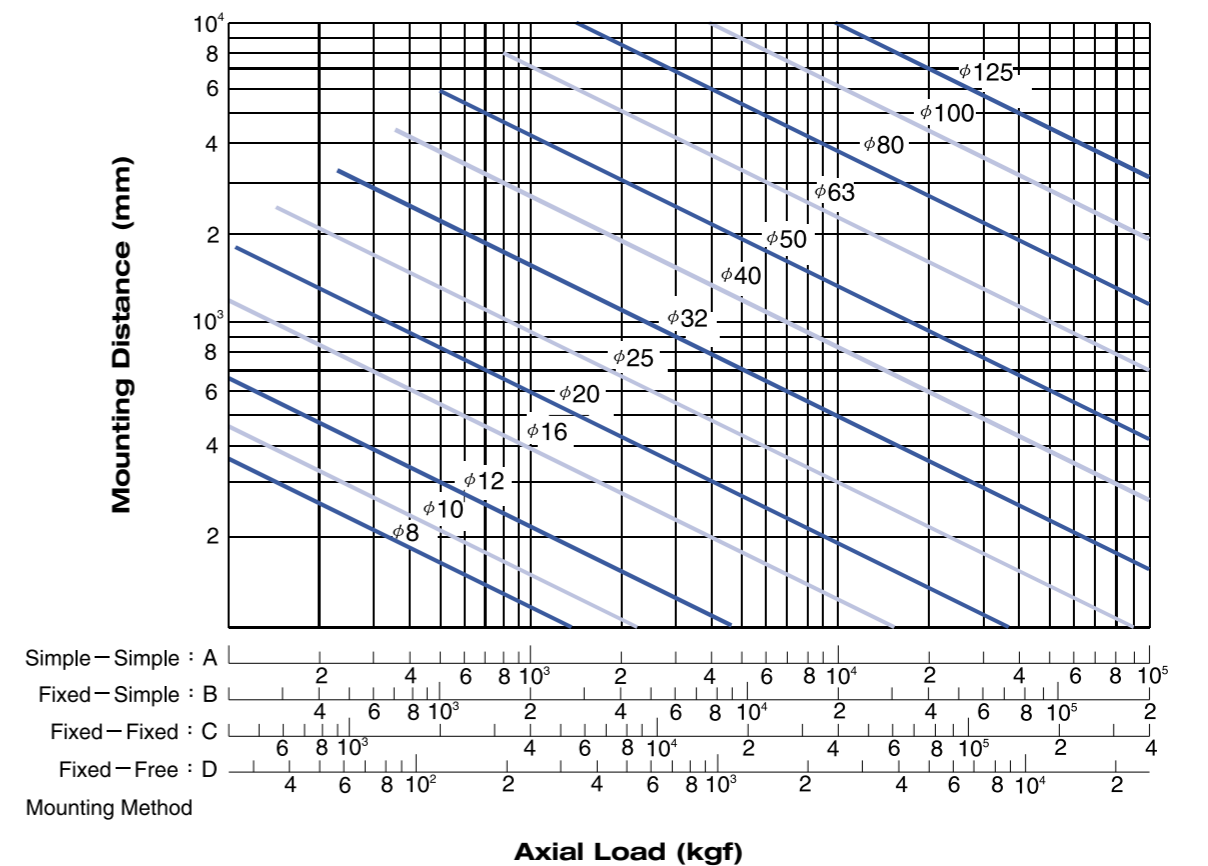
Both the critical speed and column buckling load depend upon the method of mounting and the unsupported length of the shaft.



## Buckling Load

The safety of the screw shaft against buckling needs to be checked when the shaft is expected receive buckling loads. The figure shows a diagram which summarizes the allowable compressive load for buckling for each nominal outside diameter of screw shaft.

Select the graduation of allowable axial load of the ball groove regardless of the mounting method when the mounting distance is short.





# Critical Speed

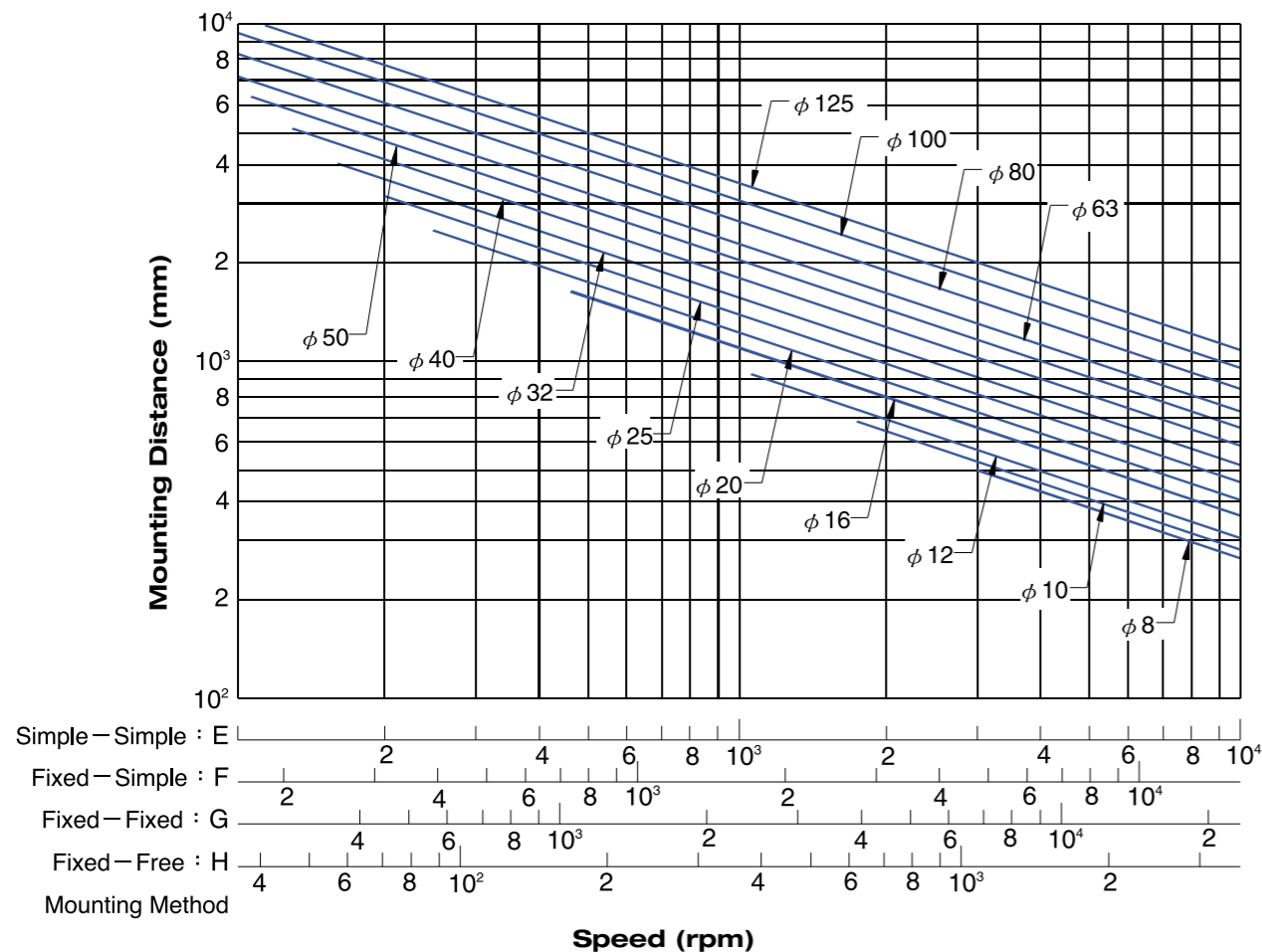
It is necessary to check if the ball screw rotation speed is resonant with the natural frequency of the screw shaft. We recommend 80% or less of this critical speed as an allowable rotation speed. The figure shows a diagram which summarizes the allowable rotation speed for shaft nominal diameters up to outside diameter of the screw shaft exceeds 125 mm. Select the graduation of allowable rotation speed according to the method of supporting the ball screw. Where the working rotation speed presents a problem in terms of critical speed, it would be best to provide an intermediate support to increase the natural frequency of the screw shaft.

### dm·n value

The allowable rotation speed is regulated also by the dm·n value (dm:diameter of central circle of steel ball, n: Revolution speed, rpm) which expresses the peripheral speed.

Generally:

- For precision Ball Screws accuracy grade C7  $dm \cdot n \leq 100,000$
- For Commercial Ball Screw Accuracy Grade C7  $dm \cdot n \leq 70,000$
- Product exceeding the above limits can be produced. Please contact Rollco.



# Calculation of Life

The fatigue life is generally expressed by the total number of revolutions. The total rotation hours or total travel distance may also be used to express life. The fatigue life is calculated as follows:

$$L = \left( \frac{Ca}{Pa \cdot fw} \right)^3 \cdot 10^6$$

$$L_f = \frac{L}{60n}$$

$$L_s = \frac{L \cdot \ell}{10^6}$$

Where

- L : Rated fatigue life (rev)
- L<sub>f</sub> : Life in hours (h)
- L<sub>s</sub> : Life in travel distance (km)
- Ca : Basic dynamic load rating (N)
- Pa : Axial load (N)
- fw : Load factor (factor depending on operation conditions)
- n : Rotating speed (rpm)
- ℓ : Lead (mm)

### fw:

- Smooth operation without impact: 1.0~1.2
- Normal operation: 1.2~1.5
- Operation with impact and vibration: 1.5~3.0

**Basic Dynamic Load Rating Ca:**  $Ca = \text{Average Load} \cdot fs$

**Basic Static Load Rating Coa:**  $Coa = \text{Max Load} \cdot fs$

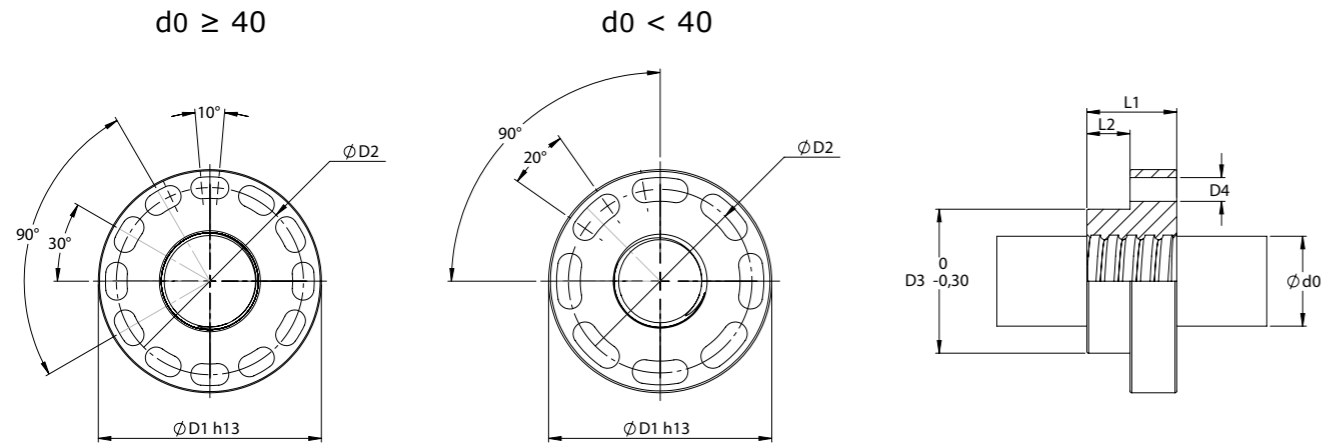
# Factor of Safety (fs)

Usage	Operation	fs
Industrial machines	Normal operation	1.0~1.3
	Operation with impact and vibration	2.0~3.0
Working machines	Normal operation	1.0~1.5
	Operation with impact and vibration	2.5~7.0

# Lubrication

Adequate lubrication must be provided when ball screw is used, insufficient lubrication will result in contact of metal, which in turn leads to increase of friction and friction loss, this cause failure or shortening of service life. We recommend to use grease with Lithium-based soap.

## Safety Nut Type SNFSCR



Item No.	Dimensions							
	d0	D1	D2	D3	D4	L1	L2	C0 (kN)
SNFSCR1605	16	48	38	28	8x5,5	25	12	50
SNFSCR2005	20	58	47	36	8x6,6	25	12	61
SNFSCR2505	25	62	51	40	8x6,6	25	12	75
SNFSCR2510	25	62	51	40	8x6,6	30	15	56
SNFSCR3205	32	80	65	50	8x9	30	15	112
SNFSCR3210	32	80	65	50	8x9	30	15	113
SNFSCR4005	40	93	78	63	12x9	35	15	163
SNFSCR4010	40	93	78	63	12x9	40	15	190
SNFSCR5010	50	110	93	75	12x11	40	15	226

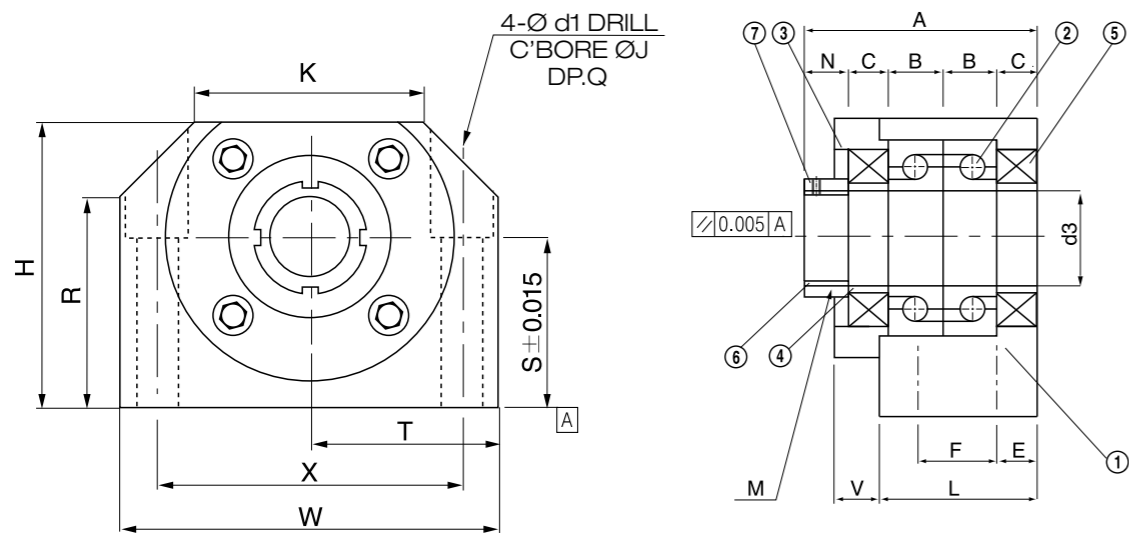
## Support Units and Recommended Screw-Shaft Diameters

Fixed-side Base	Fixed-side Flange	Fixed-side Flange high load	Supported-side Base	Supported-side Flange	Applicable Screw do mm
BK8	FK 8		BF8	FF 8	Ø12
BK10	FK 10		BF10	FF 10	Ø14
BK12	FK 12		BF12	FF 12	Ø16
BK15	FK 15		BF15	FF 15	Ø20
BK20	FK 20		BF20	FF 20	Ø25
BK25	FK 25		BF25	FF 25	Ø32
BK30	FK 30	FK30DFF	BF30	FF 30	Ø40
BK40	FK 40	FK40DFF	BF40	FF 40	Ø50

## Load Capacity of Support Units

Item No.			Ball bearing	Axial dynamic load (kN)	Permissible load (kN)
BK 8	Fixed	Block type	608	4,4	1,4
FK 8	Fixed	Flange type			
BK 10	Fixed	Block type	7000A	6,5	2,7
FK 10	Fixed	Flange type			
BK 12	Fixed	Block type	7001A	7,1	3,0
FK 12	Fixed	Flange type			
BK 15	Fixed	Block type	7002A	7,5	3,9
FK 15	Fixed	Flange type			
BK 20	Fixed	Block type	7004A	17,9	9,5
FK 20	Fixed	Flange type	7204A		
BK 25	Fixed	Block type	7205A	20,1	11,4
FK 25	Fixed	Flange type			
BK 30	Fixed	Block type	7206A	28,0	16,2
FK 30	Fixed	Flange type			
BK 40	Fixed	Block type	7208A	44,1	27,1
FK 40	Fixed	Flange type			
FK30DFF	Fixed	Flange type	30TAC62B	29,1	52,8
FK40DFF	Fixed	Flange type	40TAC72B	31,5	63,6

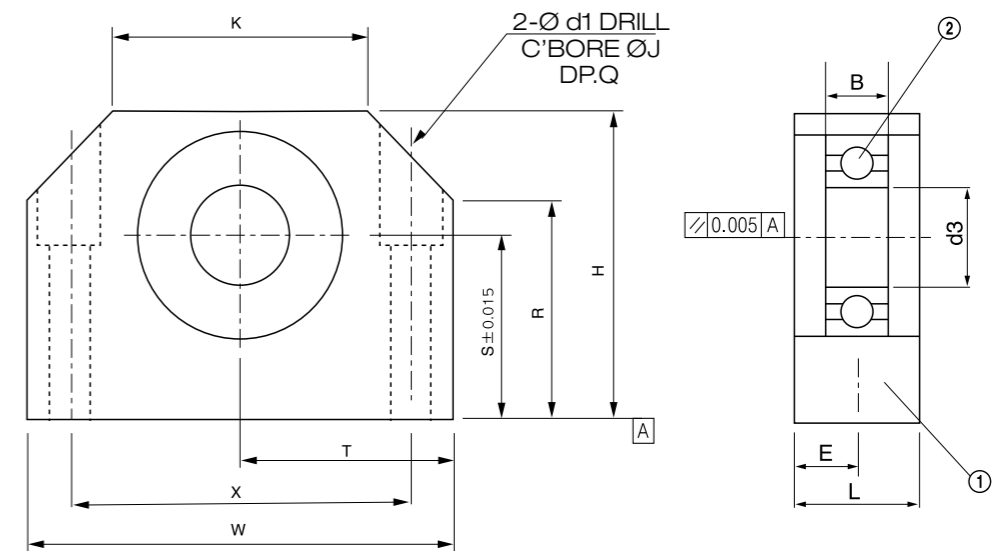
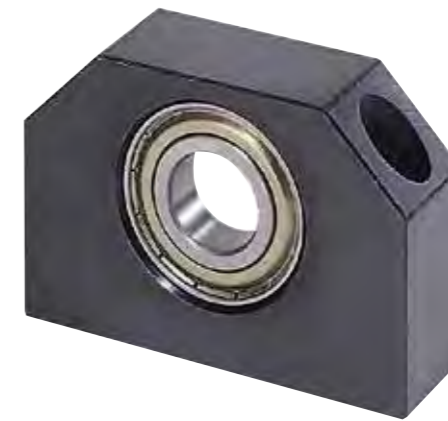
### Type BK



BK part list 1: Housing 2: Bearing 3: Bracket 4: Collar 5: Seal 6: Ring nut 7: Set screw

Item No.	Dimensions										Mounting										
	W	H	S	R	T	X	K	d1	J	Q	M	L	E	F	V	A	B	C	N	d3	BRG
BK 8	52	32	17	18,5	26	38	25	6,6	11	6,5	M8*0,75	23	11,5	-	5	34	7	6	8	8	608
BK 10	60	39	22	26	30	46	34	6,6	11	6,5	M10*1	25	6	13	6	38	8	7	8	10	7000A
BK 12	60	43	25	30	30	46	34	6,6	11	6,5	M12*1	25	6	13	6	38	8	7	8	12	7001A
BK 15	70	48	28	33	35	54	40	6,6	11	6,5	M15*1	27	6	15	7	40	9	7	8	15	7002A
BK 20	88	60	34	42	44	70	52	9	14	8,5	M20*1	35	8	19	9	52	12	9	10	20	7004A
BK 25	106	80	48	59	53	85	64	11	17,5	11	M25*1,5	42	10	22	11	62	15	10	12	25	7205A
BK 30	128	89	51	63	64	102	76	14	20	13	M30*1,5	45	11	23	12	66	16	11	12	30	7206A
BK 40	160	110	60	80	80	130	100	18	26	17,5	M40*1,5	61	14	33	15	82	18	16	14	40	7208A

### Type BF



BF part list 1: Housing 2: Bearing

Item No.	Dimensions										Mounting				
	W	H	S	R	T	X	K	d1	J	Q	L	E	d3	B	BRG
BF 8	52	32	17	18,5	26	38	25	6,6	11	6,5	20	10	6	6	606
BF 10	60	39	22	26	30	46	34	6,6	11	6,5	20	10	8	7	608
BF 12	60	43	25	30	30	46	34	6,6	11	6,5	20	10	10	8	6000
BF 15	70	48	28	33	35	54	40	6,6	11	6,5	20	10	15	9	6002
BF 20	88	60	34	42	44	70	52	9	14	8,5	26	13	20	12	6004
BF 25	106	80	48	59	53	85	64	11	17,5	11	30	15	25	15	6205
BF 30	128	89	51	63	64	102	76	14	20	13	32	16	30	16	6206
BF 40	160	110	60	80	80	130	100	18	26	17,5	37	18,5	40	18	6208

### Type FK



FK 8, 10, 12, 15, 20



FK 25, 30, 40

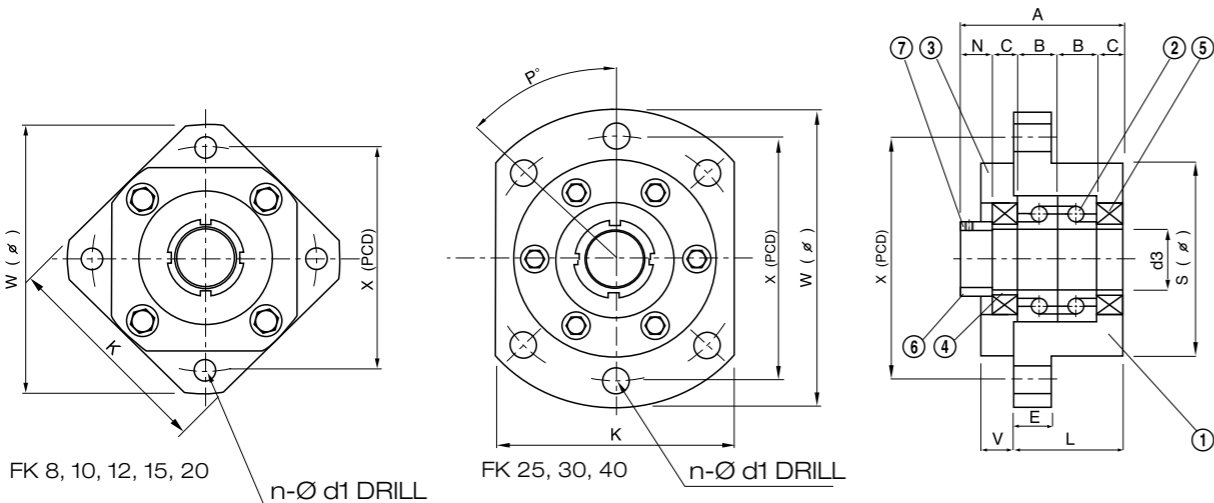


Fig. 1-1

Fig. 1-2

FK part list 1: Housing 2: Bearing 3: Bracket 4: Collar 5: Seal 6: Ring nut 7: Set screw

Item No.	Dimensions										Mounting						
	W	L	S -0,000 -0,030	K	E	V	X	n	d1	p°	M	A	B	C	N	d3	BRG
FK 8	43	21	28	35	7	5	35	4	3,4	90	M8*0,75	32	7	5	8	8	608
FK 10	52	25	34	42	7	6	42	4	4,5	90	M10*1	38	8	7	8	10	7000A
FK 12	54	25	36	44	8	6	44	4	4,5	90	M12*1	38	8	7	8	12	7001A
FK 15	63	27	40	52	10	7	50	4	5,5	90	M15*1	40	9	7	8	15	7002A
FK 20	85	37	57	68	15	7	70	4	6,6	90	M20*1	52	14	7	10	20	7204A
FK 25	122	42	80	92	15	11	100	6	11	45	M25*1,5	62	15	10	12	25	7205A
FK 30	138	45	90	106	16	12	116	6	11	45	M30*1,5	66	16	11	12	30	7206A
FK 40	176	61	120	128	19	15	150	6	14	45	M40*1,5	82	18	16	14	40	7208A

Fig. 1-1

Fig. 1-2

### Type FF



FF 8, 10, 12, 15, 20



FF 25, 30, 40

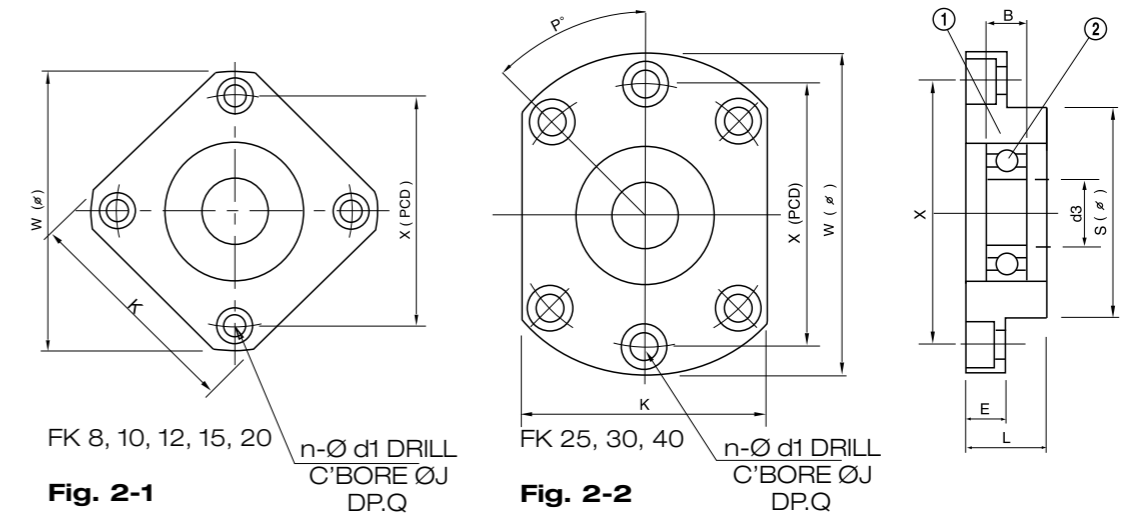


Fig. 2-1

Fig. 2-2

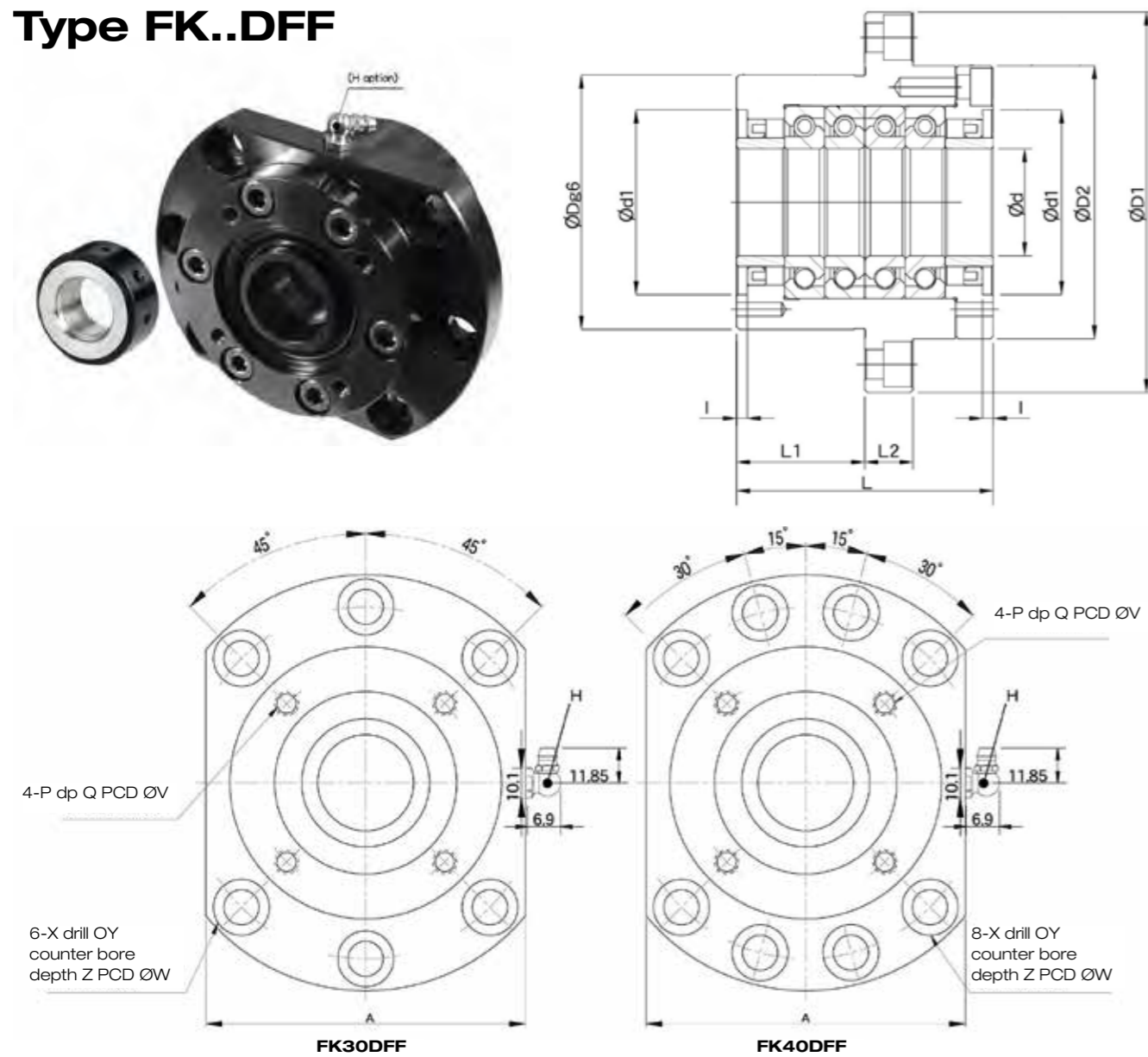
FF part list 1: Housing 2: Bearing

Item No.	Dimensions											Mounting		
	W	L	S -0,000 -0,030	K	E	X	n	d1	J	Q	P	d3	B	BRG
FF 8	43	11	28	35	6	35	4	3,4	6,5	4	90	6	6	606
FF 10	52	12	34	42	7	42	4	4,5	8	5	90	8	7	608
FF 12	54	15	36	44	8	44	4	4,5	8	5	90	10	8	6000
FF 15	63	17	40	52	9	50	4	5,5	9,5	6	90	15	9	6002
FF 20	85	20	57	68	14	70	4	6,6	11	10	90	20	14	6204
FF 25	122	30	80	92	15	100	6	11	17,5	11	45	25	15	6205
FF 30	138	32	90	106	15	116	6	11	17,5	11	45	30	16	6206
FF 40	176	36	120	128	18	150	6	14	20	13	45	40	18	6208

Fig. 2-1

Fig. 2-2

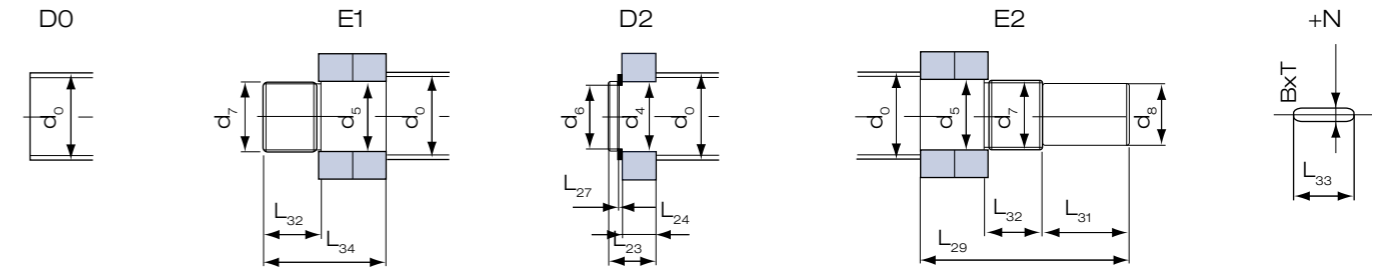
### Type FK..DFF



Item No.	Dimension																	
	d	D	D1	D2	L	L1	L2	A	W	X	Y	Z	d1	I	V	P	Q	H
FK30DFF	30	85	130	90	96	48	18	100	110	11	17	11	57	4	70	M6	12	M6
FK40DFF	40	95	142	102	96	48	18	106	121	11	17	11	69	4	80	M6	12	M6

Item No.	Basic dynamic load rating	Permissible axial load	Preload	Axial rigidity	Starting torque	Lock nut			Weight
	Ca (N)	(N)	(N)	(N/mm)	(Nm)	M	D3	L3	Kg
FK30DFF	29100	52800	6800	205	0,29-0,52	M30x1,5	50	20	4,4
FK40DFF	31500	63600	8000	245	0,34-0,62	M40x1,5	60	22	5

### Standard End Journals

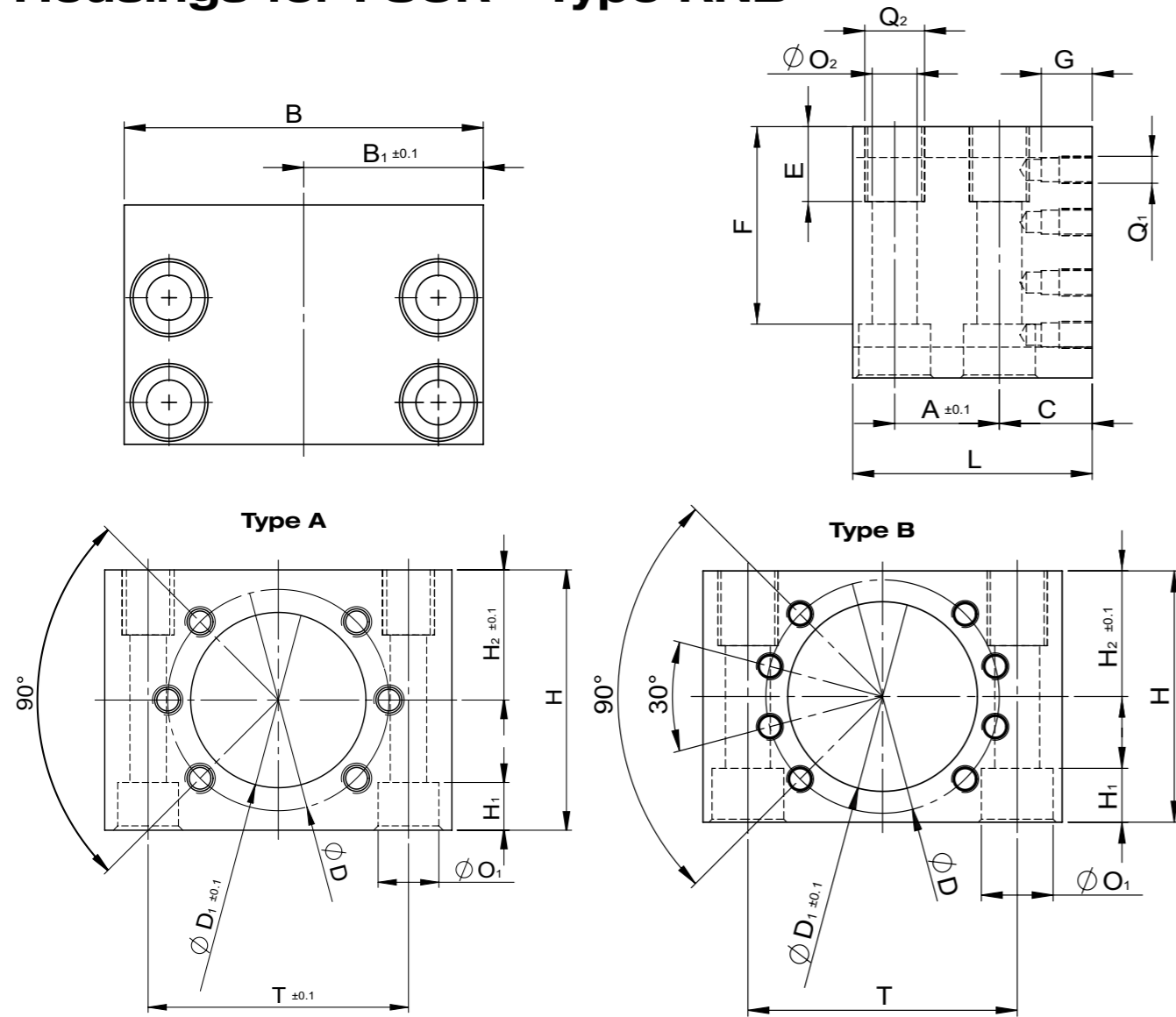


Standard end journals

$d_0$	$d_4$	$d_5$	$d_6$	$d_7$	$d_8$	$L_{23}$	$L_{24}$	$L_{27}$	$L_{29}$	$L_{31}$	$L_{32}$	$L_{34}$	$B_{P9} \times L_{33} \times T$	Unit size
	j6	j6	h12		h7			H13						
12	6	8	5,7	M8 x 0,75	6	8	6	0,9	51	15	10	36	2 x 10 x 1,2	8
16	10	12	9,6	M12 x 1,0	10	10,5	8	1,15	65	25	10	40	3 x 18 x 1,8	12
20	15	15	14,3	M15 x 1,0	12	13	9	1,15	78	35	11	43	4 x 27 x 2,5	15
*25	20	20	19,0	M20 x 1,0	16	16	12	1,35	101	45	14	56	5 x 36 x 3	20
32	25	25	23,9	M25 x 1,5	20	19	15	1,35	120	55	15	65	6 x 45 x 3,5	25
40	30	30	28,6	M30 x 1,5	25	21	16	1,65	133	64	15	69	8 x 50 x 4	30
50	40	40	37,5	M40 x 1,5	36	25	18	1,85	168	78	22	90	10 x 63 x 5	40
40	30	30	28,6	M30 x 1,5	25	21	16	1,65	183	64	26	119	8 x 50 x 4	FK30DFF
50	40	40	37,5	M40 x 1,5	36	25	18	1,85	200	78	30	122	10 x 63 x 5	FK40DFF

\* Valid for BF20. For FF20  $L_{23}=18$  and  $L_{24}=14$

# Housings for FSCR - Type RNB



Item No.	Dimensions (mm)																	
	T	D	D1	H	H1	H2	O1	O2	B	B1	F	E	A	C	L	G	Q1	Q2
<b>Type A</b>																		
RNB16	50	38	28,4	48	11	24	14	8,4	70	35	37	15	20	20	50	10	M5	M10
RNB20	55	47	36,4	56	11	28	14	8,4	75	37,5	45	15	23	22	55	11	M6	M10
RNB25	60	51	40,4	58	9	30	14	8,4	80	40	49	15	23	22	55	11	M6	M10
RNB32	75	65	50,4	68	16	35	18	13	100	50	52	20	30	27	70	14	M8	M16
<b>Type B</b>																		
RNB40	90	78	63,4	84	18	42	24	15	120	60	66	25	35	31	80	17	M8	M18

Other types on request - please contact Rollco

# Product Overview



**BALL SCREWS**  
High efficiency ball screws and nuts.



**LINEAR UNIT QME**  
Complete linear drive unit with ball bushings and ball screws.



**LINEAR UNIT RHL**  
Complete unit with tooth belt.



**LINEAR UNITS**  
Complete unit with ball screw or tooth belt.



**ALUMINIUM PROFILES**  
A full program of aluminium profiles and accessories.



**BELT CONVEYOR**  
Transportation system with different drive options



**U-RAIL**  
Rollers in steel or polyamide. For light, standard or heavy load. Mounted in U-rails.



**COMPACT RAIL**  
No more problems with parallelism. Low noise. Lifetime lubricated bearings.



**C-RAIL**  
A simple and cost effective linear bearing system



**LINEAR RAIL SYSTEM**  
The most standardized linear rail system.



**MINIATURE**  
Range from 3 mm up to 15 mm.



**EASY RAIL**  
A strong solution for short strokes.



**ROLLER GUIDES**  
Four raceways with rollers. High load capacity.



**HEAVY TELESCOPIC**  
The strongest solution for extraction.



**LIGHT TELESCOPIC**  
Telescopic systems for smooth movement. Steel and aluminium.



**BALL BEARINGS**  
Linear ball bearings and hardened steel shafts.

Every care has been taken to ensure the accuracy of the information contained in this catalogue but no liability can be accepted for any errors or omissions. Even partial reproduction is allowed only by written permission by Rollco.

**Rollco AB**  
Box 22234  
Ekvändan 3  
250 24 Helsingborg  
Sweden  
Tel. +46 42 150040  
Fax +46 42 150045  
[www.rollco.se](http://www.rollco.se)

**Rollco A/S**  
Ladegårdsvej 2  
7100 Vejle  
Denmark  
Tel. +45 7552 2666  
Fax +45 7552 0708  
[www.rollco.dk](http://www.rollco.dk)

**Rollco OY**  
Kuohuntie 2  
36200 Kangasala  
Finland  
Tel. +358 207 57 97 90  
Fax +358 207 57 97 99  
[www.rollco.fi](http://www.rollco.fi)

**Rollco Norge AS**  
Bergliveien 2  
3427 Gullaug  
Norway  
Tel. +47 32 84 00 34  
Fax +47 32 84 00 91  
[www.rollco.no](http://www.rollco.no)

**Rollco Taiwan**  
No. 28, Lane 125, Da-an Road  
Shulin District 238  
New Taipei City, Taiwan  
Tel. +886-2-8687-2726  
Fax +886-2-8687-2720  
[www.rollco-tw.com](http://www.rollco-tw.com)



**ROLLCO**  
SPECIALIZED  
ON LINEAR MOTION