



# V M TRADERS

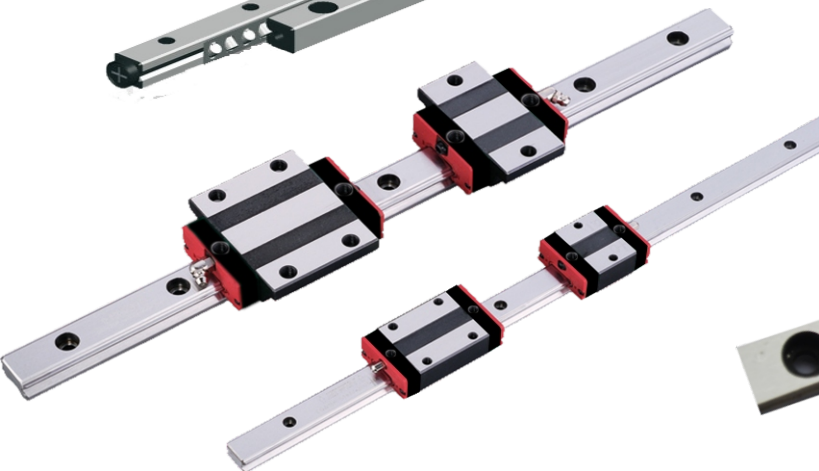
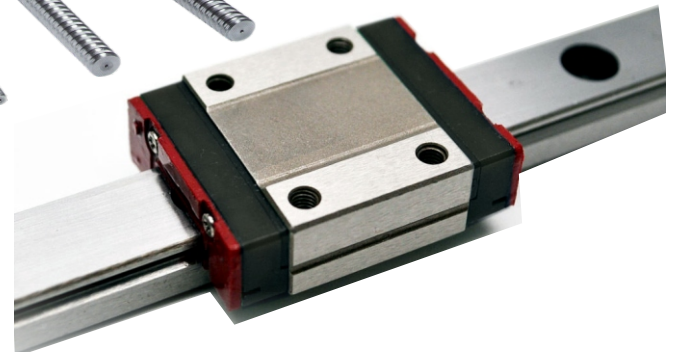
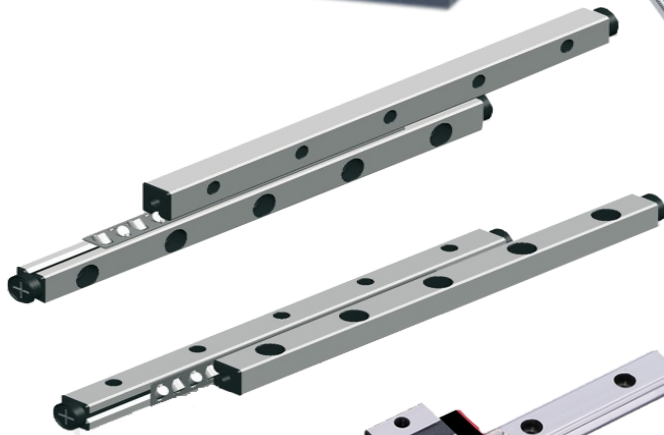
AUTHORISED DISTRIBUTOR :

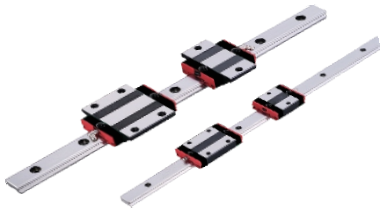
# MINIB

LINEAR GUIDE WAYS & BALL SCREW

CROSS ROLLER GUIDE WAYS

BALL SCREW SUPPORT UNIT

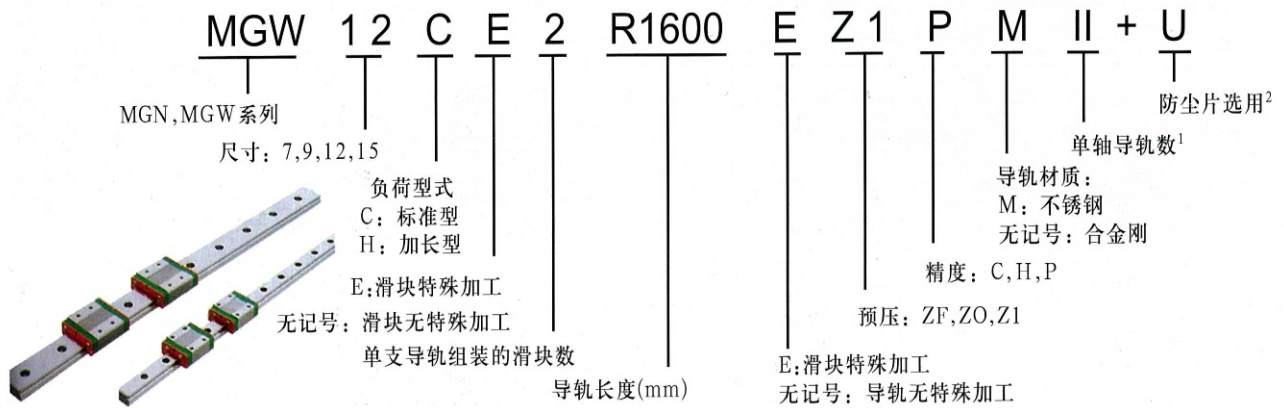
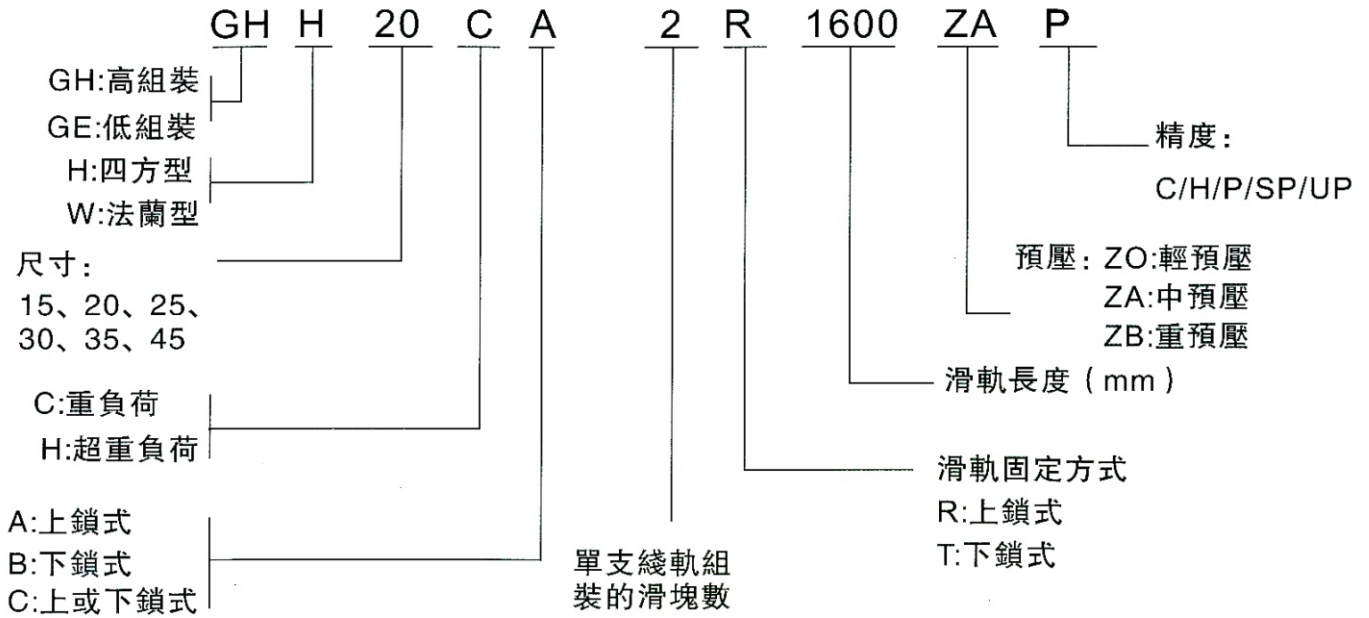




# MNMB



## LINEAR MOTION GUIDEWAY



- 注: 1. 單軸導軌數若只使用一支導軌則不寫, 兩支標記為 II, 三支標記為 III, 以此類推。  
 2. 防塵配備中無記號為防塵標準配備刮油片和防塵片。  
 ZZ 為刮油片加防塵片加金屬刮板  
 KK 為變刮油片加防塵片加金屬刮板  
 DD 為變刮油片加防塵片。  
 U 為 MGN 及 MGW 12, 15 規格可選用防塵片





# MNB

## LINEAR MOTION GUIDEWAY

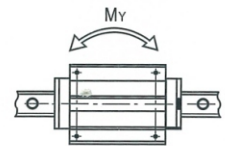
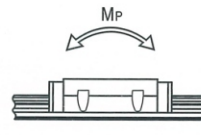
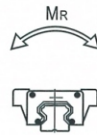
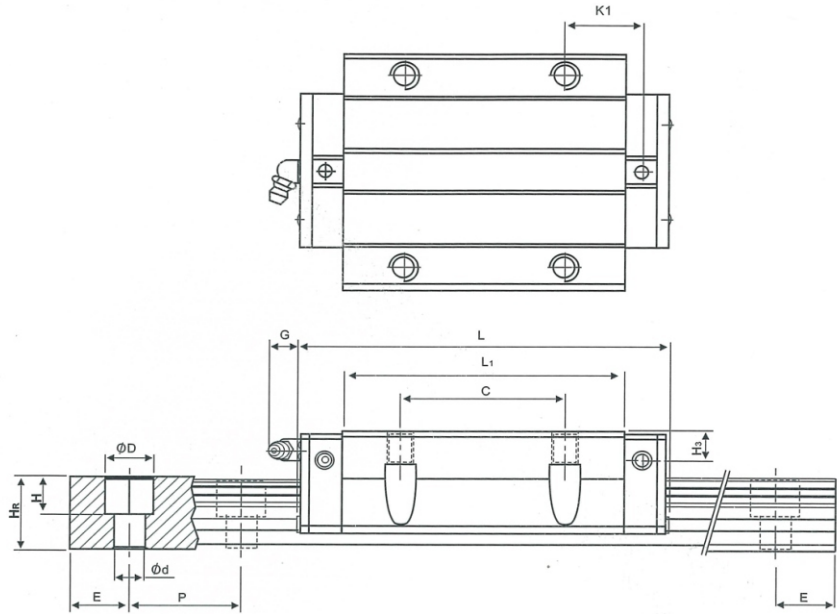
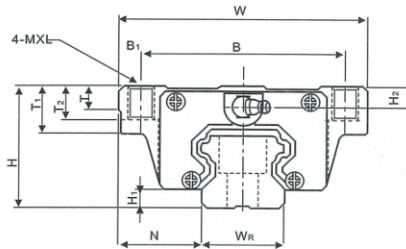


### GHW系列綫性滑軌

GHW系列綫性滑軌尺寸表

(高組裝法蘭型)

GHW-CC/GHW-HC



型號	組件尺寸 (mm)			滑塊尺寸(mm)														滑軌尺寸(mm)							滑軌的固定螺栓尺寸 (mm)	基本動額定負荷 C(KN)	基本靜額定負荷 Co(KN)	容許靜力矩			重量	
	H	H1	N	W	B	B1	C	L1	L	K1	G	M	T	T1	T2	H2	4ML	WR	Hr	D	h	d	P	E				MR	MP	MY	滑塊	滑軌
GHW 15CC	28	4.3	16	47	38	4.5	30	39.4	61.4	8	5.3	M5	6	8.9	6.95	3.95	3.7	15	15	7.5	5.3	4.5	60	20	M4x16	11.38	25.31	0.17	0.15	0.15	0.18	1.45
GHW 20CC	30	4.6	21.5	63	53	5	40	50.5	77.5	12.25	12	M6	8	10	9.5	6	7	20	17.5	9.5	8.5	6	60	20	M5x16	17.75	37.84	0.38	0.27	0.27	0.40	2.21
GHW 20HC								65.2	92.2	17.6																21.18	48.84	0.48	0.47	0.47	0.52	
GHW 25CC	36	5.5	23.5	70	57	6.5	45	58	84	11.8	12	M8	8	14	10	6	9	23	22	11	9	7	60	20	M6x20	26.78	56.19	0.64	0.51	0.51	0.59	3.21
GHW 25HC								78.6	104.6	22.1																32.75	76.00	0.87	0.88	0.88	0.80	
GHW 30CC	42	6	31	90	72	9	52	70	97.4	14.25	12	M10	8.5	16	10	6.5	10.8	28	26	14	12	9	80	20	M8x25	38.74	83.06	1.06	0.85	0.85	1.09	4.47
GHW 30HC								93	120.4	25.75																47.27	110.13	1.40	1.47	1.47	1.44	
GHW 35CC	48	7.5	33	100	82	9	62	80	112.4	14.6	12	M10	10.1	18	13	9	126	34	29	14	12	9	80	20	M8x25	49.52	102.87	1.73	1.20	1.20	1.56	6.30
GHW 35HC								105.8	138.2	27.5																60.21	136.31	2.29	2.08	2.08	2.06	
GHW 45CC	60	9.5	37.5	120	100	10	80	97	139.4	13	12.9	M12	15.1	22	15	8.5	20.5	45	38	20	17	14	105	22.5	M12x35	77.57	155.93	3.01	2.35	2.35	2.79	10.41
GHW 45HC								128.8	171.2	28.9																94.547	207.12	4.00	4.07	4.07	3.69	

E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)

Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)





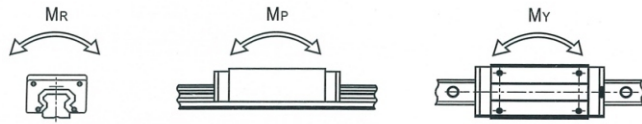
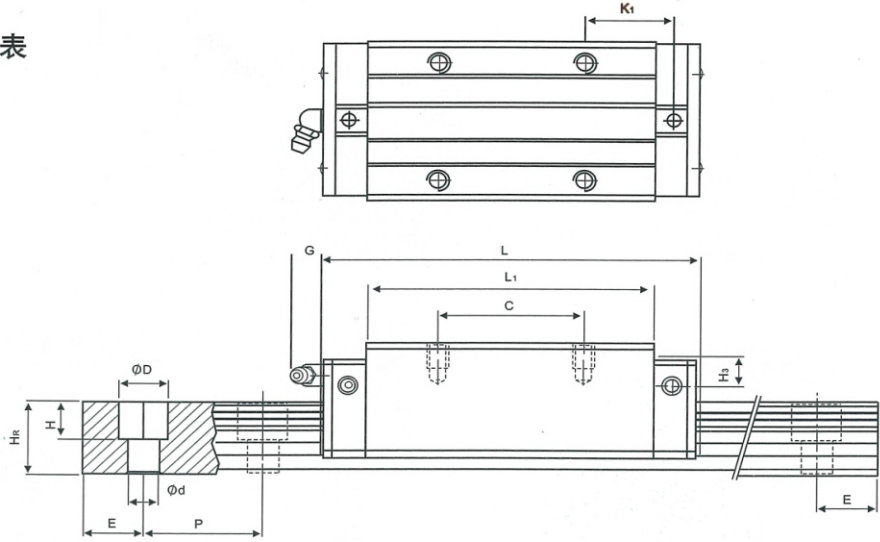
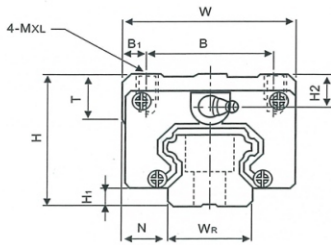
# MNB

## LINEAR MOTION GUIDEWAY

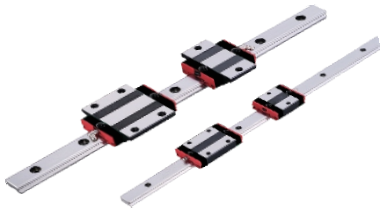


### GHH系列綫性滑軌

GHH系列綫性滑軌尺寸表  
(高組裝四方型)  
GHH-CA/GHH-HA



型號	組件尺寸 (mm)			滑塊尺寸(mm)										滑軌尺寸(mm)						滑軌的固定螺栓尺寸	基本動額定負荷 C(KN)	基本靜額定負荷 Co(KN)	容許靜力矩			重量				
	H	H1	N	W	B	B1	C	L1	L	K1	G	4-MxL	T2	H2	H3	Wr	Hr	D	h				d	P	E	(mm)	MR	MP	MY	滑塊
																								kN-m	kN-m	kN-m	kg	kg/m		
GHH 15CA	28	4.3	9.5	34	26	4	26	39.4	61.4	10	5.3	M4x5	6	7.95	7.7	15	15	7.5	5.3	4.5	60	20	M4x16	11.38	25.31	0.17	0.15	0.15	0.18	1.45
GHH 20CA	30	4.6	12	44	32	6	36	50.5	77.5	12.25	12	M5x6	8	6	7	20	17.5	9.5	8.5	6	60	20	M5x16	17.75	37.84	0.38	0.27	0.27	0.30	2.21
GHH 20HA							50	65.2	92.2	12.6														21.18	48.84	0.48	0.47	0.47	0.39	
GHH 25CA	40	5.5	12.5	48	35	6.5	35	58	64	16.8	12	M6x8	8	10	13	23	22	11	9	7	60	20	M6x20	26.48	56.19	0.64	0.51	0.51	0.51	3.21
GHH 25HA							50	78.6	104.6	19.6														32.75	76.00	0.87	0.88	0.88	0.69	
GHH 30CA	45	6	16	60	40	10	40	70	97.4	20.25	12	M8x10	8.5	9.5	13.8	28	26	14	12	9	80	20	M8x25	38.74	83.06	1.06	0.85	0.85	0.88	4.47
GHH 30HA							60	93	120.4	21.75														47.27	110.13	1.40	1.47	1.47	1.16	
GHH 35CA	55	7.5	18	70	50	10	50	80	112.4	20.6	12	M8x12	10.2	16	19.6	34	29	14	12	9	80	20	M8x25	49.52	102.87	1.73	1.20	1.20	1.45	6.30
GHH 35HA							72	105.8	138.2	22.5														60.21	136.31	2.29	2.08	2.08	1.92	
GHH 45CA	70	9.5	20.5	86	60	13	60	97	139.4	23	12.9	M10x17	16	18.5	30.5	45	38	20	17	14	105	22.5	M12x35	77.57	155.93	3.01	2.35	2.35	2.73	10.41
GHH 45HA							80	128.8	171.2	28.9														94.54	207.12	4.00	4.07	4.07	3.61	



# MNB

## LINEAR MOTION GUIDEWAY

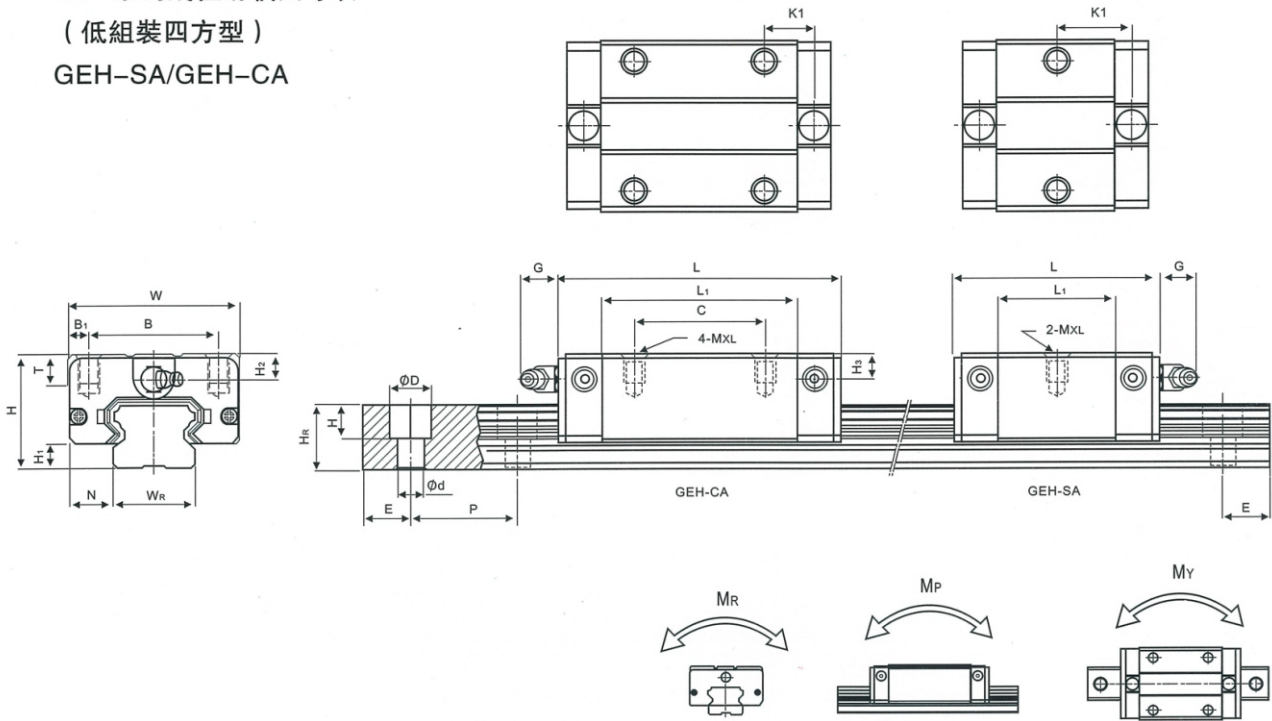


### GEH系列綫性滑軌

GEH系列綫性滑軌尺寸表

(低組裝四方型)

GEH-SA/GEH-CA



型號	組件尺寸 (mm)			滑塊尺寸(mm)													滑軌尺寸(mm)					滑軌的固定螺栓尺寸 (mm)	基本動額定負荷 C(KN)	基本靜額定負荷 Co(KN)	容許靜力矩			重量				
	H	H <sub>1</sub>	N	W	B	B <sub>1</sub>	C	L <sub>1</sub>	L	K <sub>1</sub>	G	4-MxL	T <sub>2</sub>	H <sub>2</sub>	H <sub>3</sub>	W <sub>R</sub>	H <sub>R</sub>	D	h	d	P				E	MR	MP	MY	滑塊	滑軌		
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kN-m	kN-m	kN-m	kg	kg/m				
GEH 15SA	24	4.5	9.5	34	26	4	—	23.1	40.1	14.8	—	5.7	M4x6	6	5.5	6	15	12.5	6	4.5	3.5	60	20	M3x16	5.35	9.40	0.08	0.04	0.04	0.14	1.25	
GEH 15CA	—	—	—	—	—	—	26	39.8	56.8	10.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.83	16.19	0.13	0.10	0.10	0.15		
GEH 20SA	—	—	—	—	—	—	—	29	50	18.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.23	12.74	0.13	1.06	1.06	0.15	2.08	
GEH 20CA	28	6	11	42	32	5	32	48.1	69.1	12.3	12	M5x7	7.5	6	6	20	15.5	9.5	8.5	6	60	20	M5x16	10.31	21.13	0.22	0.16	0.16	0.24			
GEH 25SA	—	—	—	—	—	—	—	35.5	59.1	21.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.40	19.50	0.23	0.12	0.12	0.25	2.67
GEH 25CA	33	7	12.5	48	35	6.5	35	59	82.6	16.15	12	M6x9	8	8	8	23	18	11	9	7	60	20	M6x20	16.27	32.40	0.38	0.32	0.32	0.41			
GEW 30SA	—	—	—	—	—	—	—	41.5	69.5	26.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.42	28.10	0.40	0.21	0.21	0.45	4.35
GEW 30CA	42	10	16	60	40	10	40	70.1	98.1	21.05	12	M8x12	9	8	9	28	23	11	9	7	60	20	M6x25	23.70	47.46	0.68	0.55	0.55	0.76			





# MNB

## LINEAR MOTION GUIDEWAY

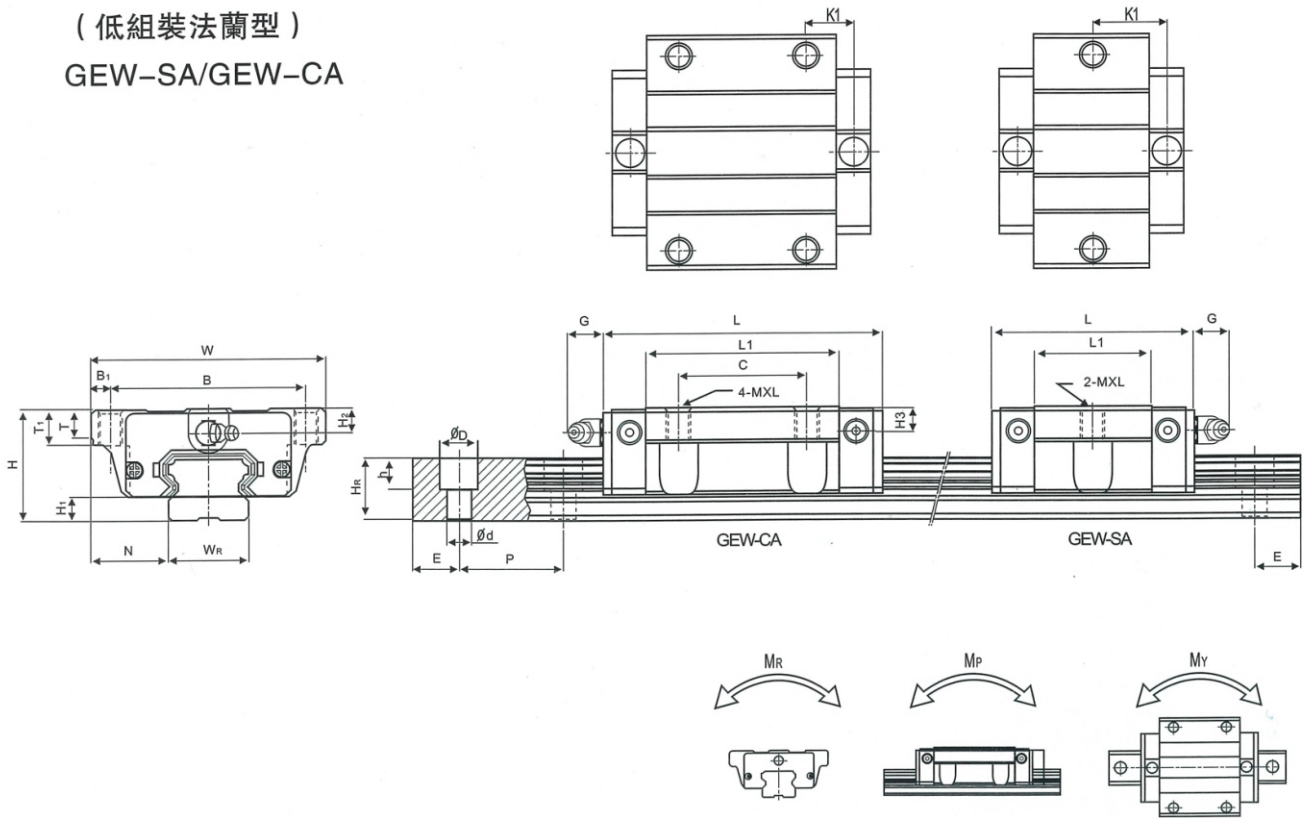


### GEW系列綫性滑軌

GEW系列綫性滑軌尺寸表

(低組裝法蘭型)

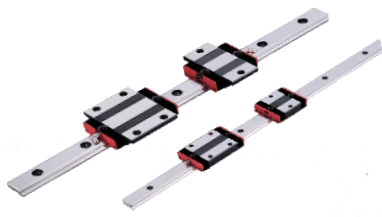
GEW-SA/GEW-CA



型號	組件尺寸 (mm)			滑塊尺寸(mm)													滑軌尺寸(mm)					滑軌的固定螺栓尺寸 (mm)	基本動額定負荷 C(KN)	基本靜額定負荷 Co(KN)	容許靜力矩			重量					
	H	H1	N	W	B	B1	C	L1	L	K1	G	4-MXL	T2	H2	H3	WR	HR	D	h	d	P				E	(mm)	C(KN)	Co(KN)	MR	MP	MY	滑塊	滑軌
																													kN-m	kN-m	kN-m	kg	kg/m
GEW 15SA	24	4.5	18.5	52	41	5.5	-	23.1	40.1	14.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.35	9.40	0.08	0.04	0.04	0.12	1.25
GEW 15CA							26	39.8	56.8	10.15	5.7	M5	5	5.5	6	15	12.5	6	4.5	3.5	60	20	M3x16	7.83	16.19	0.13	0.10	0.10	0.21				
GEW 20SA	28	6	19.5	59	49	5	-	29	50	18.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.83	12.74	0.13	0.06	0.06	0.19	2.08	
GEW 20CA							32	48.1	69.1	12.3	12	M6	7	6	6	20	15.5	9.5	8.5	6	60	20	M5x16	10.31	21.13	0.22	0.16	0.16	0.32				
GEW 25SA	33	7	25	73	60	6.5	-	35.5	59.1	21.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.40	19.50	0.23	0.12	0.12	0.35	2.67	
GEW 25CA							35	59	82.6	16.15	12	M8	7.5	8	8	23	18	11	9	7	60	20	M6x20	16.27	32.40	0.38	0.32	0.32	0.59				
GEW 30SA	42	10	31	90	72	9	-	41.5	69.5	26.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.42	28.10	0.40	0.21	0.21	0.62	4.35	
GEW 30CA							40	70.1	98.1	21.05	12	M10	7	8	9	28	23	11	9	7	60	20	M6x25	23.70	47.46	0.68	0.55	0.55	1.04				

E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)

Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)



# MNB

## LINEAR MOTION GUIDEWAY



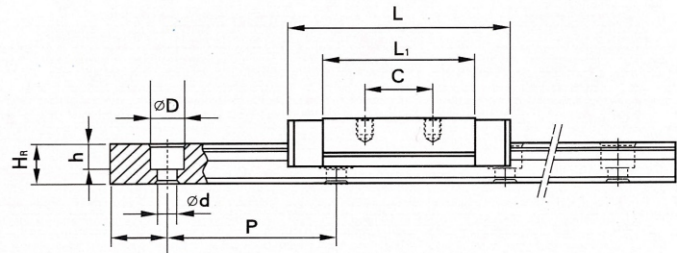
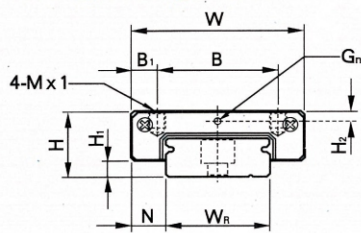
### MGW 微型系列导轨

MGW微型系列滑轨尺寸表

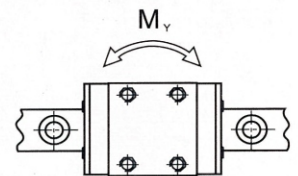
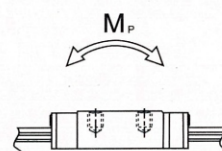
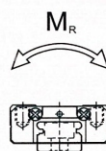
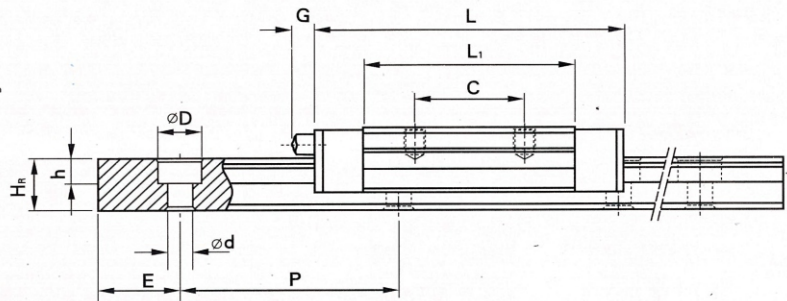
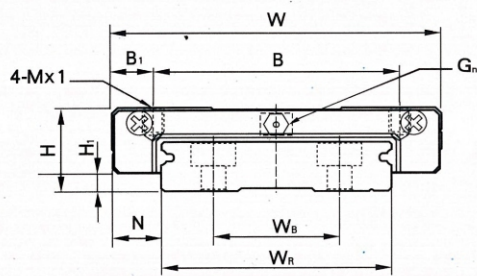
(微型法兰型)

MGW-C/MGW-H

MGW7, MGW9, MGW12



MGW15



型号	组件尺寸 (mm)			滑块尺寸 (mm)										滑轨尺寸 (mm)					滑轨的固定螺栓尺寸 (mm)	基本动额定负荷 C (kgf)	基本静额定负荷 Co (kgf)	容许静力矩			重量						
	H	H1	N	W	B	B1	C	L1	L	G	Gn	Mx1	H2	WR	WB	Hr	D	h				d	P	E	MR	MP	MY	滑块	滑轨		
	kgf-m	kgf-m	kgf-m	g	kg/m																										
MGW 7C	9	1.9	5.5	25	19	3	10	21	31.2	-	Ø1.2	M 3x3	1.85	14	-	5.2	6	3.2	3.5	30	10	M 3x6	140	210	1.6	0.73	0.73	20	0.51		
MGW 7H							19	30.8	41													180	320	2.39	1.58	1.58	29				
MGW 9C							21	4.5	12	27.5	39.3	-	Ø1.4	M 3x3	2.4	18	-	7	6	4.5	3.5	30	10	M 3x8	280	420	4.09	1.93	1.93	40	0.91
MGW 9H	12	2.9	6	30	23	3.5	24	38.5	50.7													350	600	5.56	3.47	3.47	57				
MGW 12C							15	31.3	46.1	-	Ø1.4	M 3x3.6	2.8	24	-	8.5	8	4.5	4.5	40	15	M 4x8	400	570	7.17	2.83	2.83	71	1.49		
MGW 12H	14	3.4	8	40	28	6	28	45.6	60.4													520	840	10.47	5.85	5.85	103				
MGW 15C							20	38	54.8	5.2	M 3	M 4x4.2	3.2	42	23	9.5	8	4.5	4.5	40	15	M 4x10	690	940	20.32	5.78	5.78	143	2.86		
MGW 15H	16	3.4	9	60	45	7.5	35	57	73.8													910	1410	30.48	12.5	12.5	215				

E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)

Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)





# MNB



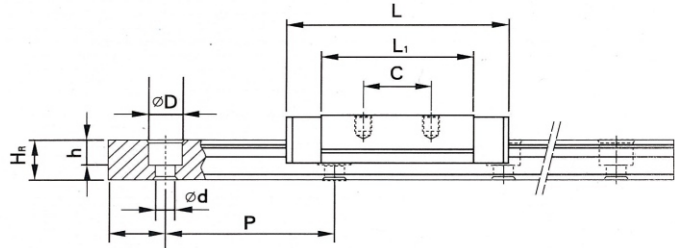
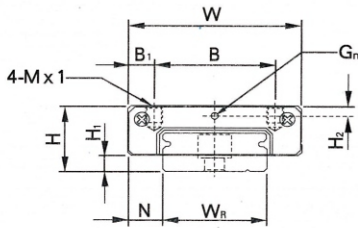
## LINEAR MOTION GUIDEWAY

### MGN 微型系列导轨

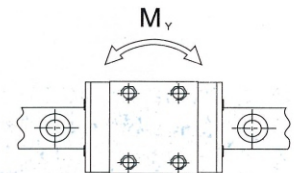
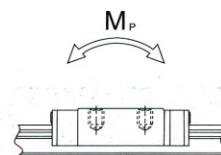
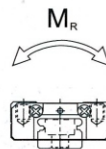
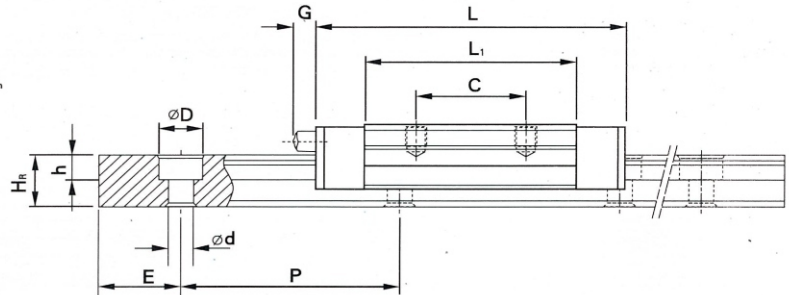
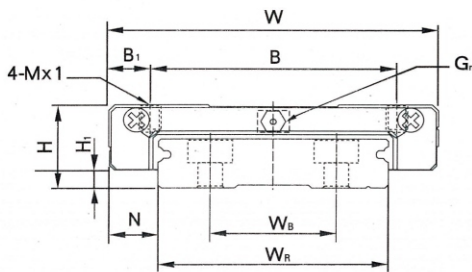
MGN微型系列导轨尺寸表  
(微四方型)

MGN-C/MGN-H

MGN7, MGN9, MGN12



MGN15



型号	组件尺寸 (mm)		滑块尺寸 (mm)											滑轨尺寸 (mm)					滑轨的固定螺栓尺寸 (mm)	基本动额定负荷 C(KN)	基本静额定负荷 Co(KN)	容许静力矩			重量			
	H	H1	N	W	B	B1	C	L1	L	G	Gn	Mx1	H2	WR	Hr	D	h	d				P	E	Mr	Mp	My	滑块 (g)	滑轨 (kg/m)
	kgf-m	kgf-m	kgf-m	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g			
MGN7C	8	1.5	5	17	12	2.5	8	13.5	22.5	-	Ø1.2	M2x2.5	1.5	7	4.8	4.2	2.3	2.4	15	5	M2x6	100	127	0.48	0.29	0.29	10	0.22
MGN7H							13	21.8	30.8													140	200	0.78	0.49	0.49	15	
MGN9C	10	2	5.5	20	15	2.5	10	18.9	28.9	-	Ø1.2	M3x3	1.8	9	6.5	6	3.5	3.5	20	7.5	M3x8	190	260	1.2	0.75	0.75	16	0.38
MGN7H							16	29.9	39.9													260	410	2	1.9	1.9	26	
MGN12C	13	3	7.5	27	20	3.5	15	21.7	34.7	-	Ø1.4	M3x3.5	2.5	12	8	6	4.5	3.5	25	10	M3x8	290	400	2.6	1.4	1.4	34	0.65
MGN12H							20	32.4	45.4													380	600	3.9	3.7	3.7	54	
MGN15C	16	3	8.5	32	25	3.5	20	26.7	42.1	-	M3	M3x4	3	15	10	6	4.5	3.5	40	15	M3x10	470	570	4.6	2.2	2.2	59	1.06
MGN15H							25	43.4	58.8													650	930	7.5	5.9	5.9	92	

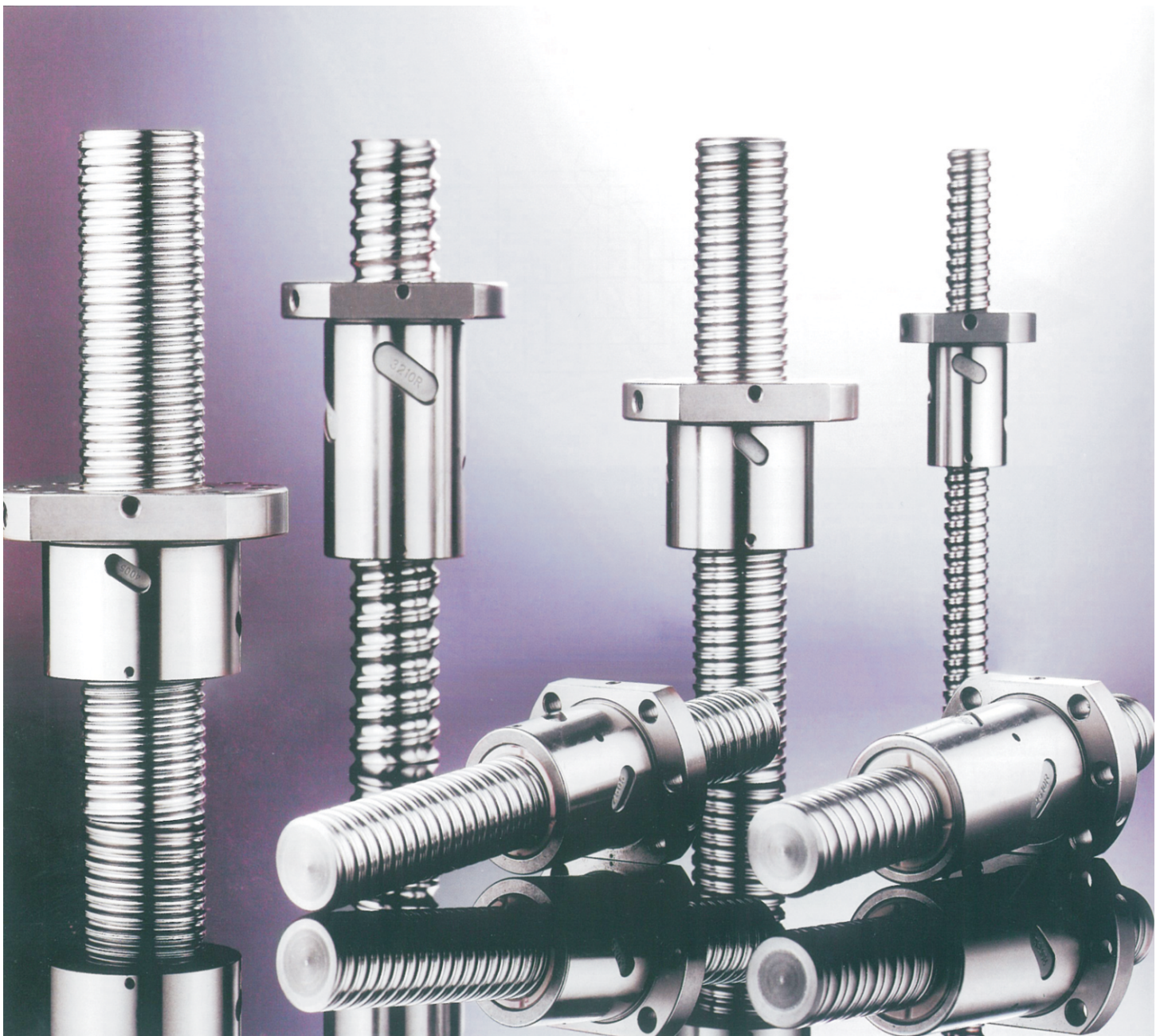




# MNB



## BALL SCREW



E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)  
Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)

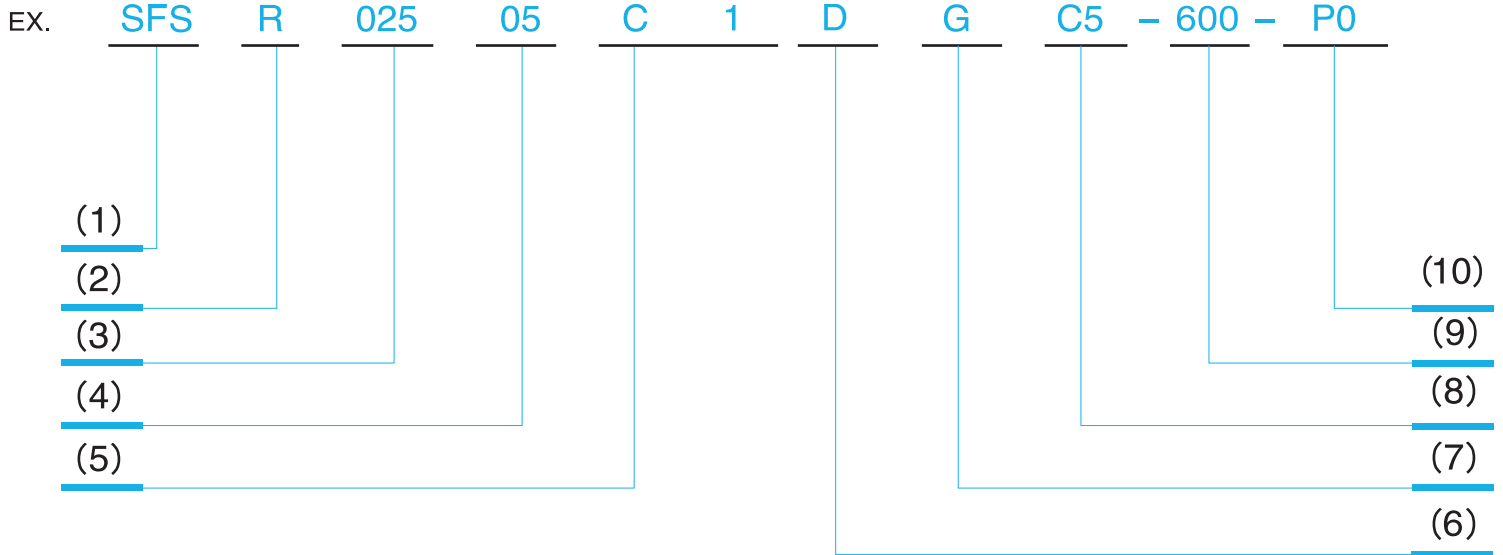


# MNMB

## BALL SCREW



### Model-number coding



#### (1) Nut type codes

**S** S : Single nut  
D : Double nut

**F** F : With flange  
C : Without flange

**S** S : DIN nut  
U : DIN nut  
I : I type nut  
E : E type nut  
K : K type nut  
V : V type nut  
T : T type nut  
M : M type nut

(SFS \ DFS \ SFU \ DFU \ SFI \ DFI \ SFT \ DFT \ SFV \ DFV \ SFE \ SFK \ BSH \ SCI \ SFM \ DFM)

#### (2) Direction of helix

R : Right L : Left

#### (3) Shaft dia. (mm)

#### (4) Lead(mm)

#### (5) No. of Turn (Circuits) or Turn x Row

Turn: T:1 A:1.5(or 1.7/1.8) B:2.5/2.8 C:3.8 D:4.8 ex: (2.5x2 = B2)

#### (6) Flange type

N : Not cutting S : Single cutting D : Double cutting

#### (7) Produce code

G : Ground F : Rolled

#### (8) Accuracy grade code

C0 \ C1 \ C2 \ C3 \ C5 \ C7 \ C10

#### (9) Overall length of shaft(mm)

#### (10) Axial clearance and preload code

P0 \ P1 \ P2 \ P3 \ P4

E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)

Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)

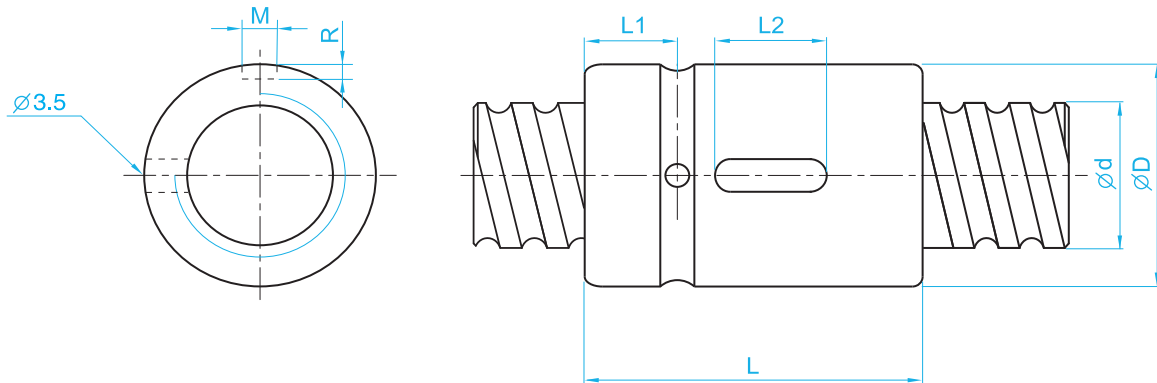


# MNB

## BALL SCREW



(TYPE) : **SCI**



Unit : mm

Model No.	Dimensions												
	d	I	Da	D	L	L1	L2	M	R	n	Ca	Coa	K
SCI01604-4	16	4	2.381	30	40	9	15	3	1.5	1x4	973	2406	32
★ SCI01605-4		5	3.175	30	45	9	20	5	3	1x4	1380	3052	33
SCI02004-4	20	4	2.381	34	40	9	15	3	1.5	1x4	1066	2987	37
★ SCI02005-4		5	3.175	34	45	9	20	5	3	1x4	1551	3875	39
SCI02504-4	25	4	2.381	40	40	9	15	3	1.5	1x4	1180	3795	43
★ SCI02505-4		5	3.175	40	45	9	20	5	3	1x4	1724	4904	45
SCI02510-4		10	4.762	46	85	13	30	5	3	1x4	2954	7295	51
SCI03204-4	32	4	2.381	46	40	9	15	3	1.5	1x4	1296	4838	49
★ SCI03205-4		5	3.175	46	45	9	20	5	3	1x4	1922	6343	52
★ SCI03210-4		10	6.35	54	85	13	30	5	3	1x4	4805	12208	62
★ SCI04005-4	40	5	3.175	56	45	9	20	5	3	1x4	2110	7988	59
★ SCI04010-4		10	6.35	62	85	13	30	5	3	1x4	5399	15500	72
SCI05010-4	50	10	6.35	72	85	13	30	5	3	1x4	6004	19614	83
★ SCI06310-4	63	10	6.35	85	85	13	30	6	3.5	1x4	6719	25358	95
★ SCI08010-4	80	10	6.35	105	85	13	30	8	4.5	1x4	7346	31953	109

Note: with sign ★ can be produced in left helix

E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)  
 Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)



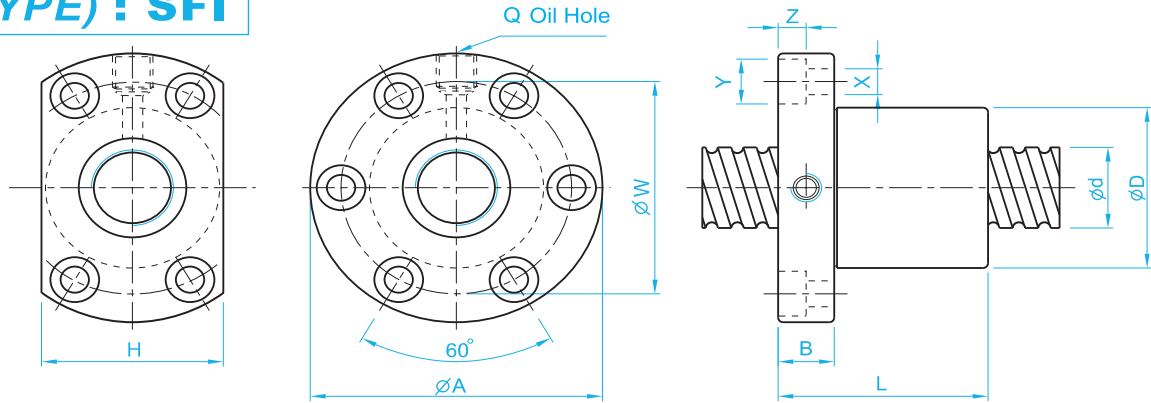


# MNB

## BALL SCREW



**(TYPE) : SFI**



Unit : mm

I: Lead    Da: Ball Dia.    n: Number of Circuits    K: Stiffness (Kgf/μm)  
 Ca: Basic Dynamic Rating Load (Kgf)    Coa: Basic Static Rating Load(Kgf)

Model No.	Dimensions																
	d	I	Da	D	A	B	L	W	H	X	Y	Z	Q	n	Ca	Coa	K
SFI01604-4	16	4	2.381	30	49	10	45	39	34	4.5	8	4.5	M6	1x4	973	2406	32
★ SFI01605-4		5	3.175	30	49	10	50	39	34	4.5	8	4.5	M6	1x4	1380	3052	33
★ SFI01610-3		10	3.175	34	58	10	57	45	34	5.5	9.5	5.5	M6	1x3	1103	2401	27
SFI02004-4	20	4	2.381	34	57	11	46	45	40	5.5	9.5	5.5	M6	1x4	1066	2987	37
★ SFI02005-4		5	3.175	34	57	11	51	45	40	5.5	9.5	5.5	M6	1x4	1551	3875	39
★ SFI0205T-4		5.08	3.175	34	57	11	51	45	40	5.5	9.5	5.5	M6	1x4	1550	3875	39
★ SFI02504-4	25	4	2.381	40	63	11	46	51	46	5.5	9.5	5.5	M6	1x4	1180	3795	43
★ SFI02505-4		5	3.175	40	63	11	51	51	46	5.5	9.5	5.5	M8	1x4	1724	4904	45
SFI02510-4		10	4.762	46	72	12	85	58	52	6.5	11	6.5	M6	1x4	2954	7295	51
SFI03204-4	32	4	2.381	46	72	12	47	58	52	6.5	11	6.5	M6	1x4	1296	4838	49
★ SFI03205-4		5	3.175	46	72	12	52	58	52	6.5	11	6.5	M8	1x4	1922	6343	52
★ SFI03210-4		10	6.35	54	88	15	90	70	62	9	14	8.5	M8	1x4	4805	12208	62
★ SFI04005-4	40	5	3.175	56	90	15	55	72	64	9	14	8.5	M8	1x4	2110	7988	59
★ SFI04010-4		10	6.35	62	104	18	93	82	70	11	17.5	11	M8	1x4	5399	15500	72
★ SFI05010-4	50	10	6.35	72	114	18	93	92	82	11	17.5	11	M8	1x4	6004	19614	83
★ SFI06310-4	63	10	6.35	85	131	22	98	107	95	14	20	13	M8	1x4	6719	25358	95
SFI08010-4	80	10	6.35	105	150	22	98	127	115	14	20	13	M8	1x4	7346	31953	109

Note: with sign ★ can be produced in left helix

E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)

Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)

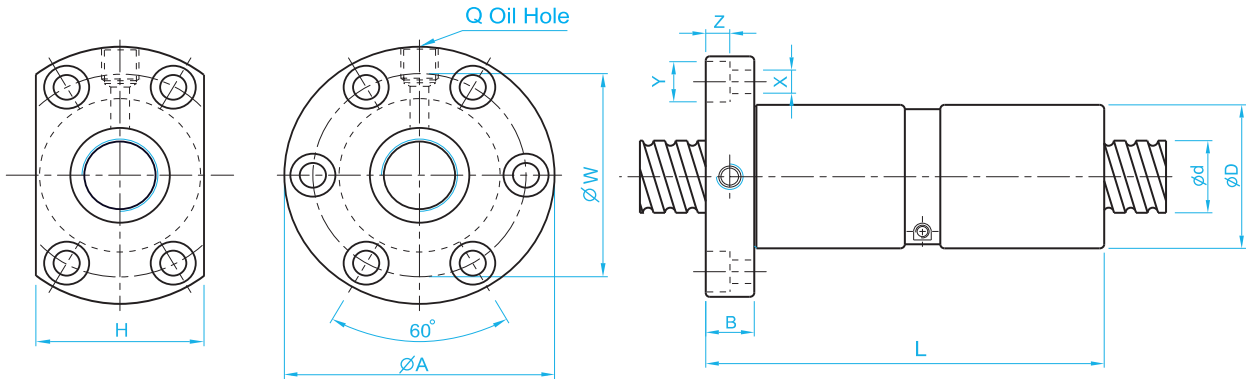


# MNB

## BALL SCREW



**(TYPE) : DFI**



Unit : mm

I: Lead    Da: Ball Dia.    n: Number of Circuits    K: Stiffness (Kg/ $\mu$ m)  
 Ca: Basic Dynamic Rating Load (Kgf)    Coa: Basic Static Rating Load(Kgf)

Model No.	Dimensions																
	d	I	Da	D	A	B	L	W	H	X	Y	Z	Q	n	Ca	Coa	K
DFI01604-4	16	4	2.381	30	49	10	80	39	34	4.5	8	4.5	M6	1x4	973	2406	44
DFI01605-4		5	3.175	30	49	10	100	39	34	4.5	8	4.5	M6	1x4	1380	3052	44
DFI02004-4	20	4	2.381	34	57	11	80	45	40	5.5	9.5	5.5	M6	1x4	1066	2987	51
★ DFI02005-4		5	3.175	34	57	11	101	45	40	5.5	9.5	5.5	M6	1x4	1551	3875	52
DFI02504-4	25	4	2.381	40	63	11	80	51	46	5.5	9.5	5.5	M6	1x4	1180	3795	60
★ DFI02505-4		5	3.175	40	63	11	101	51	46	5.5	9.5	5.5	M8	1x4	1724	4904	62
DFI02510-4		10	4.762	46	72	12	145	58	52	6.5	11	6.5	M6	1x4	2954	7295	68
DFI03204-4	32	4	2.381	46	72	12	80	58	52	6.5	11	6.5	M6	1x4	1296	4838	69
★ DFI03205-4		5	3.175	46	72	12	102	58	52	6.5	11	6.5	M8	1x4	1922	6343	72
DFI03210-4		10	6.35	54	88	15	162	70	62	9	14	8.5	M8	1x4	4805	12208	83
★ DFI04005-4	40	5	3.175	56	90	15	105	72	64	9	14	8.5	M8	1x4	2110	7988	84
DFI04010-4		10	6.35	62	104	18	165	82	70	11	17.5	11	M8	1x4	5399	15500	99
DFI05010-4	50	10	6.35	72	114	18	171	92	82	11	17.5	11	M8	1x4	6004	19614	115
★ DFI06310-4	63	10	6.35	85	131	22	182	107	95	14	20	13	M8	1x4	6719	25358	135
★ DFI08010-4	80	10	6.35	105	150	22	182	127	115	14	20	13	M8	1x4	7346	31953	156

Note: with sign ★ can be produced in left helix

E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)

Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)

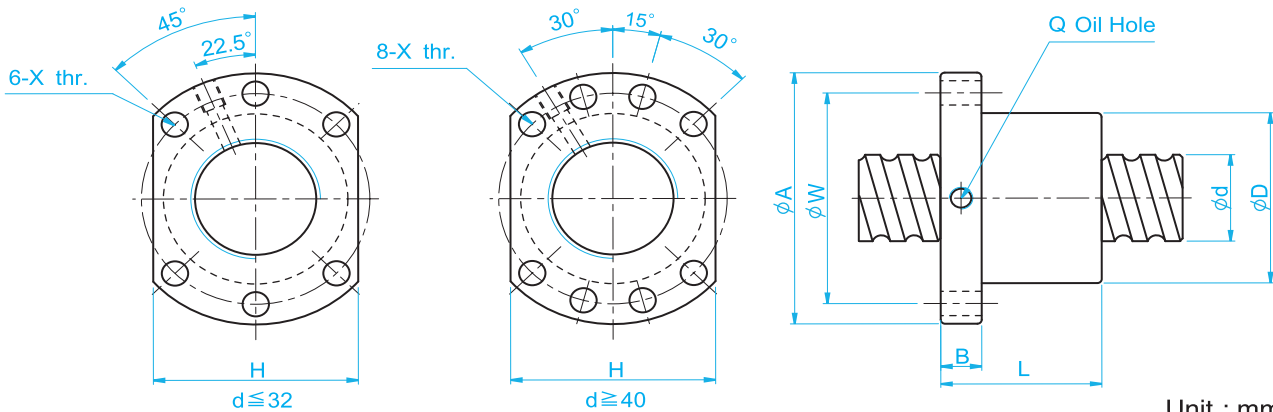


# MNBB

## BALL SCREW



**(TYPE) : SFU(DIN 69051 FORM B)**



Unit : mm

l: Lead      Da: Ball Dia.      n: Number of Circuits      K: Stiffness (Kgf/ $\mu$ m)  
 Ca: Basic Dynamic Rating Load (Kgf)      Coa: Basic Static Rating Load(Kgf)

Model No.	Dimensions														
	d	l	Da	D	A	B	L	W	X	H	Q	n	Ca	Coa	K
SFU01204-4	12	4	2.5	24	40	10	40	32	4.5	30		1x4	902	1884	26
★ SFU01604-4	16	4	2.381	28	48	10	40	38	5.5	40	M6	1x4	973	2406	32
★ SFU01605-4		5	3.175	28	48	10	50	38	5.5	40	M6	1x4	1380	3052	32
★ SFU01610-3	10	3.175	28	48	10	57	38	5.5	40	M6	1x3	1103	2401	26	
SFU02004-4	20	4	2.381	36	58	10	42	47	6.6	44	M6	1x4	1066	2987	38
★ SFU02005-4		5	3.175	36	58	10	51	47	6.6	44	M6	1x4	1551	3875	39
SFU02504-4	25	4	2.381	40	62	10	42	51	6.6	48	M6	1x4	1180	3795	43
★ SFU02505-4		5	3.175	40	62	10	51	51	6.6	48	M6	1x4	1724	4904	45
SFU02506-4		6	3.969	40	62	10	54	51	6.6	48	M6	1x4	2318	6057	47
★ SFU02508-4		8	4.762	40	62	10	63	51	6.6	48	M6	1x4	2963	7313	49
★ SFU02510-4	10	4.762	40	62	12	85	51	6.6	48	M6	1x4	2954	7295	50	
SFU03204-4	32	4	2.381	50	80	12	44	65	9	62	M6	1x4	1296	4838	51
★ SFU03205-4		5	3.175	50	80	12	52	65	9	62	M6	1x4	1922	6343	54
SFU03206-4		6	3.969	50	80	12	57	65	9	62	M6	1x4	2632	7979	57
★ SFU03208-4		8	4.762	50	80	12	65	65	9	62	M6	1x4	3387	9622	60
★ SFU03210-4	10	6.35	50	80	12	90	65	9	62	M6	1x4	4805	12208	61	
★ SFU04005-4	40	5	3.175	63	93	14	55	78	9	70	M8	1x4	2110	7988	63
SFU04006-4		6	3.969	63	93	14	60	78	9	70	M6	1x4	2873	9913	66
★ SFU04008-4		8	4.762	63	93	14	67	78	9	70	M6	1x4	3712	11947	70
★ SFU04010-4	10	6.35	63	93	14	93	78	9	70	M8	1x4	5399	15500	73	
★ SFU05010-4	50	10	6.35	75	110	16	93	93	11	85	M8	1x4	6004	19614	85
★ SFU05020-4		20	7.144	75	110	16	138	93	11	85	M8	1x4	7142	22588	94
SFU06310-4	63	10	6.35	90	125	18	98	108	11	95	M8	1x4	6719	25358	99
SFU06320-4		20	9.525	95	135	20	149	115	13.5	100	M8	1x4	11444	36653	112
★ SFU08010-4	80	10	6.35	105	145	20	98	125	13.5	110	M8	1x4	7346	31953	109
SFU08020-4		20	9.525	125	165	25	154	145	13.5	130	M8	1x4	12911	47747	138
SFU10020-4	100	20	9.525	150	202	30	180	170	17.5	155	M8	1x4	14303	60698	162

Note: with sign ★ can be produced in left helix

E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)  
 Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)



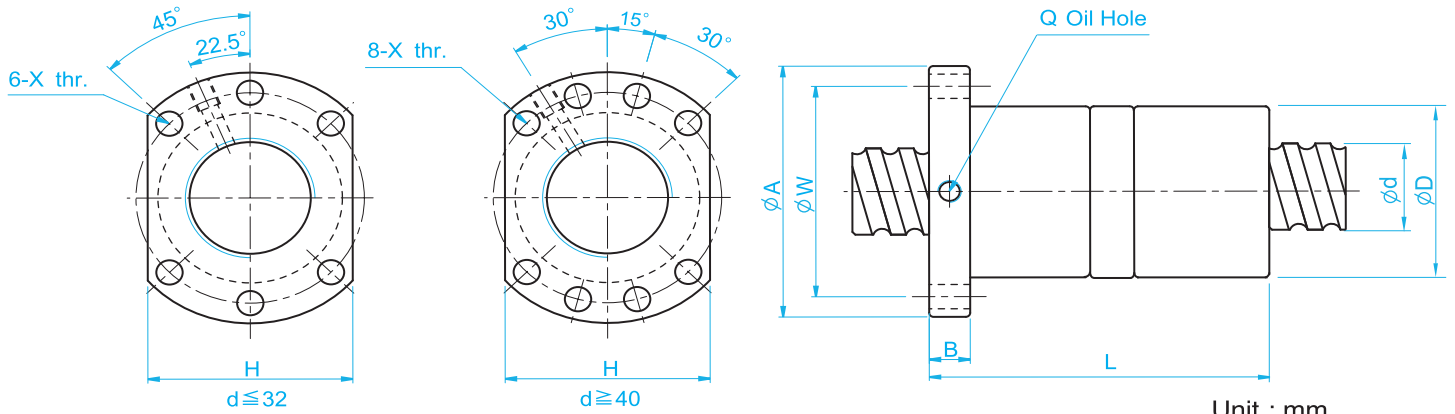


# MNB

## BALL SCREW



**(TYPE) : DFU(DIN 69051 FORM B)**



l: Lead    Da: Ball Dia.    n: Number of Circuits    K: Stiffness (Kgf/ $\mu$ m)  
 Ca: Basic Dynamic Rating Load (Kgf)    Coa: Basic Static Rating Load(Kgf)

Model No.	Dimensions														
	d	l	Da	D	A	B	L	W	X	H	Q	n	Ca	Coa	K
★ DFU01604-4	16	4	2.381	28	48	10	80	38	5.5	40	M6	1x4	973	2406	43
★ DFU01605-4		5	3.175	28	48	10	100	38	5.5	40	M6	1x4	1380	3052	44
★ DFU01610-3		10	3.175	28	48	10	118	38	5.5	40	M6	1x3	1103	2401	35
★ DFU02004-4	20	4	2.381	36	58	10	80	47	6.6	44	M6	1x4	1066	2987	51
★ DFU02005-4		5	3.175	36	58	10	101	47	6.6	44	M6	1x4	1551	3875	53
★ DFU02504-4	25	4	2.381	40	62	10	80	51	6.6	48	M6	1x4	1180	3795	60
★ DFU02505-4		5	3.175	40	62	10	101	51	6.6	48	M6	1x4	1724	4904	62
★ DFU02506-4		6	3.969	40	62	10	105	51	6.6	48	M6	1x4	2318	6057	64
★ DFU02508-4		8	4.762	40	62	10	120	51	6.6	48	M6	1x4	2963	7313	67
★ DFU02510-4	10	4.762	40	62	12	145	51	6.6	48	M6	1x4	2954	7295	67	
★ DFU03204-4	32	4	2.381	50	80	12	80	65	9	62	M6	1x4	1296	4838	71
★ DFU03205-4		5	3.175	50	80	12	102	65	9	62	M6	1x4	1922	6343	74
★ DFU03206-4		6	3.969	50	80	12	105	65	9	62	M6	1x4	2632	7979	78
★ DFU03208-4		8	4.762	50	80	12	122	65	9	62	M6	1x4	3387	9622	82
★ DFU03210-4	10	6.35	50	80	12	162	65	9	62	M6	1x4	4805	12208	82	
★ DFU04005-4	40	5	3.175	63	93	14	105	78	9	70	M8	1x4	2110	7988	87
★ DFU04006-4		6	3.969	63	93	14	108	78	9	70	M6	1x4	2873	9913	91
★ DFU04008-4		8	4.762	63	93	14	132	78	9	70	M6	1x4	3712	11947	96
★ DFU04010-4	10	6.35	63	93	14	165	78	9	70	M8	1x4	5399	15500	99	
★ DFU05010-4	50	10	6.35	75	110	16	171	93	11	85	M8	1x4	6004	19614	117
★ DFU05020-4		20	7.144	75	110	16	280	93	11	85	M8	1x4	7142	22588	126
★ DFU06310-4	63	10	6.35	90	125	18	182	108	11	95	M8	1x4	6719	25358	139
★ DFU06320-4		20	9.525	95	135	20	290	115	13.5	100	M8	1x4	11444	36653	152
★ DFU08010-4	80	10	6.35	105	145	20	182	125	13.5	110	M8	1x4	7346	31953	156
★ DFU08020-4		20	9.525	125	165	25	295	145	13.5	130	M8	1x4	12911	47747	187
★ DFU10020-4	100	20	9.525	150	202	30	340	170	17.5	155	M8	1x4	14303	60698	222

Note: with sign ★ can be produced in left helix

E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)

Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)

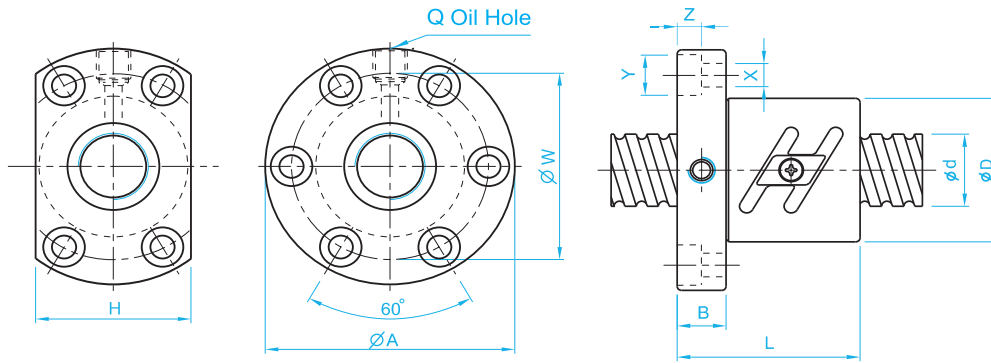


# MNB

## BALL SCREW



**(TYPE) : SFT**



Unit : mm

I: Lead    Da: Ball Dia.    n: Number of Circuits    K: Stiffness (Kgf/μm)  
 Ca: Basic Dynamic Rating Load (Kgf)    Coa: Basic Static Rating Load(Kgf)

Model No.	Dimensions																
	d	I	Da	D	A	B	L	W	H	X	Y	Z	Q	n	Ca	Coa	K
SFT02005-5	20	5	3.175	44	67	11	57	55	52	5.5	9.5	5.5	M6	2.5x2	1879	4844	49
SFT02505-5	25	5	3.175	50	73	11	55	61	52	5.5	9.5	5.5	M8	2.5x2	2089	6129	58
SFT02510-2.5		10	6.35	68	102	15	70	84	82	9	14	8.5	M8	2.5x1	2845	6062	34
SFT03205-5	32	5	3.175	58	85	12	56	71	64	6.6	11	6.5	M8	2.5x2	2329	7929	69
SFT03206-5		6	3.969	62	89	12	65	75	68	6.6	11	6.5	M8	2.5x2	3189	9974	73
SFT03208-5		8	4.762	66	100	15	82	82	76	9	14	8.5	M8	2.5x2	4103	12028	77
SFT03210-5		10	6.35	74	108	15	96	90	82	9	14	9	M8	2.5x2	5821	15259	79
SFT03220-2.5	40	20	6.35	74	108	16	100	90	82	9	14	8.5	M8	2.5x1	3284	8004	43
SFT04005-5		5	3.175	67	101	15	59	83	72	9	14	8.5	M8	2.5x2	2556	9985	79
SFT04010-5		10	6.35	82	124	18	100	102	94	11	17.5	11	M8	2.5x2	6541	19375	94
SFT04020-2.5	50	20	6.35	82	124	18	100	102	90	11	17.5	11	M8	2.5x1	3683	10086	52
SFT05010-5		10	6.35	93	135	18	103	113	98	11	17.5	11	M8	2.5x2	7274	24518	110
SFT05020-2.5	63	20	9.525	105	152	28	121	128	110	14	20	13	M8	2.5x1	6867	18241	63
SFT06310-5		10	6.35	108	154	22	105	130	110	14	20	13	M8	2.5x2	8141	31697	131
SFT06320-2.5	80	20	9.525	122	180	28	127	150	130	18	26	17.5	M8	2.5x1	7639	22908	74
SFT08010-5		10	6.35	130	176	22	105	152	132	14	20	13	M8	2.5x2	8900	39942	151
SFT08020-5		20	9.525	143	204	28	180	172	148	18	26	18	M8	2.5x2	15642	59684	174
SFT08020-7.5	80	20	9.525	143	204	28	240	172	148	18	26	18	M8	2.5x3	22169	89525	257

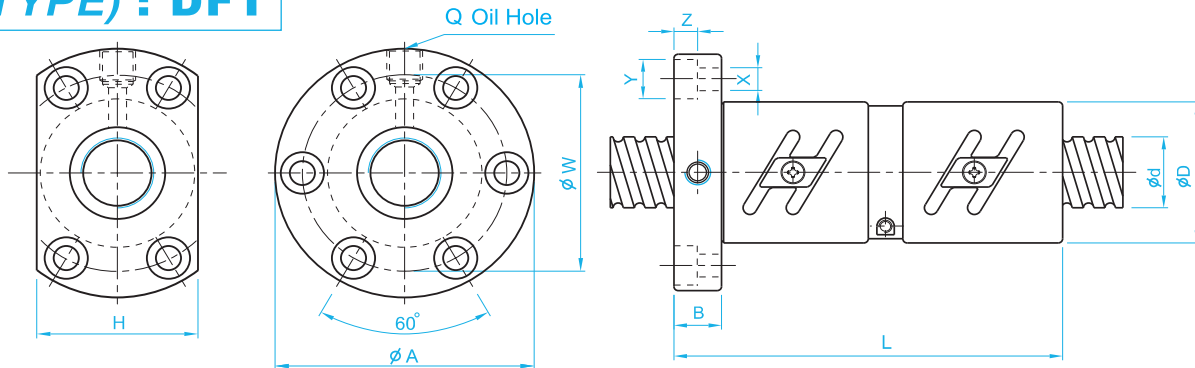


# MNB

## BALL SCREW



**(TYPE) : DFT**



Unit : mm

I: Lead      Da: Ball Dia.      n: Number of Circuits      K: Stiffness (Kgf/ $\mu$ m)  
 Ca: Basic Dynamic Rating Load (Kgf)      Coa: Basic Static Rating Load(Kgf)

Model No.	Dimensions																	
	d	I	Da	D	A	B	L	W	H	X	Y	Z	Q	n	Ca	Coa	K	
DFT02005-5	20	5	3.175	44	67	11	105	55	52	5.5	9.5	5.5	M6	2.5x2	1879	4844	66	
DFT02505-5	25	5	3.175	50	73	11	105	61	52	5.5	9.5	5.5	M8	2.5x2	2089	6129	78	
DFT02510-2.5		10	6.35	68	102	15	130	84	82	9	14	8.5	M8	2.5x1	2845	6062	46	
DFT03205-5	32	5	3.175	58	85	12	106	71	64	6.6	11	6.5	M8	2.5x2	2329	7929	94	
DFT03206-5		6	3.969	62	89	12	123	75	68	6.6	11	6.5	M8	2.5x2	3189	9974	99	
DFT03208-5		8	4.762	66	100	15	154	82	76	9	14	8.5	M8	2.5x2	4103	12028	104	
DFT03210-5		10	6.35	74	108	16	187	90	82	9	14	8.5	M8	2.5x2	5821	15259	105	
DFT03220-2.5		20	6.35	74	108	16	198	90	82	9	14	8.5	M8	2.5x1	3284	8004	57	
DFT04005-5		40	5	3.175	67	101	15	109	83	72	9	14	8.5	M8	2.5x2	2556	9985	110
DFT04010-5			10	6.35	82	124	18	188	102	94	11	17.5	11	M8	2.5x2	6541	19375	126
DFT04020-2.5	20		6.35	82	124	18	200	102	90	11	17.5	11	M8	2.5x1	3683	10086	69	
DFT05010-5	50	10	6.35	93	135	18	193	113	98	11	17.5	11	M8	2.5x2	7274	24518	149	
DFT05020-2.5		20	9.525	105	152	28	225	128	110	14	20	13	M8	2.5x1	6867	18241	84	
DFT06310-5	63	10	6.35	108	154	22	197	130	110	14	20	13	M8	2.5x2	8141	31697	179	
DFT06320-2.5		20	9.525	122	180	28	227	150	130	18	26	17.5	M8	2.5x1	7639	22908	100	
DFT08010-5	80	10	6.35	130	176	22	195	152	132	14	20	13	M8	2.5x2	8900	39942	209	
DFT08020-5		20	9.525	143	204	28	340	172	148	18	26	18	M8	2.5x2	15642	59684	235	

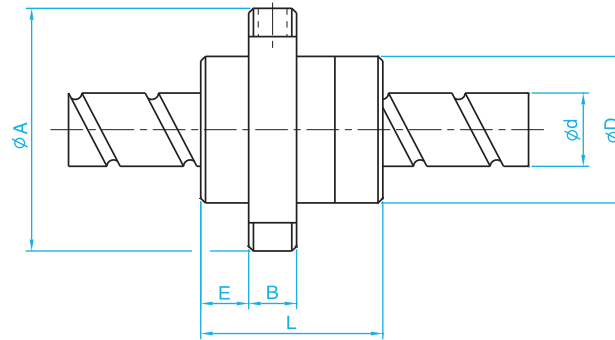
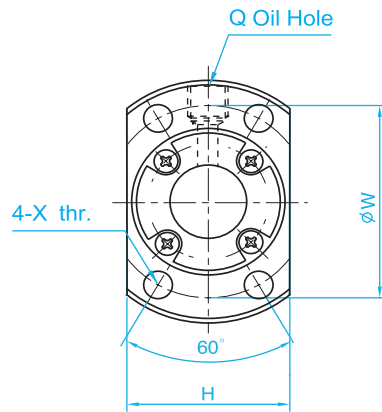


# MNB

## BALL SCREW



**(TYPE) : SFE**



Unit : mm

I: Lead    Da: Ball Dia.    n: Number of Circuits    K: Stiffness (Kgf/μm)  
 Ca: Basic Dynamic Rating Load (Kgf)    Coa: Basic Static Rating Load(Kgf)

Model No.	Dimensions															
	d	l	Da	D	A	E	B	L	X	W	H	Q	n	Ca	Coa	K
SFE01616-3	16	16	2.778	32	53	10.1	10	38	4.5	42	34	M6	1.7x2	1021	2409	29
SFE01616-6		16	2.778	32	53	10.1	10	38	4.5	42	34	M6	1.7x4	1853	4818	57
SFE01632-3	16	32	2.778	34	55	10.5	10	34	5.5	45	36	M6	0.7x2	439	976	11
SFE01632-6		32	2.778	34	55	10.5	10	34	5.5	45	36	M6	0.7x4	797	1953	21
SFE02020-3	20	20	3.175	39	62	12	10	47	5.5	50	41	M6	1.7x2	1321	3320	35
SFE02020-6		20	3.175	39	62	12	10	47	5.5	50	41	M6	1.7x4	2397	6640	67
SFE02040-3	20	40	3.175	38	58	11	10	41	5.5	48	40	M6	0.7x2	582	1397	13
SFE02040-6		40	3.175	38	58	11	10	41	5.5	48	40	M6	0.7x4	1056	2794	26
SFE02525-3	25	25	3.969	47	74	14	12	57	6.6	60	49	M6	1.7x2	1974	5188	43
SFE02525-6		25	3.969	47	74	14	12	57	6.6	60	49	M6	1.7x4	3583	10377	83
SFE02550-3	25	50	3.969	46	70	13	12	50	6.6	58	48	M6	0.7x2	870	2183	16
SFE02550-6		50	3.969	46	70	13	12	50	6.6	58	48	M6	0.7x4	1579	4366	32
SFE03232-3	32	32	4.762	58	92	17	12	71	9	74	60	M6	1.7x2	2876	8207	54
SFE03232-6		32	4.762	58	92	17	12	71	9	74	60	M6	1.7x4	5220	16414	106
SFE03264-3	32	64	4.762	58	92	15.5	12	62	9	74	60	M6	0.7x2	1225	3282	20
SFE03264-6		64	4.762	58	92	15.5	12	62	9	74	60	M6	0.7x4	2223	6565	39
SFE04040-3	40	40	6.35	73	114	19.5	15	89	11	93	75	M6	1.7x2	4600	13281	66
SFE04040-6		40	6.35	73	114	19.5	15	89	11	93	75	M6	1.7x4	8348	26561	128
SFE05050-3	50	50	7.938	90	135	21.5	20	107	14	112	92	M6	1.7x2	6512	19430	80
SFE05050-6		50	7.938	90	135	21.5	20	107	14	112	92	M6	1.7x4	11820	38859	155

Note: 1. "-3" means 2 starts, "-6" means 4 starts.

Note: 2. TBI MOTION Standard nuts are without seals, if required, please advise.

**E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)**

**Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)**



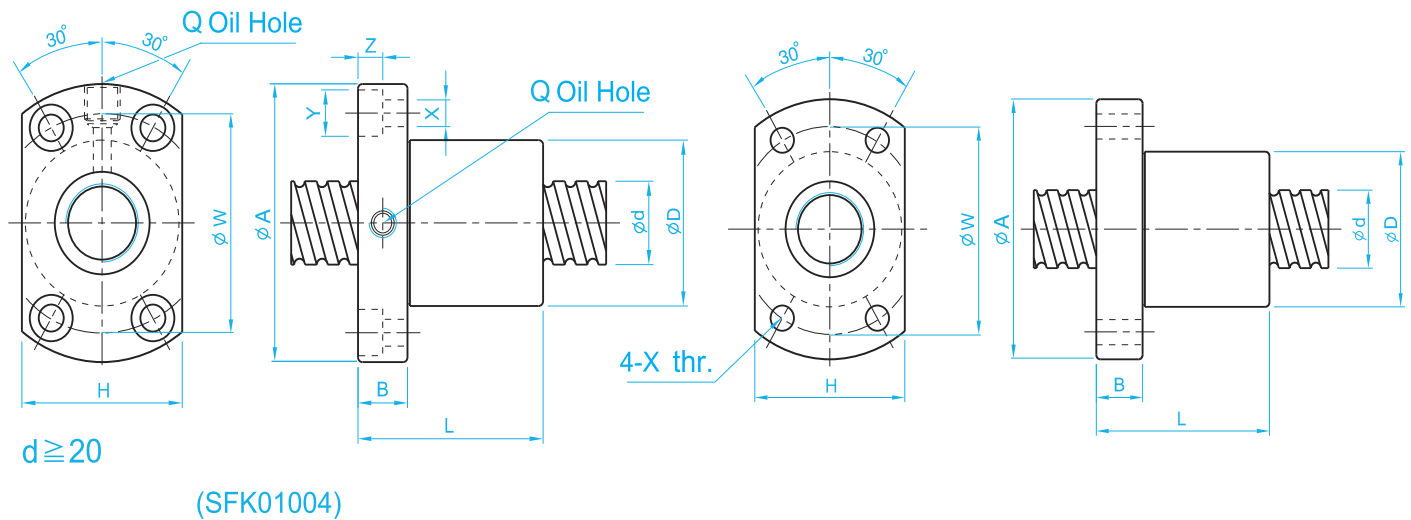


# MNB

## BALL SCREW



**(TYPE) : SFK**



Unit : mm

l: Lead    Da: Ball Dia.    n: Number of Circuits    K: Stiffness (Kgf/μm)

Ca: Basic Dynamic Rating Load (Kgf)    Coa: Basic Static Rating Load(Kgf)

Model No.	Dimensions																
	d	l	Da	D	A	B	L	W	H	X	Y	Z	Q	n	Ca	Coa	K
SFK00401	4	1	0.8	10	20	3	12	15	14	2.9	-	-	-	1x2	64	97	5
SFK00601	6	1	0.8	12	24	3.5	15	18	16	3.4	-	-	-	1x3	111	224	9
★ SFK00801	8	1	0.8	14	27	4	16	21	18	3.4	-	-	-	1x4	161	403	14
★ SFK00802		2	1.2	14	27	4	16	21	18	3.4	-	-	-	1x3	222	458	13
SFK0082.5		2.5	1.2	16	29	4	26	23	20	3.4	-	-	-	1x3	221	457	13
★ SFK01002	10	2	1.2	18	35	5	28	27	22	4.5	-	-	-	1x3	243	569	15
SFK01004		4	2	26	46	10	34	36	28	4.5	8	4.5	M6	1x3	468	905	17
★ SFK01202	12	2	1.2	20	37	5	28	29	24	4.5	-	-	-	1x4	334	906	22
SFK01402	14	2	1.2	21	40	6	23	31	26	5.5	-	-	-	1x4	354	1053	24
SFK01602	16	2	1.2	25	43	10	40	35	29	5.5	-	-	M6	1x4	373	1200	26

Note: 1. **TBI MOTION** Standard nuts are without seals, if required, please advise.

Note: with sign ★ can be produced in left helix



# MNB



---

## COUPLING

---



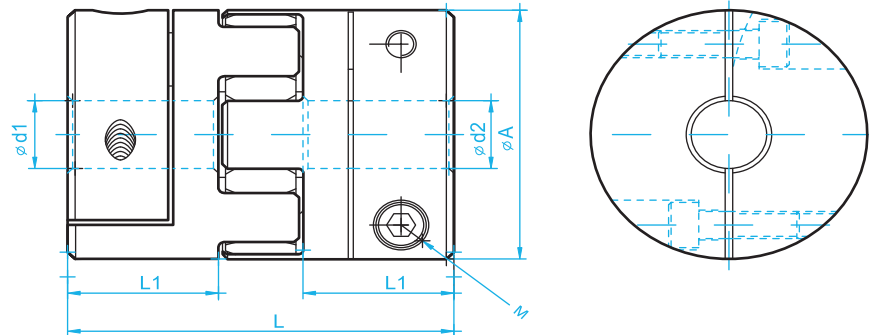


# MNB



## BALL SCREW COUPLING

### Coupling (SRJ)



### Dimension

Unit : mm

Model No.	A	L	L1	dmax	(H8) d1Xd2		M
					d1	d2	
SRJ-20C	20	30	10	10	4、5、6、6.35、7、8、10		M3
SRJ-30C	30	35	11	16	5、6、6.35、8、9、9.5、10、11、12、14、15		M4
SRJ-40C	40	66	25	22	8、9.5、10、11、12、14、15、16、18、19、20		M5
SRJ-55C	55	78	30	28	12、15、16、18、19、20、22、24、25		M6
SRJ-65C	65	90	35	38	20、22、24、25、28、30、32、35、38		M8

■ Buffer Material : Engineering Class Plastic 
 ■ Material : Aluminum Alloy  
■ Specification Number : SRJ-AC-d1xd2 ex:SRJ-30C-6x8

### Function

Model No.	Rated Torque (N.m)	Max Torque (N.m)	Max Rotational Frequency (min <sup>-1</sup> )	Static torsion spring stiffness (N.m/rad)	Dynamic torsion spring stiffness (N.m/rad)
SRJ-20C	5	10	15200	51.0	151
SRJ-30C	12.5	25	10200	170.9	505
SRJ-40C	17	34	7600	857.5	2571
SRJ-55C	60	120	5600	2060	6163
SRJ-65C	160	320	4700	3430	10291

Model No.	Weight (kg)		Mass moment of inertia J (kgm <sup>2</sup> )		Radial (mm)	Angular (°)	Axial (mm)
	each hub	spider	each hub	spider			
SRJ-20C	8.5 x10 <sup>-3</sup>	1.7 x10 <sup>-3</sup>	0.46 x10 <sup>-6</sup>	0.073 x10 <sup>-6</sup>	0.10	1.0	0.8
SRJ-30C	18 x10 <sup>-3</sup>	4.2 x10 <sup>-3</sup>	2.5 x10 <sup>-6</sup>	0.45 x10 <sup>-6</sup>	0.15	1.0	1
SRJ-40C	64 x10 <sup>-3</sup>	6.5 x10 <sup>-3</sup>	20.1 x10 <sup>-6</sup>	1.44 x10 <sup>-6</sup>	0.15	1.0	1.2
SRJ-55C	130 x10 <sup>-3</sup>	17.4 x10 <sup>-3</sup>	50.5 x10 <sup>-6</sup>	7.3 x10 <sup>-6</sup>	0.2	1.0	1.4
SRJ-65C	250 x10 <sup>-3</sup>	28.6 x10 <sup>-3</sup>	200.1 x10 <sup>-6</sup>	16.3 x10 <sup>-6</sup>	0.2	1.0	1.5

E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)

Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)

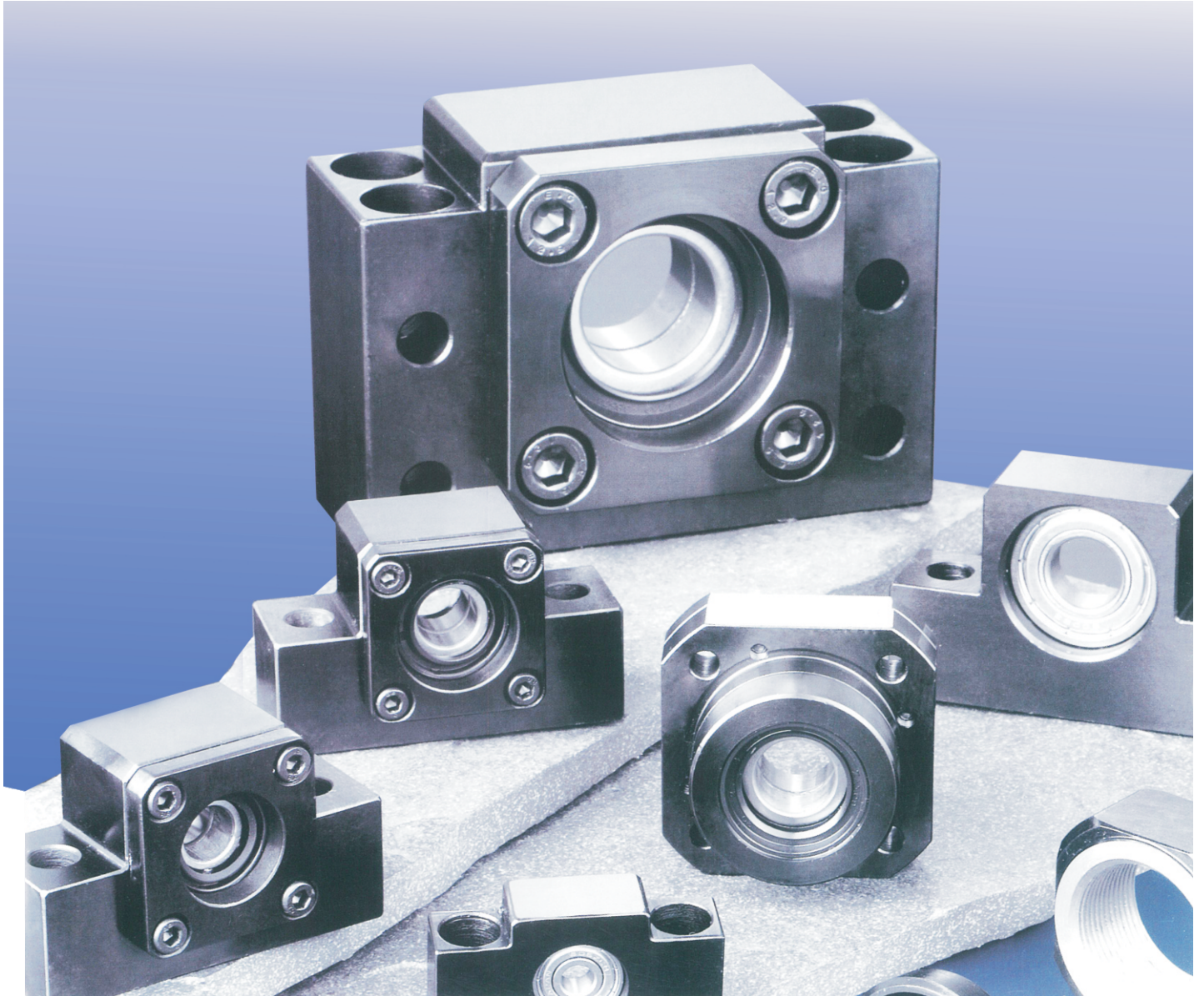




# MNB



## BALL SCREW SUPPORT UNIT



E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)  
Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)

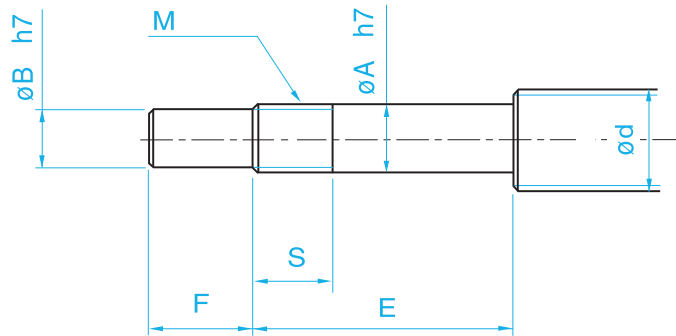


# MNB



## BALL SCREW SUPPORT UNIT

### Recommended Shaft End Shape For Support Unit Type BK and FK and EK Fixed Side



Unit:mm

Support Unit model No.	Ball Screw shaft OD	Shaft Support Portion OD					Metric screw thread	
Type BK	d	A	B	E	F	M	S	
BK 10	12/14/15	10	8	36	15	M10X1	16	
BK 12	14/15/16	12	10	36	15	M12X1	14	
BK 15	18/20	15	12	40	20	M15X1	12	
BK 17	20/25	17	15	53	23	M17X1	17	
BK 20	25/28	20	17	53	25	M20X1	15	
BK 25	32/36	25	20	65	30	M25X1.5	18	
BK 30	36/40	30	25	72	38	M30X1.5	25	
BK 35	45	35	30	81	45	M35X1.5	28	
BK 40	50	40	35	93	50	M40X1.5	35	

Unit:mm

Support Unit model No.		Ball Screw shaft OD	Shaft Support Portion OD					Metric screw thread	
Type FK	Type EK	d	A	B	E	F	M	S	
FK 6	EK 6	8	6	4	28	8	M6X0.75	8	
FK 8	EK 8	10/12	8	6	32	9	M8X1	10	
FK 10	EK 10	12/14/15	10	8	36	15	M10X1	11	
FK 12	EK 12	14/15/16	12	10	36	15	M12X1	11	
FK 15	EK 15	18/20	15	12	47	20	M15X1	13	
FK 20	EK 20	25/28/30	20	17	62	25	M20X1	17	
FK 25	—	30/32/36	25	20	76	30	M25X1.5	20	
FK 30	—	36/40	30	25	72	38	M30X1.5	25	



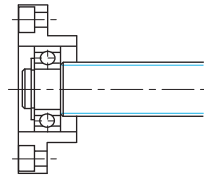


# MNB

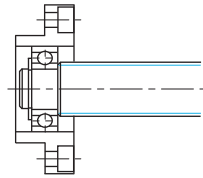


## BALL SCREW SUPPORT UNIT

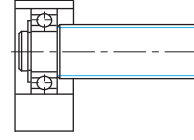
### Recommended Shaft End Shape For Support Unit Types FF and EF and BF Floated Side



Type FF



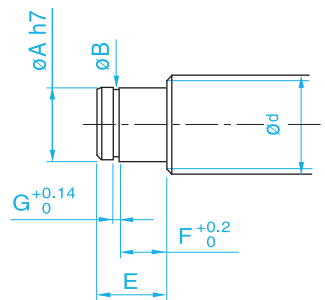
Type FF



Type EF  
Type BF

Unit:mm

Support Unit model No.			Ball Screw shaft OD	Shaft Support Portion OD
Type FF	Type EF	Type BF	d	A
FF 10	EF 10	BF 10	12/14/15	8
FF 12	EF 12	BF 12	14/15/16	10
FF 15	EF 15	BF 15	18/20	15
FF 17	—	BF 17	20/25	17
FF 20	EF 20	BF20 (NOTE)	25/28/30	20
FF 25	—	BF 25	30/32/36	25
FF 30	—	BF 30	36/40	30
—	—	BF 35	40/45	35
—	—	BF 40	50	40



Note:

In this table, dimensions in parentheses are those of type BF20. These dimensions differ from those of type FF20 and EF20. When placing an order, always specify the model number of the Support Unit to be used.

Unit:mm

E	Snap-ring Groove		
	B	F	G
10	7.6	7	0.9
11	9.6	8	1.15
13	14.3	9	1.15
16	16.2	12	1.15
19(16)	19	14(12)	1.35
20	23.9	15	1.35
21	28.6	16	1.75
22	33	17	1.75
23	38	18	1.75

E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)

Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)



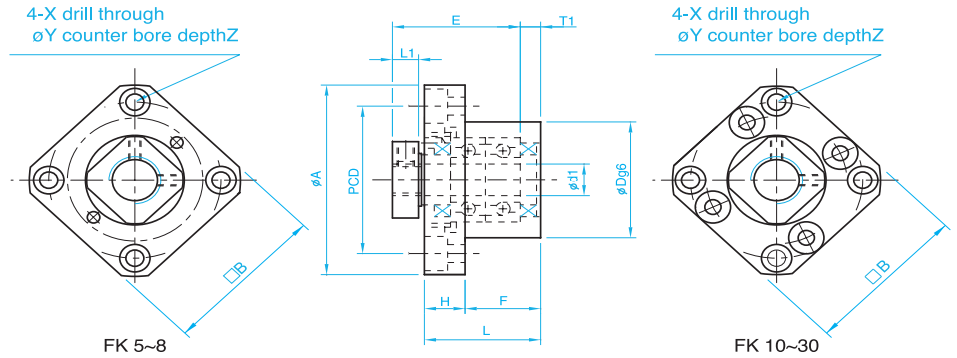
# MNB



## BALL SCREW SUPPORT UNIT

### FK

#### Fixed Side

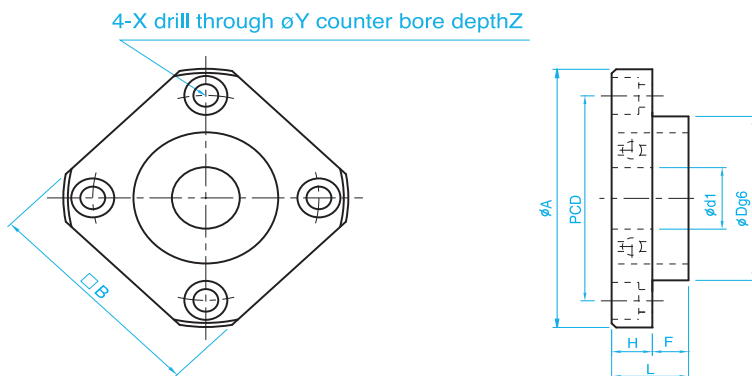


Unit : mm

Model No.	d1	L	H	F	E	Dg6	A	PCD	B	L1	T1	X	Y	Z
FK 5	5	16.5	6	10.5	18.5	20	34	26	26	5.5	3.5	3.4	6.5	4
FK 6	6	20	7	13	22	22	36	28	28	5.5	3.5	3.4	6.5	4
FK 8	8	23	9	14	26	28	43	35	35	7	4	3.4	6.5	4
FK 10	10	27	10	17	29.5	34	52	42	42	7.5	5	4.5	8	4
FK 12	12	27	10	17	29.5	36	54	44	44	7.5	5	4.5	8	4
FK 15	15	32	15	17	36	40	63	50	52	10	6	5.5	9.5	6
FK 20	20	52	22	30	50	57	85	70	68	8	10	6.6	11	10
FK 25	25	57	27	30	60	63	98	80	79	13	10	9	15	13
FK 30	30	62	30	32	61	75	117	95	93	11	12	11	17.5	15

### FF

#### Floated Side



Unit : mm

Model No.	d1	L	H	F	Dg6	A	PCD	B	X	Y	Z
FF 6	6	10	6	4	22	36	28	28	3.4	6.5	4
FF 10	8	12	7	5	28	43	35	35	3.4	6.5	4
FF 12	10	15	7	8	34	52	42	42	4.5	8	4
FF 15	15	17	9	8	40	63	50	52	5.5	9.5	5.5
FF 20	20	20	11	9	57	85	70	68	6.6	11	6.5
FF 25	25	24	14	10	63	98	80	79	9	14	8.5
FF 30	30	27	18	9	75	117	95	93	11	17.5	11

E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)

Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)





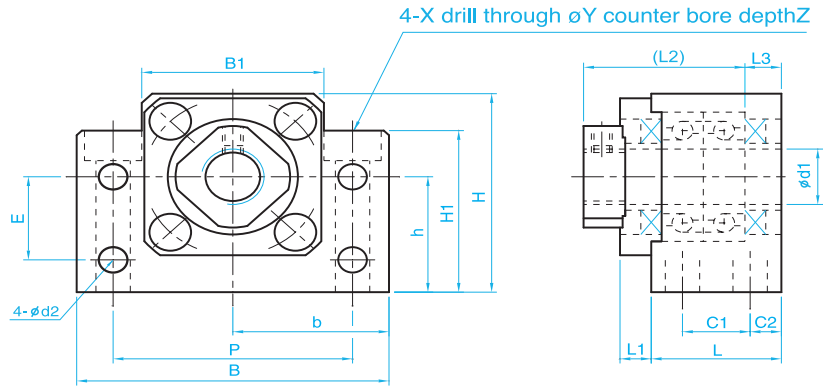
# MNB



## BALL SCREW SUPPORT UNIT

### BK

#### Fixed Side

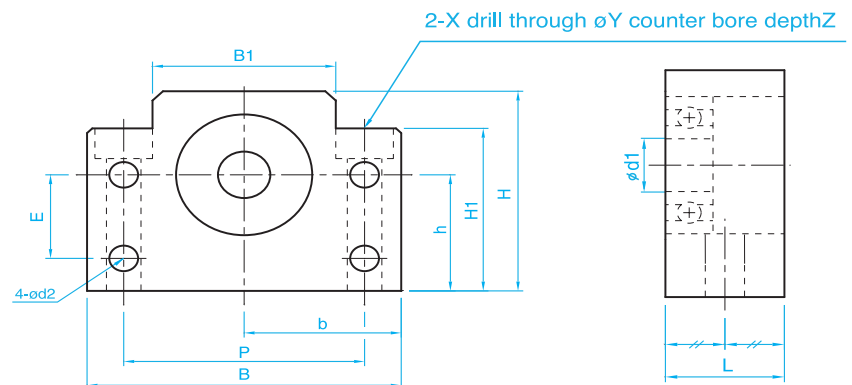


Unit : mm

Model No.	d1	L	L1	L2	L3	C1	C2	B	H	b <sup>+0.02</sup>	h <sup>+0.02</sup>	B1	H1	E	P	d2	X	Y	Z
BK 10	10	25	5	29	5	13	6	60	39	30	22	34	32.5	15	46	5.5	6.6	10.8	5
BK 12	12	25	5	29	5	13	6	60	43	30	25	34	32.5	18	46	5.5	6.6	10.8	1.5
BK 15	15	27	6	32	6	15	6	70	48	35	28	40	38	18	54	5.5	6.6	11	6.5
BK 17	17	35	9	44	7	19	8	86	64	43	39	50	55	28	68	6.6	9	14	8.5
BK 20	20	35	8	43	8	19	8	88	60	44	34	52	50	22	70	6.6	9	14	8.5
BK 25	25	42	12	54	9	22	10	106	80	53	48	64	70	33	85	9	11	17.5	11
BK 30	30	45	14	61	9	23	11	128	89	64	51	76	78	33	102	11	14	20	13
BK 35	35	50	14	67	12	26	12	140	96	70	52	88	79	35	114	11	14	20	13
BK 40	40	61	18	76	15	33	14	160	110	80	60	100	90	37	130	14	18	26	17.5

### BF

#### Floated Side



Unit : mm

Model No.	d1	L	B	H	b <sup>+0.02</sup>	h <sup>+0.02</sup>	B1	H1	E	P	d2	X	Y	Z
BF 10	8	20	60	39	30	22	34	32.5	15	46	5.5	6.6	10.8	5
BF 12	10	20	60	43	30	25	34	32.5	18	46	5.5	6.6	10.8	1.5
BF 15	15	20	70	48	35	28	40	38	18	54	5.5	6.6	11	6.5
BF 17	17	23	86	64	43	39	50	55	28	68	6.6	9	14	8.5
BF 20	20	26	88	60	44	34	52	50	22	70	6.6	9	14	8.5
BF 25	25	30	106	80	53	48	64	70	33	85	9	11	17.5	11
BF 30	30	32	128	89	64	51	76	78	33	102	11	14	20	13
BF 35	35	32	140	96	70	52	88	79	35	114	11	14	20	13
BF 40	40	37	160	110	80	60	100	90	37	130	14	18	26	17.5

E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)

Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)

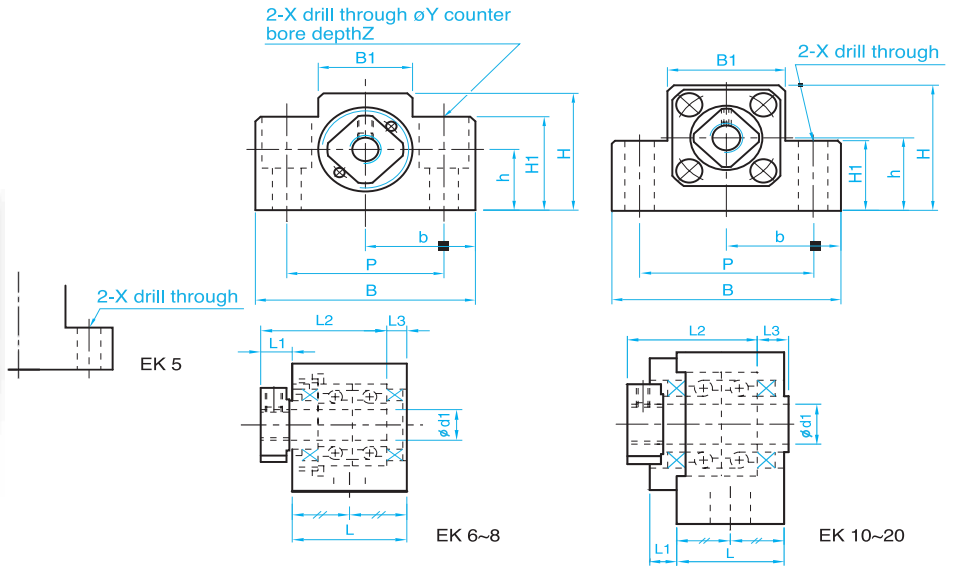


# MNB



## BALL SCREW SUPPORT UNIT

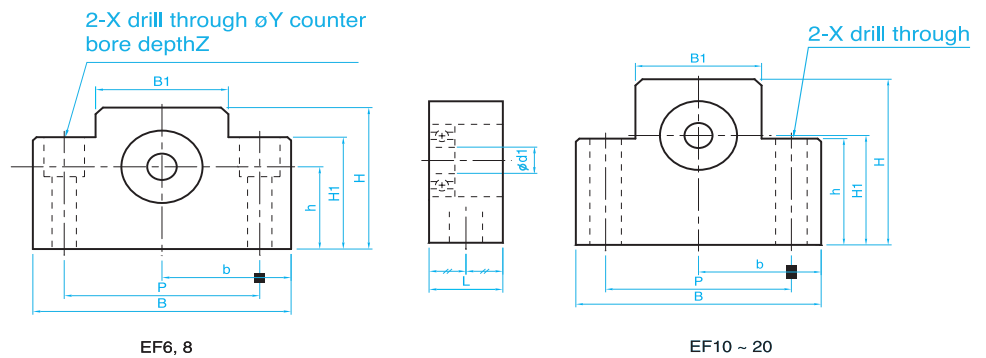
### EK Fixed Side



Unit : mm

Model No.	d1	L	L1	L2	L3	B	H	b <sup>+0.02</sup>	h <sup>+0.02</sup>	B1	H1	P	X	Y	Z
EK 5	5	16.5	5.5	18.5	3.5	36	21	18	11	20	8	28	4.5	—	—
EK 6	6	20	5.5	22	3.5	42	25	21	13	18	20	30	5.5	9.5	11
EK 8	8	23	7	26	4	52	32	26	17	25	26	38	6.6	11	12
EK 10	10	24	6	29.5	6	70	43	35	25	36	24	52	9	—	—
EK 12	12	24	6	29.5	6	70	43	35	25	36	24	52	9	—	—
EK 15	15	25	6	36	5	80	49	40	30	41	25	60	11	—	—
EK 20	20	42	10	50	10	95	58	47.5	30	56	25	75	11	—	—

### EF Floated Side



Unit : mm

Model No.	d1	L	B	H	b <sup>+0.02</sup>	h <sup>+0.02</sup>	B1	H1	P	X	Y	Z
EF 6	6	12	42	25	21	13	18	20	30	5.5	9.5	11
EF 8	6	14	52	32	26	17	25	26	38	6.6	11	12
EF 10	8	20	70	43	35	25	36	24	52	9	—	—
EF 12	10	20	70	43	35	25	36	24	52	9	—	—
EF 15	15	20	80	49	40	30	41	25	60	9	—	—
EF 20	20	26	95	58	47.5	30	56	25	75	11	—	—



# MNB



## CROSS ROLLER GUIDE WAYS







# MNB



## CROSS ROLLER GUIDE WAYS



Linear bearings type MVR are compact guides for precise linear motion providing high accuracy and an outstanding reliability. Depending on the load requirements they can be fitted with ball- or roller cages. With many years of experience MVR-bearings are the world-wide standard in high-tech applications requiring first class performances and quality with minimum cost.

### Structure and Features

Depending on the construction, the linear bearing can be fitted with ball- or roller cages with alternately crossed rollers. The construction consists of two pairs linear bearings; one pair consists of two similar 90° V-groove guideways, through-hardened and precision ground, fitted with a cage in-between. Crossed roller cages are used in high-load and high precision applications (note: good dust protection is in this case required). Cages fitted with balls are used in applications which require less capacity, low friction resistance, or where dust and dirt are likely to penetrate into the guideways (balls are affected less by dust or dirt, due to a self-cleaning effect of the balls).

Guideways are equipped with countersunk-bored attachment holes, according to a standard configuration.

Threaded holes in ends for fixing endpieces and wipers.

For the attachment, special screws type GD can be ordered separately.

On request we supply linear bearings with roller size  $\varnothing$  18 and  $\varnothing$  24 mm

### Notes by ordering

One set linear bearings consists of:  
4 pcs. guideways (=2 pairs), 2 pcs. cages and 8 pcs. endscrews.

By ordering please specify the following:

1. Quantity and type of guideways.
2. Quantity, type and length of cages or max. stroke/travel.
3. Direction of movement (eg: horizontal, vertical or in-between).
4. Quantity and type of endscrews or endpieces with or without wipers.  
(in case of GC and GC-A, only 4 pcs are needed)

### Example

To order one linear bearing set of 300 mm length, size 6 mm for a 120 mm long horizontal stroke in standard quality please specify:

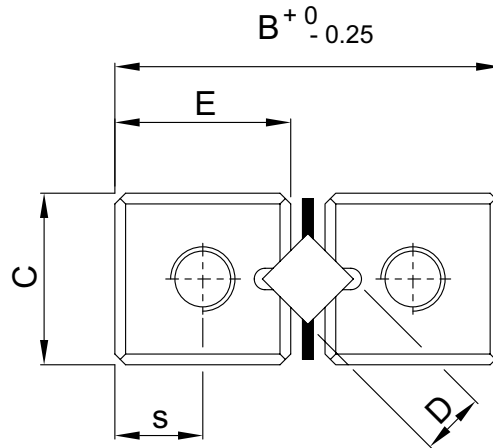
- 4 pcs. Guideways MVR - 6300
- 2 pcs. Rollercages R6x20AA, pitch T=12 mm
- 8 pcs. Endscrews GA-6



# MNB



## CROSS ROLLER GUIDE WAYS



Guideways Type		Main dimensions					Mounting holes					
Standard	Corrosion Resistant	A	B	C	E	D	f	g	h	k	m	p
MVR - 1520	MVR - 1520SS	20						1 x 10				
MVR - 1530	MVR - 1530SS	30						2 x 10				
MVR - 1540	MVR - 1540SS	40						3 x 10				
MVR - 1550	MVR - 1550SS	50						4 x 10				
MVR - 1560	MVR - 1560SS	60						5 x 10				
MVR - 1570	MVR - 1570SS	70	8.5	4	3.9	1.5	5	6 x 10	1.8 <sup>±0.1</sup>	1.6	M2	3
MVR - 1580	MVR - 1580SS	80						7 x 10				
MVR - 1590	MVR - 1590SS	90						8 x 10				
MVR - 15100	MVR - 15100SS	100						9 x 10				
MVR - 15120	MVR - 15120SS	120						11 x 10				
MVR - 15140	MVR - 15140SS	140						13 x 10				
MVR - 2030	MVR - 2030SS	30						1 x 15				
MVR - 2045	MVR - 2045SS	45						2 x 15				
MVR - 2060	MVR - 2060SS	60						3 x 15				
MVR - 2075	MVR - 2075SS	75						4 x 15				
MVR - 2090	MVR - 2090SS	90						5 x 15				
MVR - 2105	MVR - 2105SS	105	12	6	5.5	2	7.5	6 x 15	2.5 <sup>±0.1</sup>	2.5	M3	4.3
MVR - 2120	MVR - 2120SS	120						7 x 15				
MVR - 2135	MVR - 2135SS	135						8 x 15				
MVR - 2150	MVR - 2150SS	150						9 x 15				
MVR - 2165	MVR - 2165SS	165						10 x 15				
MVR - 2180	MVR - 2180SS	180						11 x 15				

E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)

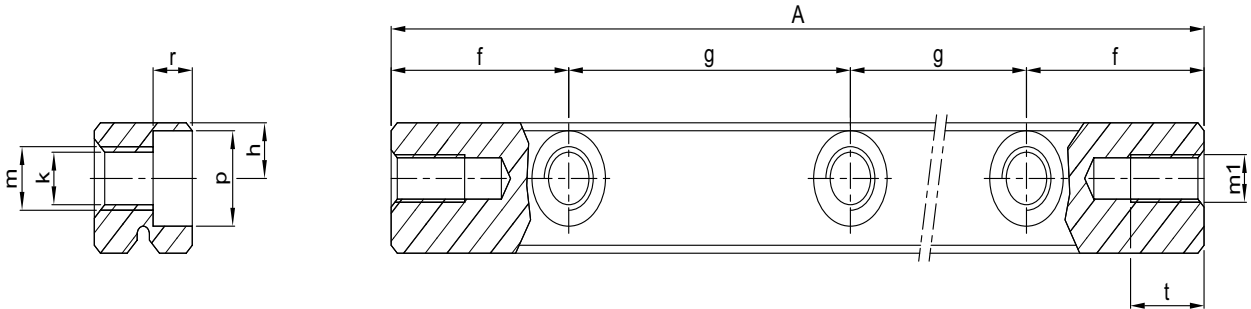
Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)



# MNB



## CROSS ROLLER GUIDE WAYS



r	End holes			Weight in g	Type	Accessories
	m1	s	t			
1.4	M1.8	1.95	3.1	3	MVR - 1520	Cages: AA, CC, KZR, JJ, KCLK Endpieces: GA, GB Suitable Centerrails: DST
				4	MVR - 1530	
				5	MVR - 1540	
				6	MVR - 1550	
				7	MVR - 1560	
				8	MVR - 1570	
				9	MRV - 1580	
				10	MVR - 1590	
				12	MVR - 15100	
				14	MVR - 15120	
				16	MVR - 15140	
				2	M2.5	
11	MVR - 2045					
14	MVR - 2060					
17	MVR - 2075					
20	MVR - 2090					
23	MVR - 2105					
26	MVR - 2120					
30	MVR - 2135					
34	MVR - 2150					
37	MVR - 2165					
40	MVR - 2180					

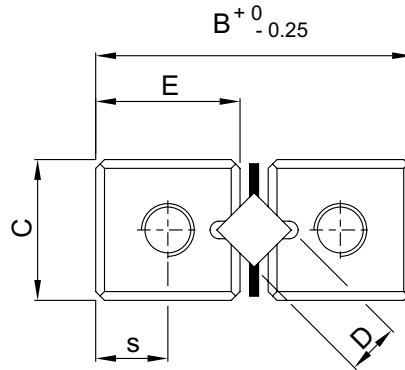




# MNB



## CROSS ROLLER GUIDE WAYS



Guideway Type		Main dimensions					Mounting holes						
		A	B	C	E	D	f	g	h	k	m	p	
Standard	Corrosion Resistant												
MVR - 3050	MVR - 3050SS	50						1 x 25					
MVR - 3075	MVR - 3075SS	75						2 x 25					
MVR - 310	MVR - 3100SS	100						3 x 25					
MVR - 3125	MVR - 3125SS	125						4 x 25					
MVR - 3150	MVR - 3150SS	150						5 x 25					
MVR - 3175	MVR - 3175SS	175	18	8	8.25	3	12.5	6 x 25	3.5 <sup>±0.2</sup>	3.2	M4	6	
MVR - 3200	MVR - 3200SS	200						7 x 25					
MVR - 3225	MVR - 3225SS	225						8 x 25					
MVR - 3250	MVR - 3250SS	250						9 x 25					
MVR - 3275	MVR - 3275SS	275						10 x 25					
MVR - 3300	MVR - 3300SS	300						11 x 25					
MVR - 3350	MVR - 3350SS	350						13 x 25					
MVR - 4080	MVR - 4080SS	80						1 x 40					
MVR - 4120	MVR - 4120SS	120						2 x 40					
MVR - 4160	MVR - 4160SS	160						3 x 40					
MVR - 4200	MVR - 4200SS	200						4 x 40					
MVR - 4240	MVR - 4240SS	240						5 x 40					
MVR - 4280	MVR - 4280SS	280	22	11	10	4	20	6 x 40	4.5 <sup>±0.2</sup>	4.3	M5	7.5	
MVR - 4320	MVR - 4320SS	320						7 x 40					
MVR - 4360	MVR - 4360SS	360						8 x 40					
MVR - 4400	MVR - 4400SS	400						9 x 40					
MVR - 4440	MVR - 4440SS	440						10 x 40					
MVR - 4480	MVR - 4480SS	480						11 x 40					

E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)

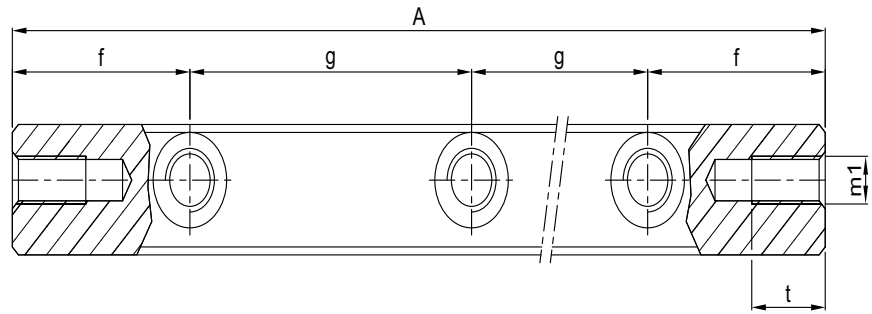
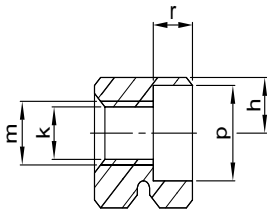
Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)



# MNB



## CROSS ROLLER GUIDE WAYS



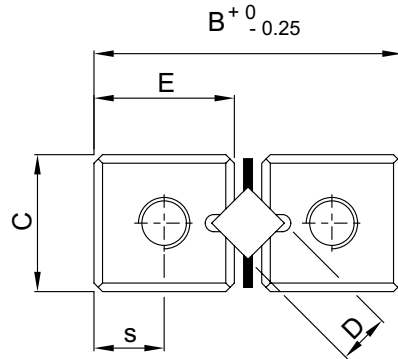
r	m1	End holes s	t	Weight in g	Type	Accessories				
3.2	M3	4.1	5.5	22	MVR - 3050	Cages: AA, DD, AL, KZR, JJ, KKLK Endpieces: GA, GB, GC, GCA-wiper Attachment screw : GD Suitable Centerrails: DST				
				33	MVR - 3075					
				44	MVR - 3100					
				55	MVR - 3125					
				66	MVR - 3150					
				77	MVR - 3175					
				88	MVR - 3200					
				99	MVR - 3225					
				110	MVR - 3250					
				121	MVR - 3275					
				132	MVR - 3300					
				155	MVR - 3350					
				4.1	M3		5	7	64	MVR - 4080
									96	MVR - 4120
120	MVR - 4160									
160	MVR - 4200									
192	MVR - 4240									
224	MVR - 4280									
256	MVR - 4320									
288	MVR - 4360									
320	MVR - 4400									
352	MVR - 4440									
384	MVR - 4480									



# MNB



## CROSS ROLLER GUIDE WAYS



Guideway Type		Main dimensions					Mounting holes					
Standard	Corrosion Resistant	A	B	C	E	D	f	g	h	k	m	p
MVR - 6100	MVR - 6100SS	100						1 x 50				
MVR - 6150	MVR - 6150SS	150						2 x 50				
MVR - 6200	MVR - 6200SS	200						3 x 50				
MVR - 6250	MVR - 6250SS	250						4 x 50				
MVR - 6300	MVR - 6300SS	300						5 x 50				
MVR - 6350	MVR - 6350SS	350						6 x 50				
MVR - 6400	MVR - 6400SS	400						7 x 50				
MVR - 6450	MVR - 6450SS	450	31	15	14	6	25	8 x 50	6 <sup>±0.2</sup>	5.2	M6	9.5
MVR - 6500	MVR - 6500SS	500						9 x 50				
MVR - 6600	MVR - 6600SS	600						11 x 50				
MVR - 6700	MVR - 6700SS	700						13 x 50				
MVR - 6800	MVR - 6800SS	800						15 x 50				
MVR - 6900	MVR - 6900SS	900						17 x 50				
MVR - 61000	MVR - 61000SS	1000						19 x 50				
MVR - 61100	MVR - 61100SS	1100						21 x 50				
MVR - 61200	MVR - 61200SS	1200						23 x 50				
MVR - 9100	MVR - 9100SS	100					25	1 x 50				
MVR - 9200	MVR - 9200SS	200						1 x 100				
MVR - 9300	MVR - 9300SS	300						2 x 100				
MVR - 9400	MVR - 9400SS	400						3 x 100				
MVR - 9500	MVR - 9500SS	500						4 x 100				
MVR - 9600	MVR - 9600SS	600	44	22	19.8	9	50	5 x 100	9 <sup>±0.2</sup>	6.8	M8	11
MVR - 9700	MVR - 9700SS	700						6 x 100				
MVR - 9800	MVR - 9800SS	800						7 x 100				
MVR - 9900	MVR - 9900SS	900						8 x 100				
MVR - 91000	MVR - 91000SS	1000						9 x 100				
MVR - 91100	MVR - 91100SS	1100						10 x 100				
MVR - 91200	MVR - 91200SS	1200						11 x 100				

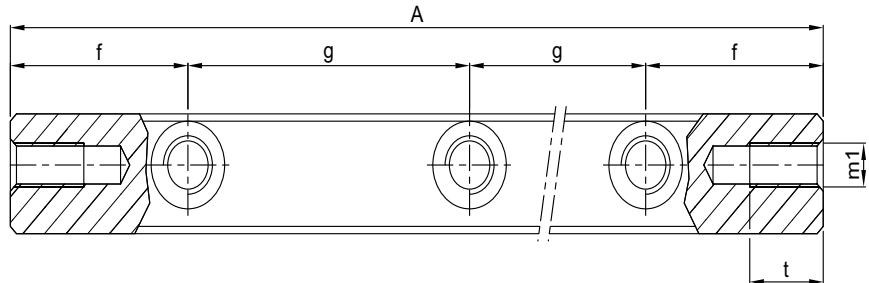
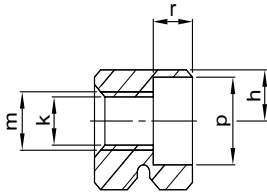




# MNB



## CROSS ROLLER GUIDE WAYS



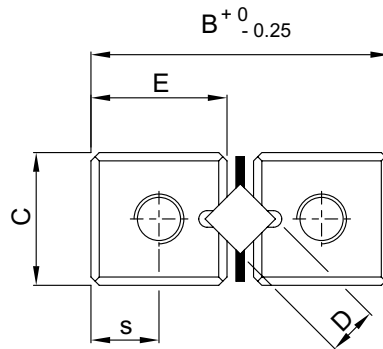
r	End holes			Weight in g	Type	Accessories
	m1	s	t			
5.2	M5	7	8.5	142	MVR - 6100	
				213	MVR - 6150	
				288	MVR - 6200	
				360	MVR - 6250	Cages: AA, DD, AL, KZR, JJ, KCLK
				432	MVR - 6300	
				504	MVR - 6350	Endpieces: GA, GB, GC, GCA-wiper
				576	MVR - 6400	
				648	MVR - 6450	Attachment screw: GD
				720	MVR - 6500	
				864	MVR - 6600	Suitable
				1008	MVR - 6700	Centerrails: DST
				1152	MVR - 6800	
				1296	MVR - 6900	
				1440	MVR - 61000	
				6.2	M6	9.9
1728	MVR - 61200					
306	MVR - 9100					
616	MVR - 9200	Cages: AA, DD, AL, KZR, JJ, KCLK				
926	MVR - 9300					
1236	MVR - 9400	Endpieces: GA, GB, GC, GCA-wiper				
1546	MVR - 9500					
1856	MVR - 9600	Attachment screw: GD				
2166	MVR - 9700					
2476	MVR - 9800	Suitable				
2786	MVR - 9900	Centerrails: DST				
3096	MVR - 91000					
3406	MVR - 91100					
3716	MVR - 91200					



# MNB



## CROSS ROLLER GUIDE WAYS



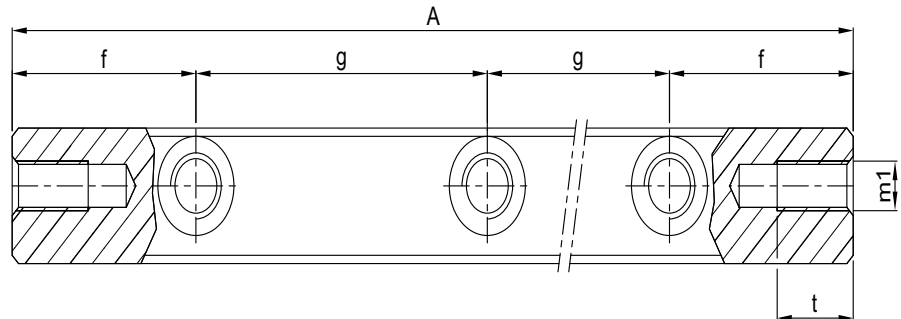
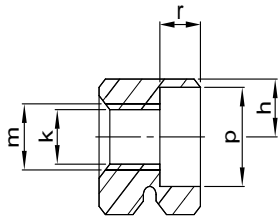
Guideways Type		Main dimensions				Mounting holes						
		A	B	C	E	D	f	g	h	k	m	p
Standard	Corrosion Resistant											
MVR - 12200	on request	200						1 x 100				
MVR - 12300	-	300						2 x 100				
MVR - 1240	-	400						3 x 100				
MVR - 12500	-	500						4 x 100				
MVR - 12600	-	600						5 x 100				
MVR - 12700	-	700	58	28	25.9	12	50	6 x 100	12 <sup>±0.2</sup>	8.5	M10	13.5
MVR - 12800	-	800						7 x 100				
MVR - 12900	-	900						8 x 100				
MVR - 121000	-	1000						9x 100				
MVR - 121100	-	1100						10 x 100				
MVR - 121200	-	1200						11 x 100				
MVR - 121400	-	1400						13 x 100				
MVR - 15300	on request	30						2 x 100				
MVR - 15400	-	400						3 x 100				
MVR - 15500	-	500						4 x 100				
MVR - 15600	-	600						5 x 100				
MVR - 15700	-	700						6 x 100				
MVR - 15800	-	800	71	36	31.9	15	50	7 x 100	14 <sup>±0.2</sup>	10.3	M12	16.5
MVR - 15900	-	900						8 x 100				
MVR - 151000	-	1000						9 x 100				
MVR - 151100	-	1100						10 x 100				
MVR - 151200	-	1200						11 x 100				
MVR - 151400	-	1400						13 x 100				



# MNB



## CROSS ROLLER GUIDE WAYS



r	End holes			Weight in g	Type	Accessories
	m1	s	t			
8.3	M8	12.95	15	1011	MVR - 12200	Cages: AA, DD, AL, JJ, KKLK Endpieces: GA, GB, GC, GCA-wiper Attachment screw: GD
				1525	MVR - 12300	
				2039	MVR - 12400	
				2553	MVR - 12500	
				3067	MVR - 12600	
				3581	MVR - 12700	
				4095	MVR - 12800	
				4609	MVR - 12900	
				5123	MVR - 121000	
				5637	MVR - 121100	
				6151	MVR - 121200	
				7693	MVR - 121400	
				2426	MVR - 15300	
				3221	MVR - 15400	
10.3	M8	15.95	15	4027	MVR - 15500	Cages: AA, DD, AL, JJ Endpieces: GA, GB, GC, GCA-wiper Attachment screw: GD
				4833	MVR - 15600	
				5639	MVR - 15700	
				6445	MVR - 15800	
				7251	MVR - 15900	
				8057	MVR - 151000	
				8863	MVR - 151100	
				9669	MVR - 151200	
				10.475	MVR - 151400	





# MNB



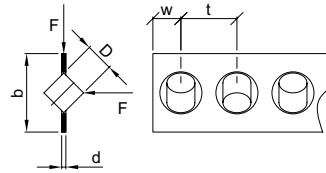
## CROSS ROLLER GUIDE WAYS

### Accessories

for linear bearings type MVR, DST

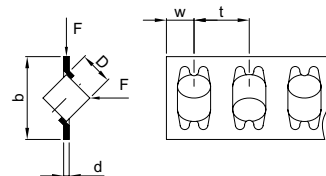
**Roller cage CC** , size 1.5- 2 mm

- rollers not retained
- for horizontal and vertical installation
- material brass



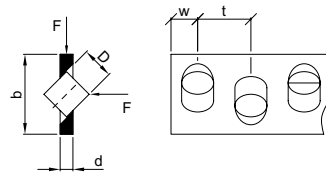
**Roller cage AA** , size 1.5- 15 mm

- rollers retained
- for horizontal installation
- material steel



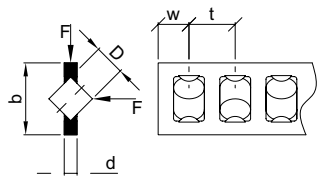
**Roller cage DD** , size 3- 15 mm

- rollers not retained
- for horizontal and vertical installation
- material brass



**Roller cage AL** , size 4- 15 mm

- rollers retained
- for horizontal and vertical installation
- material aluminium



Cage type		Dimensions					Accessories	
Standard	Corrosion Resistant	D	b	d	t	w	Suitable for Guideway	Endstop
R 1.5 x AA	R 1.5 x AA-SS		3.8	0.2	2.5	2		GA
R 1.5 x CC	R 1.5 x CC-SS		3.5	0.5	3	1.5		GA
R 1.5 x KZR	R 1.5 x KZR-SS	1.5	3.8	0.5	3	2	MVR- 1.5	GB
K 1.5 x JJ	K 1.5 x JJ-SS		3.5	0.5	3	1.5	DST- 1.5	GB
K 1.5 x KCLK	K 1.5 x KCLK-SS		3.5	0.45	2.2	1.5		GB
R 2 x AA	R 2 x AA-SS		5.6	0.3	4	2		GA
R 2 x CC	R 2 x CC-SS		5.5	0.8	4	2	MVR- 2	GB
R 2 x KZR	R 2 x KZR-SS	2	5.5	0.7	4	2	DST- 2	GB
K 2 x JJ	K 2 x JJ-SS		5.5	0.8	4	2		GB
K 2 x KCLK	K 2 x KCLK-SS		5	0.75	3.9	3		GB
R 3 x AA	R 3 x AA-SS		7.5	0.5	5	2.5		GA
R 3 x DD	R 3 x DD-SS		7.5	1.2	5	2.5	MVR- 3	GB, GC
R 3 x KZR	R 3 x KZR-SS	3	7	1	5	2.5	DST- 3	GB, GC
K 3 x JJ	K 3 x JJ-SS		7.5	1.2	5	2.5		GB, GC
K 3 x KCLK	K 3 x KCLK-SS		7	1	4.2	2.7		GB, GC
R 4 x AA	R 4 x AA-SS		10	0.5	7	5		GA
R 4 x DD	R 4 x DD-SS	4	10	1.2	7	5	MVR- 4	GB, GC
K 4 x JJ	K 4 x JJ-SS		10	1.2	7	5		GB, GC
R 4 x AL	R 4 x AL-SS		10	1.2	7	5		GB, GC

E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)

Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)



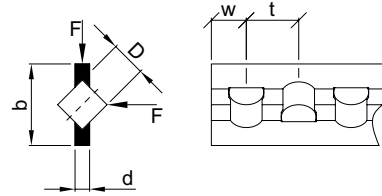
# MNB



## CROSS ROLLER GUIDE WAYS

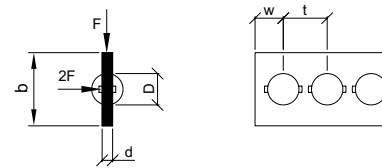
### Roller cage KZR , size 1.5- 9 mm

- rollers retained
- for horizontal and vertical installation
- material plastic (reinforced cages available in size 6- 9 mm)



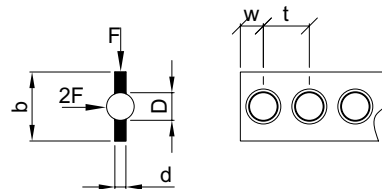
### Ball cage KCLK , size 1.5- 12 mm

- balls retained
- for horizontal and vertical installation
- material plastic



### Ball cage JJ , size 1.5- 15 mm

- balls retained (size 6- 15 mm)
- for horizontal and vertical installation
- material brass



Cage type		D	Dimensions				w	Accessoires	
Standard	Corrosion Resistant		b	d	t	Suitable for		Endstop	
R 6 x AA	R 6 x AA-SS	6	14	0.75	9+12	6	MVR- 6 DST- 6	GA	
R 6 x DD	R 6 x DD-SS		14	2.5	9+12	6		GB, GC	
R 6 x AL	R 6 x AL-SS		14	2.5	9+12	6		GB, GC	
R 6 x KZR	R 6 x KZR-SS		14	2.5	8.5	6		GB, GC	
K 6 x JJ	K 6 x JJ-SS		14	2.5	9+12	6		GB, GC	
K 6 x KCLK	K 6 x KCLK-SS		14	2.5	9	6		GB, GC	
R 9 x AA	R 9 x AA-SS	9	20	1	14+18	9	MVR- 9 DST- 9	GA	
R 9 x DD	R 9 x DD-SS		20	4	14+18	9		GB, GC	
R 9 x AL	R 9 x AL-SS		20	4	14+18	9		GB, GC	
R 9 x KZR	R 9 x KZR-SS		20	3	14	9		GB, GC	
K 9 x JJ	K 9 x JJ-SS		20	4	14+18	9		GB, GC	
K 9 x KCLK	K 9 x KCLK-SS		20	3.5	14	9		GB, GC	
R 12 x AA	on request	12	26	1.2	18+22	11	MVR-12	GA	
R 12 x DD	-		25	5	18+22	11		GB, GC	
R 12 x AL	-		25	5	18+22	11		GB, GC	
K 12 x JJ	-		25	5	18+22	11		GB, GC	
K 12 x KCLK	-		20	4	15.5	11			
R 15 x AA	on request		15	35	1.2	20+28		12	MVR-15
R 15 x DD	-	35		5	20+28	12	GB, GC		
R 15 x AL	-	35		5	20+28	12	GB, GC		
K 15 x JJ	-	35		5	20+28	12	GB, GC		



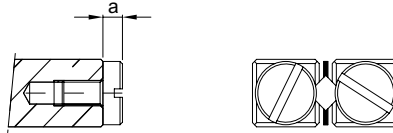
# MNB



## CROSS ROLLER GUIDE WAYS

### Endscrews GA , size 1.5- 15 mm

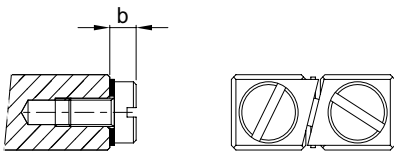
- for cage AA, RE
- for guideways MVR, MVRE, DST



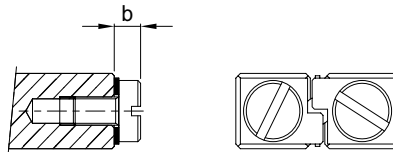
### Endpieces GB , size 1.5- 15 mm

- for horizontal and vertical installation
- for cage CC, DD, AL, KZR, JJ, KCLK

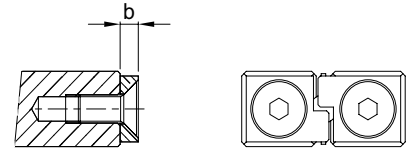
size 1.5 mm



size 2 mm

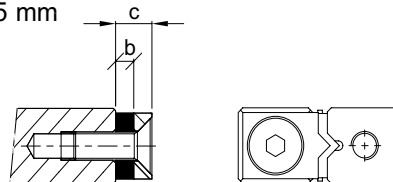


size 3-15 mm



### Endpieces GC+wipers GCA, size 3- 15 mm

- for horizontal and vertical installation
- for cage CC, DD, AL, KZR, JJ, KCLK



Dimensions	Size							
	1.5	2	3	4	6	9	12	15
a	1.5	2	2.4	2.7	3.7	4.2	5.3	5.3
b	1.7	2.3	2	2.7	3.2	4.2	5.2	6.3
c	-	-	5	2.7	6.2	7.2	8.2	9.3





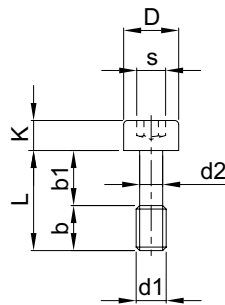
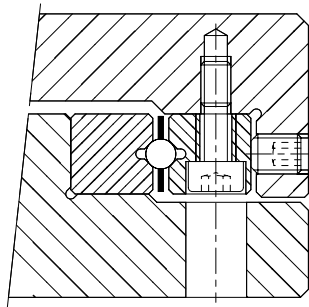
# MNB



## CROSS ROLLER GUIDE WAYS

**Attachment screws GD** , size 3-15 mm

- for compensation of pitch distances between mounting holes.
- recommended for the installation of the pre-load guideway.
- fit **ST**.



Type	Dimensions							
	L	b	b1	D	d1	d2	K	s
GD- 3	12	5	7	5	M3	2.3	3	2.5
GD- 4	16	7	9	6.5	M4	3	4	3
GD- 6	20	8	12	8	M5	3.9	5	4
GD- 9	30	12	18	8.5	M6	4.6	6	5
GD- 12	40	17	23	11.3	M8	6.2	8	6
GD- 15	45	16	29	13.9	M10	7.9	10	8



# MNB



## CROSS ROLLER GUIDE WAYS



Linear bearings type N/O are suitable to support and guide high loads and moments very accurately. Due to the close arrangement of needle rollers they provide extremely high rigidity, high linear motion accuracy and a compact size.

### Structure and Features

A typical installation consists of 2 pairs of linear bearings; each pair is made up of (2) guideways, 1, N-type (female) and 1, O-type (male), through-hardened and precision ground, with one needle roller cage in-between. The guideways are made to very high tolerances and matched together as a set. Mixing components from different sets may affect the accuracy.

Guideways are equipped with countersunk-bored attachment holes, according to a standard configuration.

Threaded holes in ends for fixing endstops and wipers.

For the attachment, special screws type GD can be ordered separately.

### Notes by ordering

Normally one set linear bearing consists of:  
4 pcs. guideways (=2 pairs), 2 pcs. cages and 8 pcs. endstops. (4xN-type+4xO-type)

By ordering please specify the following data:

1. Quantity and type of guideways.
2. Quantity and type of cages or max. stroke/travel.
3. Quantity and type of endstop screws or endstop pieces with or without wipers.

In case of endstop GH with GH-A wipers, and endstop GW with GW-A wipers only 4 pcs are needed.

### Example

To order one linear bearing set of 600 mm length, size 2025 for a 350 mm stroke in standard quality please specify:

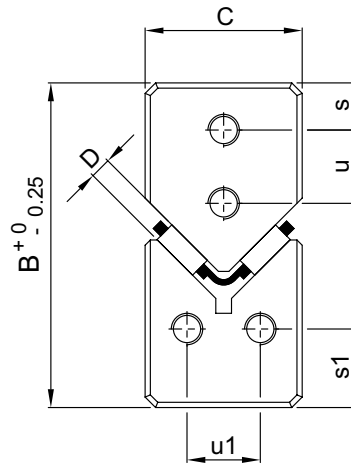
- 2 pcs. Guideways N 2025 600
- 2 pcs. Guideways O 2025 600
- 2 pcs. Needle cages HW-15x425 mm
- 4 pcs. Endpieces GFN-2025
- 4 pcs. Endpieces GFO-2025



# MNB



## CROSS ROLLER GUIDE WAYS



Guideway Type				Main dimensions							D	Mounting holes				
				A	B	C	N	O	O1	f		g	h	k	m	
N-type		O-type														
N 62015	100	O 62015	100	100								1 x 50				
N 62015	150	O 62015	150	150								2 x 50				
N 62015	200	O 62015	200	200								3 x 50				
N 62015	250	O 62015	250	250								4 x 50				
N 62015	300	O 62015	300	300								5 x 50				
N 62015	350	O 62015	350	350								6 x 50				
N 62015	400	O 62015	400	400	31	15	16	11	18	2	25	7 x 50	6	5.2	M6	
N 62015	450	O 62015	450	450								8 x 50				
N 62015	500	O 62015	500	500								9 x 50				
N 62015	600	O 62015	600	600								11 x 50				
N 62015	700	O 62015	700	700								13 x 50				
N 62015	800	O 62015	800	800								15 x 50				
N 62015	900	O 62015	900	900								17 x 50				
N 62015	1000	O 62015	1000	1000								19 x 50				
N 92025	200	O 92025	200	200								1 x 100				
N 92025	300	O 92025	300	300								2 x 100				
N 92025	400	O 92025	400	400								3 x 100				
N 92025	500	O 92025	500	500								4 x 100				
N 92025	600	O 92025	600	600								5 x 100				
N 92025	700	O 92025	700	700	44	22	24	15	24.5	2	50	6 x 100	9	6.8	M8	
N 92025	800	O 92025	800	800								7 x 100				
N 92025	900	O 92025	900	900								8 x 100				
N 92025	1000	O 92025	1000	1000								9 x 100				
N 92025	1100	O 92025	1100	1100								10 x 100				
N 92025	1200	O 92025	1200	1200								11 x 100				

E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)

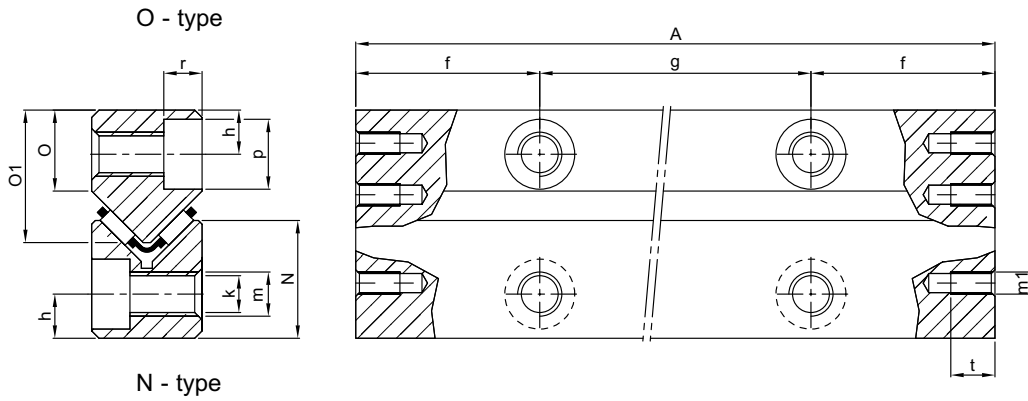
Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)



# MNB



## CROSS ROLLER GUIDE WAYS



p	r	Endhole						Weight in g		Type N/O	Accessories	
		m1	s	s1	t	u	u1	Type N	Type O			
9.5	5.2	M3	4.5	7.5	7	7	7	143	163	62015	100	Cages: HW-10 Endpieces: GF, GH, GW Attachment screw: GD-6
								214	245	62015	150	
								285	326	62015	200	
								357	408	62015	250	
								438	489	62015	300	
								510	571	62015	350	
								581	652	62015	400	
								652	734	62015	450	
								724	815	62015	500	
								866	979	62015	600	
								1019	1142	62015	700	
								1162	1305	62015	800	
								1305	1468	62015	900	
								1448	1631	62015	1000	
10.5	6.2	M4	6	11	8	10	10	683	693	92025	200	
								1019	1030	92025	300	
								1346	1356	92025	400	
								2018	2029	92025	600	
								2365	2375	92025	700	
								2691	2701	92025	800	
								3028	3038	92025	900	
								3364	3374	92025	1000	
3700	3710	92025	1100									
4027	4037	92025	1200									

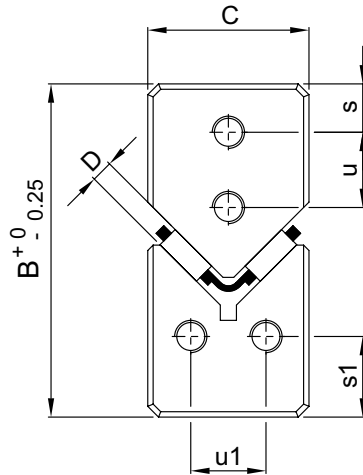




# MNB



## CROSS ROLLER GUIDE WAYS



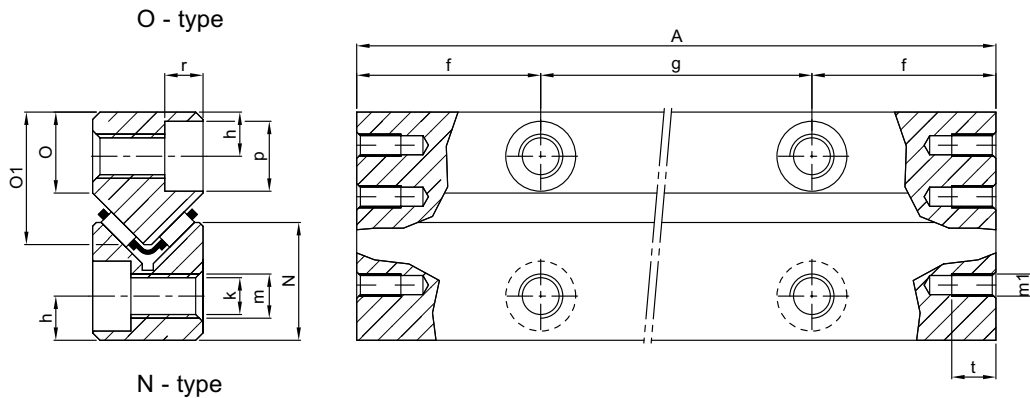
Guideway Type N-type      O-type		Main dimensions								f	Mounting holes				
		A	B	C	N	O	O1	D	g		h	k	m		
N 2025 200	O 2025 200	200										1 x 100			
N 2025 300	O 2025 300	300										2 x 100			
N 2025 400	O 2025 400	400										3 x 100			
N 2025 500	O 2025 500	500										4 x 100			
N 2025 600	O 2025 600	600										5 x 100			
N 2025 700	O 2025 700	700	52	25	28	18	29	2	50			6 x 100	10	8.5	M10
N 2025 800	O 2025 800	800										7 x 100			
N 2025 900	O 2025 900	900										8 x 100			
N 2025 1000	O 2025 1000	1000										9 x 100			
N 2025 1100	O 2025 1100	1100										10 x 100			
N 2025 1200	O 2025 1200	1200										11 x 100			
N 2535 300	O 2535 300	300										2 x 100			
N 2535 400	O 2535 400	400										3 x 100			
N 2535 500	O 2535 500	500										4 x 100			
N 2535 600	O 2535 600	600										5 x 100			
N 2535 700	O 2535 700	700	62	30	34	22	35	2.5	50			6 x 100	12	10.3	M12
N 2535 800	O 2535 800	800										7 x 100			
N 2535 900	O 2535 900	900										8 x 100			
N 2535 1000	O 2535 1000	1000										9 x 100			
N 2535 1100	O 2535 1100	1100										10 x 100			
N 2535 1200	O 2535 1200	1200										11 x 100			



# MNB



## CROSS ROLLER GUIDE WAYS



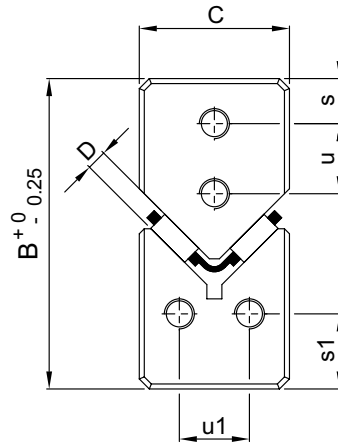
p	r	Endholes							Weight in g Type N	Weight in g Type O	Type N/O	Accessories
		m1	s	s1	t	u	u1					
13.5	8.2	M6	7	12	12	11	14	897	897	2025	200	
								1366	1346	2025	300	
								1835	1804	2025	400	
								2304	2253	2025	500	Cages: HW-15, FF-2025-ZW
								2762	2701	2025	600	
								3231	3150	2025	700	Endpieces: GF, GH, GW
								3690	3598	2025	800	
								4159	4047	2025	900	Attachment screw: GD-2025
								4618	4506	2025	1000	
								5056	4954	2025	1100	
								5556	5403	2025	1200	
								1906	1967	2535	300	
								2548	2620	2535	400	
16.5	10.2	M6	8	15	12	12	18	3180	3282	2535	500	Cages: HW-20, FF-2535-ZW
								3812	3935	2535	600	
								4455	4587	2535	700	Endpieces: GF, GH, GW
								5076	5240	2535	800	
								5719	5902	2535	900	Attachment screw: GD-2535
								6351	6646	2535	1000	
								6993	7207	2535	1100	
7625	7859	2535	1200									



# MNB



## CROSS ROLLER GUIDE WAYS



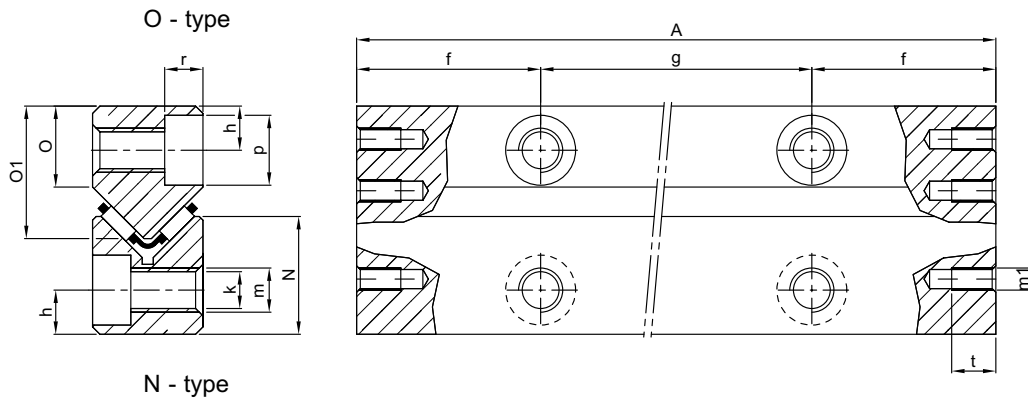
Guideway Type N-type      O-type		Main dimensions								Mounting holes				
		A	B	C	N	O	O1	D	f	g	h	k	m	
N 3045 400	O 3045 400	400											3 x 100	
N 3045 500	O 3045 500	500											4 x 100	
N 3045 600	O 3045 600	600											5 x 100	
N 3045 700	O 3045 700	700											6 x 100	
N 3045 800	O 3045 800	800	74	35	42.5	25	40	3	50				7 x 100    14    12.5    M14	
N 3045 900	O 3045 900	900											8 x 100	
N 3045 1000	O 3045 1000	1000											9 x 100	
N 3045 1100	O 3045 1100	1100											10 x 100	
N 3045 1200	O 3045 1200	1200											11 x 100	
N 3555 500	O 3555 500	500											4 x 100	
N 3555 600	O 3555 600	600											5 x 100	
N 3555 700	O 3555 700	700											6 x 100	
N 3555 800	O 3555 800	800	78	45	45	25	45	3.5	50				7 x 100    14    12.5    M14	
N 3555 900	O 3555 900	900											8 x 100	
N 3555 1000	O 3555 1000	1000											9 x 100	
N 3555 1100	O 3555 1100	1100											10 x 100	
N 3555 1200	O 3555 1200	1200											11 x 100	



# MNB



## CROSS ROLLER GUIDE WAYS



p	r	Endholes						Weight in g		Type N/O	Accessories
		m1	s	s1	t	u	u1	Type N	Type O		
								3660	3466	3045 400	
								4567	4322	3045 500	
								5494	5138	3045 600	Cages: HW-25, FF-3045-ZW
								6402	6055	3045 700	
18.5	12.2	M6	10	18	12	16	19	7319	6922	3045 800	Endpieces: GF, GH, GW
								8236	7778	3045 900	
								9154	8654	3045 1000	Attachment screw: GD-3045
								10.061	9511	3045 1100	
								10.979	10.377	3045 1200	
								6177	6106	3555 500	
								7370	7329	3555 600	Cages: HW-30, FF-3555-ZW
								8654	8542	3555 700	
18.5	12.2	M6	12	18	12	20	29	9888	9766	3555 800	Endpieces: GF, GH, GW
								11.131	10.989	3555 900	
								12.375	12.202	3555 1000	Attachment screw: GD-3555
								13.619	13.425	3555 1100	
								14.852	14.648	3555 1200	





# MNB

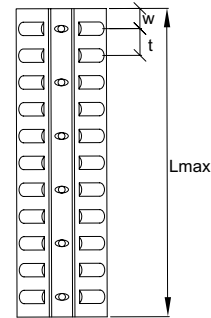
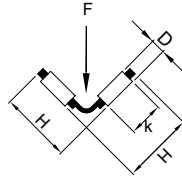


## CROSS ROLLER GUIDE WAYS

### Accessories

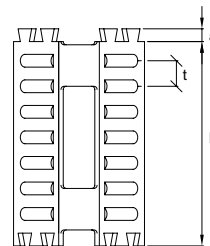
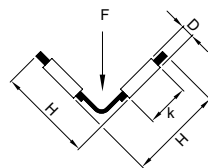
#### Needle cages type HW , size 10 - 30

- for horizontal and vertical installation
- needles are retained
- material: light-alloy



#### Needle cages type FF-ZW , size 2025 - 3555

- for horizontal and vertical installation
- needles are retained
- material: plastic



Cage Type		Dimensions								Needles/cage (mm)	Loadrating Cdyn (N)
FF..ZW	HW	D	H	a	k	L	t	w	Lmax		
	HW-10	2	10	-	4.8	-	4	3	1000	-	2740
FF-2025-ZW		2	15	2	6.8	32	4	-		7 x 2	4000
	HW-15	2	15	-	6.8	-	4.5	3.5	1000	-	4000
FF-2535-ZW		2.5	20.5	2.4	9.8	45	5	-		8 x 2	7300
	HW-20	2.5	20	-	9.8	-	5.5	3.5	1000	-	7300
FF-3045-ZW		3	26	3	13.8	60	6	-		9 x 2	12500
	HW-25	3	25	-	13.8	-	6	4.5	1000	-	12500
FF-3555-ZW		3.5	31.5	3.2	17.8	75	7	-		10 x 2	18700
	HW-30	3.5	30	-	17.8	-	7	5	1000	-	18700



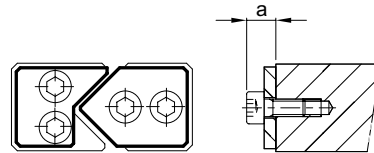
# MNB



## CROSS ROLLER GUIDE WAYS

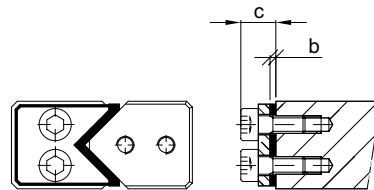
### Endpieces type GFN and GFO , size 62015 – 3555

- for horizontal and vertical installation



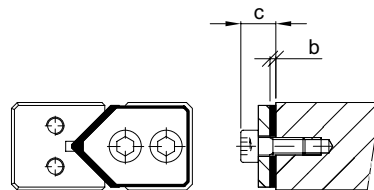
### Endpieces type GH , size 62015 – 3555

- for horizontal and vertical installation
- optional with felt-wipers type GH-A
- for protruding cages



### Endpieces type GW , size 62015 – 3555

- for horizontal and vertical installation
- optional with felt-wipers type GW-A
- for protruding cages



Dimensions	Linear Bearings N/O					
	62015	92025	2025	2535	3045	3555
a	6.2	7.2	10.2	10.2	10.2	11.2
b	3	3	3	3	3	3
c	9.2	10.2	13.2	13.2	13.2	14.2



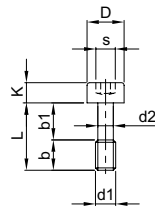
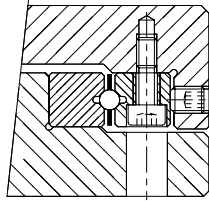
# MNB



## CROSS ROLLER GUIDE WAYS

**Attachment screws GD** , size 6- 3555

- for compensation of pitch distances between mounting holes.
- also recommended for the installation of the pre-load guideway.



Type	Dimensions								
	L	b	b1	D	d1	d2	K	s	Suitable for Guideways
GD-6	20	8	12	8	M5	3.9	5	4	N/O 62015
GD-9	30	12	18	8.5	M6	4.6	6	5	N/O 92025
GD-2025	35	16	19	11.3	M8	6.2	8	6	N/O 2025
GD-2535	40	18	22	13.9	M10	7.9	10	8	N/O 2535
GD-3045	50	25	25	15.8	M12	9.6	12	10	N/O 3045
GD-3555	60	25	35	15.8	M12	9.6	12	12	N/O 3555



# MNB

## MNB SHAFTS



Shaft Dia in mm	Maximum Length in mm
03	500
04	500
05	500
06	1000
08	1000
10	1000
12	1500
13	1500
14	1500
16	2000
20	3000
25	3000
30	3000
35	3000
40	3000
50	3000
60	3000
80	3000



**How to order**  
**SF for Normal**  
**SFC for Chrome Plated**  
**g6 or h6 tolerance**  
**Example SFC 20 g6 x 2000 mm**

**We can provide Shaft Length as per  
 your requirement & machining  
 as per your drawing.**

**Also Available :**

- Supported Shaft
- Inch Shafts
- Hollow Shafts

## Hardened & Ground Shafts with Chrome Plating

### SHAFTS FOR LINEAR MOTION BEARING

0) shafts

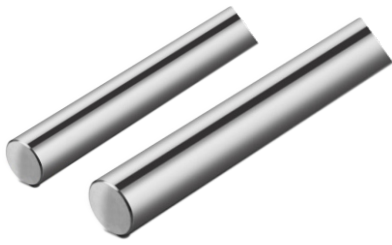
- High – Precision ground and hardened (HrC6)
  - Shafts exclusively used for linear motion ball bearings
  - Standard shafts which are quickly delivered at reasonable price
- Shafts are available in h6 and g6 tolerance however other tolerance can be given against specific orders  
 We can also supply odd item shafts (that are not included in the list)  
 The length indicated is maximum length any length can be ordered less than the max leng

### Technical Details

- SUJ-2 material is used
- The surface hardness is around HRC 58-64
- High frequency induction hardening is used The standard hardening depth is 1-2 mm
- Surface roughness is 1.5 S. or less
- Straightnes

**E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)**  
**Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)**



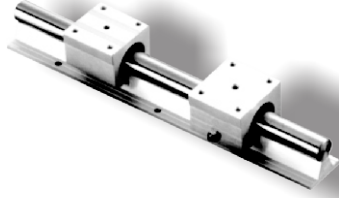


# MNB

## MNB SHAFTS



### LINEAR MOTION BALL BUSHINGS (LINEAR MOTION BEARINGS)



#### STRUCTURE AND FEATURES

- The linear bushing consists of an outer cylinder, ball retainer, balls and two end rings. The ball retainer which holds the balls in the recirculating trucks in held inside the outer cylinder by end rings.
- Those parts are assembled to optimize their required functions.
- The outer cylinder is maintained with sufficient hardness by heat treatment, therefore it ensures the bushing projected travel life and satisfactory durability.
- The ball retainer is made from steel or synthetic resin. The steel retainer has high rigidity, obtained by heat treatment. The synthetic resin retainer can reduce running noise. The user can select the optimum type for meeting the user's service conditions.

#### 1. High Precision and Rigidity

The linear bushing is produced from a solid steel outer cylinder and incorporates an industrial strength resin retainer.

#### 2. Ease of Assembly

The standard type of linear bushing can be loaded from any direction. Precision control is possible using only the shaft supporter, and the mounting surface can be machined easily.

#### 3. Ease of Replacement

Linear bushings of each type are completely interchangeable because of their standardized dimensions and strict precision control. Replacement because of wear or damage is therefore easy and accurate.

#### 4. Variety of Types

Offers a full line of linear bushing: the standard, integral single-retainer closed type, the clearance adjustable type and the open types. The user can choose from among these according to the application requirements to be met.

Tolerance Note that precision of inscribed circle diameters and outside diameters for the clearance adjustable type (...-AJ) and the open type (...-OP) indicates the value obtained before the corresponding type is subjected to cutting process.

#### Clearance and Fit

When a standard-type linear bushing is used with a shaft, inadequate clearance, adjustment may cause early bush failure and/or poor, rough traveling. The clearance adjustable linear bush and open linear bush can be clearance adjusted when assembled in the housing which can control the outside cylinder diameter. However, too much clearance adjustment increases the deformation of the outside cylinder, to affect its precision and life. Therefore, the appropriate clearance between the bush and shaft, and clearance between the bush and housing are required according to the application.

#### Shaft and Housing

To optimize performance of the linear bushing high precision of the shaft and housing is required.

##### 1. Shaft

The rolling balls in the linear bushing are in point contact with the shaft surface. Therefore, the shaft dimensions, tolerance, surface finish, and hardness greatly affect the traveling performance of the bush.

**We highly recommend to use the shafts imported by us (for details see page 30). These shafts will give ideal tolerance for the use of Linear ball bushings. These are hardened and ground shafts with the options of with or without chrome plating. Given the humid conditions in India we recommend to use Hardened & Ground Shafts with Chrome plating Model SFC which is corrosion resistant.**

##### 2. Housing

There is a wide range of housing differing in design, machining, and mounting. For the fitness and shapes of housings, see the following section on mounting.

#### Mounting

When inserting the linear bush into the housing, do not hit the linear bush on the side ring holding the retainer but apply the linear bush into the housing by hand or lightly knock it. In inserting the shaft after mounting the bush, be careful not to shock the balls. Note that if two shafts are used in parallel, the parallelism is the most important factor to assure the smooth linear movement. Take care in setting the shafts.

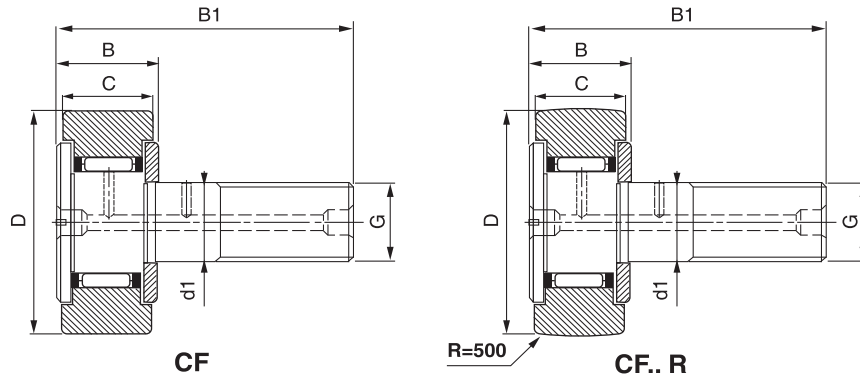
**E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)**

**Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)**



# MNBN

## CAM FOLLOWER



Number Cylindrical Outer Race CF	Number Crowned Outer Race CF.. R	DIMENSIONS (mm)						Basic Dynamic Load Rating (kgf)	Basic Static Load Rating (kgf)
		d1	D	G	C	MAX. B	MAX. B1		
CF 3	—	3	10	M3x0.5	7	8	17	150	100
CF 4	—	4	12	M4x0.7	8	9	20	210	160
CF 5	—	5	13	M5x0.8	9	10	23	260	220
CF 6	CF 6 R	6	16	M6x1	11	12.2	28.2	370	370
CF 8	CF 8 R	8	19	M8x1.25	11	12.2	32.2	430	480
CF 10	CF 10 R	10	22	M10x1.25	12	13.2	36.2	550	700
CF 10 M	CF 10 RM	10	22	M10x1	12	13.2	36.2	550	700
CF 10-1	CF 10-1 R	10	26	M10x1.25	12	13.2	36.2	550	700
CF 10-1 M	CF 10-1 RM	10	26	M10x1	12	13.2	36.2	550	700
CF 12	CF 12 R	12	30	M12x1.5	14	15.2	40.2	810	1000
CF 12-1	CF 12-1 R	12	32	M12x1.5	14	15.2	40.2	810	1000
CF 16	CF 16 R	16	35	M16x1.5	18	19.6	52.1	1230	1870
CF 18	CF 18 R	18	40	M18x1.5	20	21.6	58.1	1500	2570
CF 20	CF 20 R	20	52	M20x1.5	24	25.6	66.1	2110	3530
CF 20-1	CF 20-1 R	20	47	M20x1.5	24	25.6	66.1	2110	3530
CF 24	CF 24 R	24	62	M24x1.5	29	30.6	80.1	3110	5370
CF 24-1	CF 24-1 R	24	72	M24x1.5	29	30.6	80.1	3110	5370
CF 30	CF 30 R	30	80	M30x1.5	35	37	100	4630	8680
CF 30-1	CF 30-1 R	30	85	M30x1.5	35	37	100	4630	8680
CF 30-2	CF 30-2 R	30	90	M30x1.5	35	37	100	4630	8680

- For Lip Seal type add suffix UU e.g. CF 6 UU
- For Hex hole add suffix B e.g. CF 6 B
- For Full compliment needle add suffix V e.g. CF 6 V
- For ordering a combination specify e.g. CF 6 VBUUR meaning having full compliment, Hex hole, Lip seal, crowned outer race



# MN B

**BUSHES SELF LUBRICATING**



## THE INSTALLATION OF THE SLIDING BUSHING AND THE HOUSING

### The Installation of SF Bush

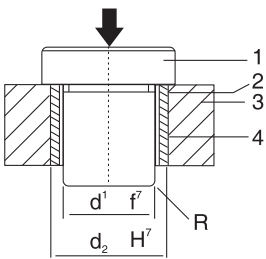
SF bushes should be cleaned in kerosene or diesel oil first, immersed in engine oil and then dried up. When the bush is installed into housing, make sure the bush not rotating in the housing or moving in the axial direction and at the same time make the outer surface surface fully contact to the base hole, generally guarantee the contact area over 70% thus to improve load capacity and transmission of friction heat. The inner surface of SF bush is made of self-lubricating plastic, the outer surface steel backing, The friction coefficient of steel to steel is bigger that of steel to plastic, So we should choose the light-graded tight fit, preventing the axle sleeve from moving in the base when working, and also preventing the inner holes from getting deformed and too big because of the large tight fit of the outer diameter.

Out Circle of the axle sleeve should be avoided in the high-pressure working conditions. Two methods are recommended here:

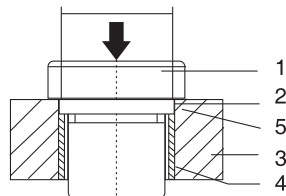
1. Increase the outer diameter of the axle sleeve, and the deformation of inner holes can be calibrated with calibrating core stick.
2. When installing, apply ZY 801 Oxygen-hatred glue in the housing to strengthen the combination strength between the axle sleeve and base hole.

For bush (outer diameter < 55mm), press the bush into the housing gently and carefully using a core axle with a handle. Fig A.

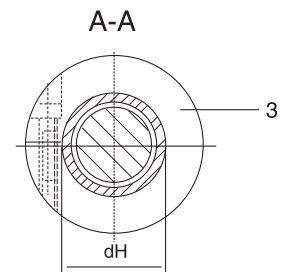
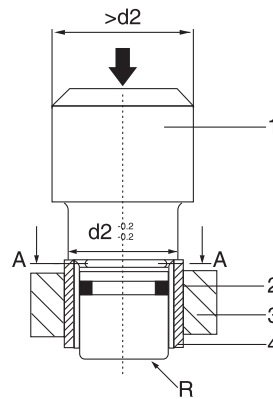
For bush (outer diameter > 55mm), press the bush into the housing gently and carefully using a handle with a shoulder, an "O" ring and an assisting circle. Fig. B



(Fig Aa) Plane Installation



(B) Inset Installation



1. Press the core axle into bushing
  2. Housing chamfer at end :  $0.8 \times 15^\circ$
  3. HOUsing
  4. Diameter of inset shoulder
- R. Radius of the round angle of the core axle end

d2	dH
> 55 100	$d2^{+0.28}_{+0.25}$
> 100 200	$d2^{+0.40}_{+0.36}$
> 200 305	$d2^{+0.50}_{+0.40}$



# MN B

## BUSHES SELF LUBRICATING



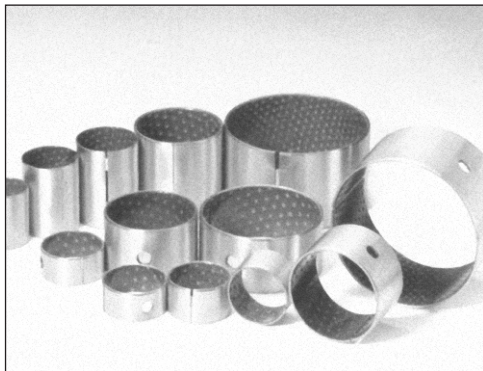
### PAP PAF PAW Self-Lubricating Bearing



This product takes the steel plate as the base . and with the sintering of bronze powder in the middle layer and rolling of the mixture of PTEE and Pb at it's surface. It has the characteristic of small rubbing coefficient, wear-resisting and corrode resisting. Long life. The adoption of this product can reduce the cost of machine, reducing noises and negligible "stick-slip". It is widely used in printing machine, wearing machine, motorcycles and etc.

Max Load	Static Load 250N/mm <sup>2</sup> Low Speed Load 120N/mm <sup>2</sup>
	Rotating & Oscillating Load 60N/mm <sup>2</sup>
Max Speed	5 m/s
Friction Coefficient	0.03 ~ 0.20
Wear Depth Limit	0.05 mm
Max PV Value	Dry Lubricating 3.6N/mm <sup>2</sup> · m/s Oil Lubricating 50N/mm <sup>2</sup> · m/s
Temperature Range	-195°C ~ +280°C

### PAP..H PAF..H PAW..H Border Lubricating Bearing



This product takes steel plate as the base. With the sintering of bronze powder in the middle layer and rolling of the modified POM at its surface. It has the characteristic of good, wear resistance and high load capacity. It is suitable for conditions which do not promote the formation of oil film oscillating movements, high load/low speed frequent, stop start up under load. It was widely used in forging machine, metallurgy & mining machine. hydroelectric industrial machine and etc.

Max Load	Static Load 250N/mm <sup>2</sup> Dynamic Load 120N/mm <sup>2</sup>
Max Speed	5 m/s
Friction Coefficient	0.05~0.25
Wear Depth Limit	0.50mm
Max PV Value	Dry Lubricating 3N/mm <sup>2</sup> · m/s Oil Lubricating 22N/mm <sup>2</sup> · m/s
Temperature Range	-40°C~+130°C

### JDB JBF Inlaid Solid Lubricating Bearing



This product base on alloy of bronze of special formula. The solid lubricating medium is inlaid in the friction surface and the friction area of the solid lubricating medium take over 20%. The combination of advantages of alloy of bronze and non-metal Friction reducing matercing has broken in the limit of general that depend on oil film. It was widely used in metallurgy, stell rolles in metallography, mineral machines, ships gas turbine and etc.

Max Load	Static Load 150N/mm <sup>2</sup> Dynamic Load 100N/mm <sup>2</sup>
Max Speed	Dry Lubricating 0.4m/s Oil Lubricating 1.5m/s
Max PV Value	Dry Lubricating 3.3N/mm <sup>2</sup> · m/s
Friction Coefficient	0.05 ~ 0.20
Temperature Range	-100°C ~ +300°C
Brinnal Composition	HBsC4
Brinnal Hardness	> HB200





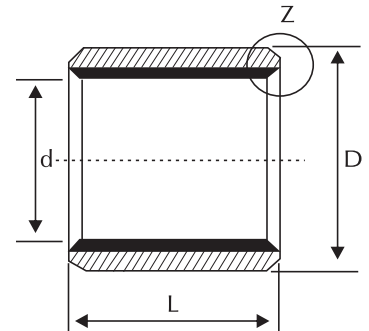
# MNB

**BUSHES SELF LUBRICATING**

**PAP / MB / DU**

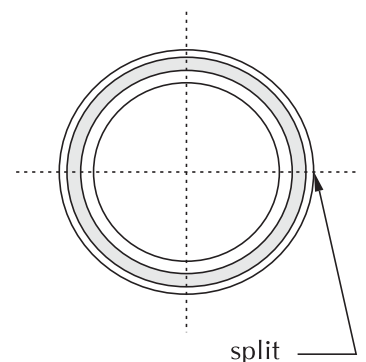


d	D	L <sub>0.3</sub> <sup>0</sup>													Unit :mm	
		3	4	5	6	8	10	12	15	20	25	30	40	50		
3	4.5	0303	0304		0306											
4	5.5		0404	0405	0406		0410									
5	7			0505		0508	0510									
6	8		0604		0606	0608	0610	0612								
8	10				0806	0808	0810	0812	0815							
10	12				1006	1008	1010	1012	1015	1020						
12	14				1206	1208	1210	1212	1215	1220	1225					
13	15						1310		1315	1320						
14	16						1410	1412	1415	1420	1425					
15	17						1510	1512	1515	1520	1525					
16	18						1610	1612	1615	1620	1625					
17	19						1710	1712	1715	1720	1725					
18	20						1810	1812	1815	1820	1825					
20	23						2010	2012	2015	2020	2025	2030				
22	25						2210	2212	2215	2220	2225	2230				
24	27								2415	2420	2425	2430				
25	28						2510	2512	2515	2520	2525	2530	2540	2550		
28	32								2815	2820	2825	2830	2840			
30	34							3012	3015	3020	3025	3030	3040	3050		
32	36								3215	3220		3230	3240			
35	39							3512	3515	3520	3525	3530	3540	3550		
38	42								3815	3820		3830	3840			
40	44							4012		4020	4025	4030	4040	4050		



**NOTE : How to order : select inner dia d1 from table, outer dia D & the length L required  
E.g id 10mm od 12mm length 15mm order code will be PAP 1015**

d	D	L <sub>0.3</sub> <sup>0</sup>										Unit :mm	
		20	25	30	40	50	60	70	80	100			
45	50	4520	4525	4530	4540	4550							
50	55	5020		5030	5040	5050	5060						
55	60			5530	5540	5550	5560						
60	65			6030	6040	6050	6060	6070					
65	70			6530	6540	6550	6560	6570					
70	75				7040	7050	7060	7050	7080				
75	80			7530	7540	7550	7560	7570	7580				
80	85				8040	8050	8060	8070	8080	80100			
85	90				8540		8560		8580	85100			
90	95				9040	9050	9060		9080	90100			
95	100					9550	9560		9580	95100			
100	105					10050	10060		10080				
105	110						10560		10580				
110	115						11060		11080				
115	120					15050	11560						
120	125						12060		12080	120100			
125	130						12560			125100			
130	135						13060		13080	130100			
140	145						14060		14080	140100			
150	155						15060		15080	150100			
160	165						16060		16080	160100			
180	185								18080	180100			
190	195								19080	190100			
200	205							20060	20080	200100			
220	225								22080	220100			
250	255								25080	250100			
260	265								26080	260100			
280	285								28080	280100			
300	305								30080	300100			

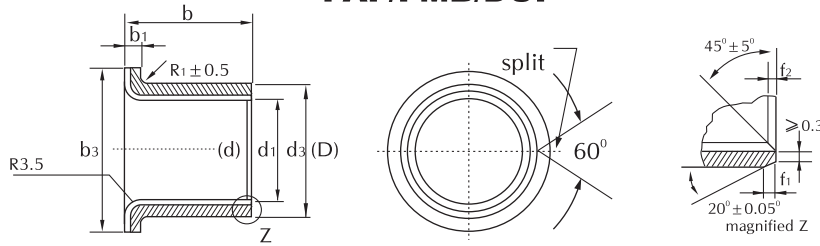




# MNFB

## FLANGED BUSHES

### PAF/FMB/DUF

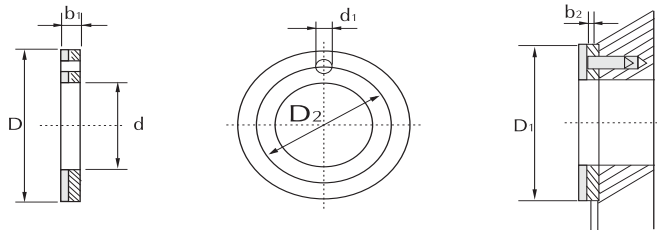


Unit : mm

d1	D	d3 (±0.4)	b1	b2	diameter of axle	Housing broe	b <sub>0.30</sub> <sup>0</sup>													
							6	8	10	12	15	20	25	30	40	50				
6	8	12	1 <sup>0</sup> <sub>-0.020</sub>	1 <sup>0</sup> <sub>-0.03</sub>	6 <sup>-0.010</sup> <sub>-0.022</sub>	8 <sup>+0.015</sup> <sub>0</sub>	0606	0608	0610											
8	10	15	1 <sup>0</sup> <sub>-0.020</sub>	1 <sup>0</sup> <sub>-0.03</sub>	8 <sup>-0.013</sup> <sub>-0.028</sub>	10 <sup>+0.015</sup> <sub>0</sub>	0806	0808	0810	0812										
10	12	18	1 <sup>0</sup> <sub>-0.020</sub>	1 <sup>0</sup> <sub>-0.03</sub>	10 <sup>-0.013</sup> <sub>-0.028</sub>	12 <sup>+0.018</sup> <sub>0</sub>	1006	1008	1010	1012	1015									
12	14	20	1 <sup>0</sup> <sub>-0.020</sub>	1 <sup>0</sup> <sub>-0.03</sub>	12 <sup>-0.016</sup> <sub>-0.034</sub>	14 <sup>+0.018</sup> <sub>0</sub>	1206	1208	1210	1212	1215									
14	16	22	1.5 <sup>0</sup> <sub>-0.020</sub>	1.5 <sup>0</sup> <sub>-0.03</sub>	14 <sup>-0.016</sup> <sub>-0.034</sub>	16 <sup>+0.018</sup> <sub>0</sub>			1410	1412	1415	1420								
15	17	23	1.5 <sup>0</sup> <sub>-0.020</sub>	1.5 <sup>0</sup> <sub>-0.03</sub>	15 <sup>-0.016</sup> <sub>-0.034</sub>	17 <sup>+0.018</sup> <sub>0</sub>			1510	1512	1515	1520	1525							
16	18	24	1.5 <sup>0</sup> <sub>-0.020</sub>	1.5 <sup>0</sup> <sub>-0.03</sub>	16 <sup>-0.016</sup> <sub>-0.034</sub>	18 <sup>+0.018</sup> <sub>0</sub>			1610	1612	1615	1620	1625							
18	20	26	1.5 <sup>0</sup> <sub>-0.020</sub>	1.5 <sup>0</sup> <sub>-0.03</sub>	18 <sup>-0.016</sup> <sub>-0.034</sub>	20 <sup>+0.021</sup> <sub>0</sub>														
20	23	31	1.5 <sup>0</sup> <sub>-0.020</sub>	1.5 <sup>0</sup> <sub>-0.03</sub>	20 <sup>-0.016</sup> <sub>-0.034</sub>	23 <sup>+0.021</sup> <sub>0</sub>				2012	2015	2020	2025	2030						
22	25	33	1.5 <sup>0</sup> <sub>-0.020</sub>	1.5 <sup>0</sup> <sub>-0.03</sub>	22 <sup>-0.016</sup> <sub>-0.034</sub>	25 <sup>+0.021</sup> <sub>0</sub>				2212	2215	2220	2225							
24	27	35	1.5 <sup>0</sup> <sub>-0.020</sub>	1.5 <sup>0</sup> <sub>-0.03</sub>	24 <sup>-0.020</sup> <sub>-0.041</sub>	27 <sup>+0.021</sup> <sub>0</sub>				2412	2415	2420	2425	2430						
25	28	36	1.5 <sup>0</sup> <sub>-0.020</sub>	1.5 <sup>0</sup> <sub>-0.03</sub>	25 <sup>-0.020</sup> <sub>-0.041</sub>	28 <sup>+0.021</sup> <sub>0</sub>				2512	2515	2520	2525	3530						
28	32	40	2.0 <sup>0</sup> <sub>-0.020</sub>	2.0 <sup>0</sup> <sub>-0.035</sub>	28 <sup>-0.020</sup> <sub>-0.041</sub>	32 <sup>+0.025</sup> <sub>0</sub>					2815	2820	2825	2830						
30	34	42	2.0 <sup>0</sup> <sub>-0.020</sub>	2.0 <sup>0</sup> <sub>-0.035</sub>	30 <sup>-0.020</sup> <sub>-0.041</sub>	34 <sup>+0.025</sup> <sub>0</sub>					3015	3020	3025	3030						
32	36	46	2.0 <sup>0</sup> <sub>-0.020</sub>	2.0 <sup>0</sup> <sub>-0.035</sub>	32 <sup>-0.025</sup> <sub>-0.050</sub>	36 <sup>+0.025</sup> <sub>0</sub>					3215	3220		3230						
35	39	49	2.0 <sup>0</sup> <sub>-0.020</sub>	2.0 <sup>0</sup> <sub>-0.035</sub>	35 <sup>-0.025</sup> <sub>-0.050</sub>	39 <sup>+0.025</sup> <sub>0</sub>					3515	3520	3525	3530						
38	42	52	2.0 <sup>0</sup> <sub>-0.020</sub>	2.0 <sup>0</sup> <sub>-0.035</sub>	38 <sup>-0.025</sup> <sub>-0.050</sub>	42 <sup>+0.025</sup> <sub>0</sub>						3820		3830						
40	44	54	2.0 <sup>0</sup> <sub>-0.020</sub>	2.0 <sup>0</sup> <sub>-0.035</sub>	40 <sup>-0.025</sup> <sub>-0.050</sub>	44 <sup>+0.025</sup> <sub>0</sub>						4020	4020	4030						

NOTE : How to order : select inner dia d1 from table, outer dia D & the length required b. E.g id 10mm od 12mm length 15mm order code will be PAF 1015

### PAW/WC/ WASHER BUSHES



Unit: mm

Designation	Size of washer				Size of Installation			Axle diameter
	d <sup>+0.25</sup> <sub>0</sub>	D <sup>0</sup> <sub>-0.25</sub>	b1 <sup>0</sup> <sub>-0.05</sub>	D2 <sup>±0.15</sup> <sub>±2</sub>	d <sub>1</sub> <sup>+0.40</sup> <sub>+0.10</sub>	b <sub>2</sub> <sup>±0.2</sup>	D <sub>1</sub> <sup>+0.25</sup> <sub>0</sub>	
PAW10	10	20	1.5	15	1.5	1	20	8
PAW12	12	24	1.5	18	1.5	1	24	10
PAW14	14	26	1.5	20	2	1	26	12
PAW16	16	30	1.5	22	2	1	30	14
PAW18	18	32	1.5	25	2	1	32	16
PAW20	20	36	1.5	28	3	1	36	18
PAW22	22	38	1.5	30	3	1	38	20
PAW24	24	42	1.5	33	3	1	42	22
PAW26	26	44	1.5	35	3	1	44	24
PAW28	28	48	1.5	38	4	1	48	25
PAW32	32	54	1.5	43	4	1	54	30
PAW38	38	62	1.5	50	4	1	62	35
PAW42	42	66	1.5	54	4	1	66	40
PAW48	48	74	2	61	4	1.5	74	45
PAW52	52	78	2	65	4	1.5	78	50
PAW62	62	80	2	76	4	1.5	90	60

E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)

Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)

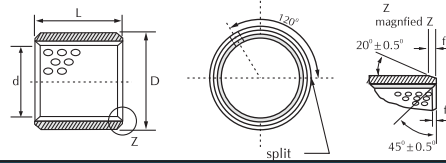


# MNB



## BORDER LUBRICATING BUSHES

### PAP.H BORDER LUBRICATING BUSHES



Unit : mm

d	D	diameter of axle	Housing bore	Wall thickness min	Wall thickness max	inside diameter	Ø	f1	f2	L -0.30 length -0.											
										10	12	15	20	25	30	35	40	45	50	55	60
10	13	10 <sup>0</sup> <sub>-0.022</sub>	13 <sup>+0.018</sup>	1.454	1.480	10 <sup>+0.110</sup> <sub>+0.040</sub>	4	0.5	0.3	1010	1012	1015	1020								
12	15	12 <sup>0</sup> <sub>-0.027</sub>	15 <sup>+0.018</sup>	1.454	1.480	12 <sup>+0.110</sup> <sub>+0.040</sub>	4	0.5	0.3	1210	1212	1215	1220								
14	17	14 <sup>0</sup> <sub>-0.027</sub>	17 <sup>+0.018</sup>	1.454	1.480	14 <sup>+0.110</sup> <sub>+0.040</sub>	4	0.5	0.3		1412	1415	1420								
15	18	15 <sup>0</sup> <sub>-0.027</sub>	18 <sup>+0.018</sup>	1.454	1.480	15 <sup>+0.110</sup> <sub>+0.040</sub>	4	0.5	0.3			1515	1520	1525							
16	19	16 <sup>0</sup> <sub>-0.027</sub>	19 <sup>+0.021</sup>	1.454	1.480	16 <sup>+0.110</sup> <sub>+0.040</sub>	4	0.5	0.3			1615	1620	1625							
18	21	18 <sup>0</sup> <sub>-0.027</sub>	21 <sup>+0.021</sup>	1.454	1.480	18 <sup>+0.110</sup> <sub>+0.040</sub>	4	0.5	0.3			1815	1820	1825							
20	23	20 <sup>0</sup> <sub>-0.033</sub>	23 <sup>+0.021</sup>	1.442	1.474	20 <sup>+0.137</sup> <sub>+0.052</sub>	4	0.8	0.4			2015	2020	2025	2030						
22	25	22 <sup>0</sup> <sub>-0.033</sub>	25 <sup>+0.021</sup>	1.442	1.474	22 <sup>+0.137</sup> <sub>+0.052</sub>	6	0.8	0.4			2215	2220	2225							
24	27	24 <sup>0</sup> <sub>-0.033</sub>	27 <sup>+0.021</sup>	1.442	1.474	24 <sup>+0.137</sup> <sub>+0.052</sub>	6	0.8	0.4			2415	2420	2425	2430						
25	28	25 <sup>0</sup> <sub>-0.033</sub>	28 <sup>+0.021</sup>	1.442	1.474	25 <sup>+0.137</sup> <sub>+0.052</sub>	6	0.8	0.4			2515	2520	2525	2530						
28	31	28 <sup>0</sup> <sub>-0.033</sub>	31 <sup>+0.025</sup>	1.442	1.474	28 <sup>+0.137</sup> <sub>+0.052</sub>	6	1.0	0.5			2820		2830							
30	34	30 <sup>0</sup> <sub>-0.039</sub>	34 <sup>+0.025</sup>	1.932	1.968	30 <sup>+0.161</sup> <sub>+0.064</sub>	6	1.0	0.5			3020	3025	3030		3040					
32	36	32 <sup>0</sup> <sub>-0.039</sub>	36 <sup>+0.025</sup>	1.932	1.968	32 <sup>+0.161</sup> <sub>+0.064</sub>	6	1.0	0.5			3220		3230		3240					
35	39	36 <sup>0</sup> <sub>-0.039</sub>	39 <sup>+0.025</sup>	1.932	1.968	36 <sup>+0.161</sup> <sub>+0.064</sub>	6	1.0	0.5			3520	3525	3530	3535	3540					
36	40	36 <sup>0</sup> <sub>-0.039</sub>	40 <sup>+0.025</sup>	1.932	1.968	36 <sup>+0.161</sup> <sub>+0.064</sub>	6	1.0	0.5					3630		3640					
40	44	40 <sup>0</sup> <sub>-0.039</sub>	44 <sup>+0.025</sup>	1.932	1.968	40 <sup>+0.161</sup> <sub>+0.064</sub>	8	1.0	0.5			4020		4030		4040	4045	4050	5055		
45	50	45 <sup>0</sup> <sub>-0.039</sub>	50 <sup>+0.025</sup>	2.414	2.460	45 <sup>+0.197</sup> <sub>+0.080</sub>	8	1.2	0.6					4530		4540	4545	4550			
50	55	50 <sup>0</sup> <sub>-0.039</sub>	55 <sup>+0.030</sup>	2.414	2.460	50 <sup>+0.202</sup> <sub>+0.080</sub>	8	1.2	0.6					5030		5040		5050		5060	
55	60	55 <sup>0</sup> <sub>-0.046</sub>	60 <sup>+0.030</sup>	2.414	2.460	55 <sup>+0.202</sup> <sub>+0.080</sub>	8	1.2	0.6					5530		5540		5550		5560	
60	65	60 <sup>0</sup> <sub>-0.046</sub>	65 <sup>+0.030</sup>	2.414	2.460	60 <sup>+0.202</sup> <sub>+0.080</sub>	8	1.2	0.6					6030		6040		6050		6060	

Unit : mm

d	D	diameter of axle	Housing bore	Wall thickness min	Wall thickness max	inside diameter	Ø	f1	f2	L <sup>0</sup> <sub>0.3</sub>											
										40	50	60	65	70	80	90	95	100	110	120	
65	70	65 <sup>0</sup> <sub>-0.046</sub>	70 <sup>+0.030</sup>	2.384	2.450	65 <sup>+0.262</sup> <sub>+0.100</sub>	8	1.2	0.6	6540		6560									
70	75	70 <sup>0</sup> <sub>-0.046</sub>	75 <sup>+0.030</sup>	2.384	2.450	70 <sup>+0.262</sup> <sub>+0.100</sub>	8	1.2	0.6	7040	7050		7065	7070	7080						
75	80	75 <sup>0</sup> <sub>-0.046</sub>	80 <sup>+0.030</sup>	2.384	2.450	75 <sup>+0.262</sup> <sub>+0.100</sub>	9.5	1.2	0.6	7540		7560			7580						
80	85	80 <sup>0</sup> <sub>-0.046</sub>	85 <sup>+0.035</sup>	2.384	2.450	80 <sup>+0.267</sup> <sub>+0.100</sub>	9.5	1.4	0.7	8040		8060			8080						
85	90	85 <sup>0</sup> <sub>-0.054</sub>	90 <sup>+0.035</sup>	2.384	2.450	85 <sup>+0.267</sup> <sub>+0.100</sub>	9.5	1.4	0.7	8540		8560			8580						
90	95	90 <sup>0</sup> <sub>-0.054</sub>	95 <sup>+0.035</sup>	2.384	2.450	90 <sup>+0.267</sup> <sub>+0.100</sub>	9.5	1.4	0.7	9040		9060			9080	9090		90100			
100	105	100 <sup>0</sup> <sub>-0.054</sub>	105 <sup>+0.035</sup>	2.384	2.450	100 <sup>+0.267</sup> <sub>+0.100</sub>	9.5	1.4	0.7		10050			10080		10095	100100				
105	110	105 <sup>0</sup> <sub>-0.054</sub>	110 <sup>+0.035</sup>	2.384	2.450	105 <sup>+0.267</sup> <sub>+0.100</sub>	10	1.4	0.7			10560		10580					105110		
110	115	110 <sup>0</sup> <sub>-0.054</sub>	115 <sup>+0.035</sup>	2.384	2.450	110 <sup>+0.267</sup> <sub>+0.100</sub>	10	1.4	0.7			11060		11080					100110		
120	125	120 <sup>0</sup> <sub>-0.054</sub>	125 <sup>+0.040</sup>	2.384	2.450	120 <sup>+0.272</sup> <sub>+0.100</sub>	10	1.6	0.8			12060		12080					120110		
125	130	125 <sup>0</sup> <sub>-0.063</sub>	130 <sup>+0.040</sup>	2.384	2.450	125 <sup>+0.272</sup> <sub>+0.100</sub>	10	1.6	0.8			12560							125110		
130	135	130 <sup>0</sup> <sub>-0.063</sub>	135 <sup>+0.040</sup>	2.384	2.450	130 <sup>+0.280</sup> <sub>+0.130</sub>	10	1.6	0.8			13050	13060		13080			130100			
140	145	140 <sup>0</sup> <sub>-0.063</sub>	145 <sup>+0.040</sup>	2.380	2.435	140 <sup>+0.280</sup> <sub>+0.130</sub>	10	1.6	0.8			14050	14060		14080			140100	150110		
150	155	150 <sup>0</sup> <sub>-0.063</sub>	155 <sup>+0.040</sup>	2.380	2.435	150 <sup>+0.280</sup> <sub>+0.130</sub>	10	1.6	0.8			15050	15060		15080			150100	160110	150120	
160	165	160 <sup>0</sup> <sub>-0.063</sub>	165 <sup>+0.040</sup>	2.380	2.435	160 <sup>+0.280</sup> <sub>+0.130</sub>	10	1.6	0.8			16000	16060		16080			160100	170110	160120	
170	175	170 <sup>0</sup> <sub>-0.063</sub>	175 <sup>+0.040</sup>	2.380	2.435	170 <sup>+0.280</sup> <sub>+0.130</sub>	10	1.6	0.8			17050	17060					170100	180100	170120	
180	185	180 <sup>0</sup> <sub>-0.063</sub>	185 <sup>+0.046</sup>	2.380	2.435	180 <sup>+0.286</sup> <sub>+0.130</sub>	10	1.6	0.8			18050	18060		18080			180100		180120	
190	195	190 <sup>0</sup> <sub>-0.072</sub>	195 <sup>+0.046</sup>	2.380	2.435	190 <sup>+0.286</sup> <sub>+0.130</sub>	10	1.6	0.8			19050	19060		19080			190100		190120	
200	205	200 <sup>0</sup> <sub>-0.072</sub>	205 <sup>+0.046</sup>	2.380	2.435	200 <sup>+0.286</sup> <sub>+0.130</sub>	10	1.6	0.8			20050	20060		20080			200100		200120	
220	225	220 <sup>0</sup> <sub>-0.072</sub>	225 <sup>+0.046</sup>	2.380	2.435	220 <sup>+0.286</sup> <sub>+0.130</sub>	10	1.6	0.8			22050	22060		22080			220100		220120	
240	245	240 <sup>0</sup> <sub>-0.072</sub>	245 <sup>+0.046</sup>	2.380	2.435	240 <sup>+0.286</sup> <sub>+0.130</sub>	10	1.6	0.8			24050	24060		24080			240100		240120	
250	255	250 <sup>0</sup> <sub>-0.072</sub>	255 <sup>+0.052</sup>	2.380	2.435	250 <sup>+0.292</sup> <sub>+0.130</sub>	10	1.6	0.8			25050	25060		25080			250100		250120	
260	265	260 <sup>0</sup> <sub>-0.081</sub>	265 <sup>+0.052</sup>	2.380	2.435	260 <sup>+0.292</sup> <sub>+0.130</sub>	10	1.6	0.8			26050	26060		26080			260100		260120	
280	285	280 <sup>0</sup> <sub>-0.081</sub>	285 <sup>+0.052</sup>	2.380	2.435	280 <sup>+0.292</sup> <sub>+0.130</sub>	10	1.6	0.8			28050	28060		28080			280100		280120	
300	305	300 <sup>0</sup> <sub>-0.081</sub>	305 <sup>+0.052</sup>	2.380	2.435	300 <sup>+0.292</sup> <sub>+0.130</sub>	10	1.6	0.8			30050	30060		30080			300100		300120	

E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)

Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)



# MNB

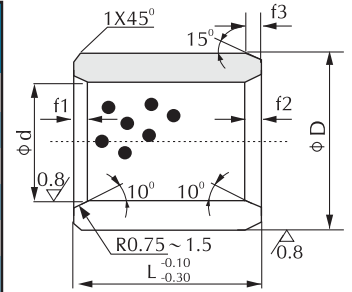
## SOLID LUBRICATING BUSHES



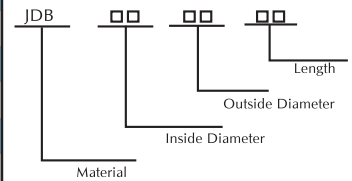
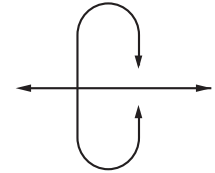
### JDB STANDARD SERIES OF JDB BUSHES

Unit : mm

d (F7)	D (p7)	Axle diameter	f <sub>1</sub>	f <sub>2</sub>	f <sub>3</sub>	L <sup>-0.10</sup> <sub>-0.30</sub>														
						10	12	15	16	20	25	30	35	40	45	50	60	70	80	100
14	+0.034 +0.016	20 <sup>+0.043</sup> <sub>+0.022</sub>	14 <sup>-0.032</sup> <sub>-0.050</sub>	1	1	1	●	●	●	●	●	●								
15	+0.034 +0.016	21 <sup>+0.043</sup> <sub>+0.022</sub>	15 <sup>-0.032</sup> <sub>-0.050</sub>	1	1	1	●	●	●	●	●	●								
16	+0.034 +0.016	22 <sup>+0.043</sup> <sub>+0.022</sub>	16 <sup>-0.032</sup> <sub>-0.050</sub>	1	1	1	●	●	●	●	●	●	●							
18	+0.034 +0.016	24 <sup>+0.043</sup> <sub>+0.022</sub>	18 <sup>-0.032</sup> <sub>-0.050</sub>	1	1	1			●	●	●	●	●	●						
20	+0.041 +0.020	28 <sup>+0.043</sup> <sub>+0.022</sub>	20 <sup>-0.042</sup> <sub>-0.061</sub>	1	1	1			●	●	●	●	●	●	●					
25	+0.041 +0.020	33 <sup>+0.051</sup> <sub>+0.026</sub>	25 <sup>-0.040</sup> <sub>-0.061</sub>	2	2	2				●	●	●	●	●	●	●				
30	+0.041 +0.020	38 <sup>+0.051</sup> <sub>+0.026</sub>	30 <sup>-0.040</sup> <sub>-0.061</sub>	2	2	2					●	●	●	●	●	●	●			
35	+0.050 +0.025	45 <sup>+0.051</sup> <sub>+0.026</sub>	35 <sup>-0.050</sup> <sub>-0.075</sub>	2	2	2					●	●	●	●	●	●	●	●		
40	+0.050 +0.025	50 <sup>+0.051</sup> <sub>+0.026</sub>	40 <sup>-0.050</sup> <sub>-0.075</sub>	2	2	2				●	●	●	●	●	●	●	●	●	●	●
45	+0.050 +0.025	55 <sup>+0.062</sup> <sub>+0.032</sub>	45 <sup>-0.050</sup> <sub>-0.075</sub>	2	2	2						●	●	●	●	●	●	●	●	●
50	+0.050 +0.025	60 <sup>+0.062</sup> <sub>+0.032</sub>	50 <sup>-0.050</sup> <sub>-0.075</sub>	3	3	3						●	●	●	●	●	●	●	●	●
55	+0.060 +0.030	70 <sup>+0.062</sup> <sub>+0.032</sub>	55 <sup>-0.060</sup> <sub>-0.090</sub>	3	3	3							●	●	●	●	●	●	●	●
60	+0.060 +0.030	75 <sup>+0.062</sup> <sub>+0.032</sub>	60 <sup>-0.060</sup> <sub>-0.090</sub>	3	3	3								●	●	●	●	●	●	●
65	+0.060 +0.030	80 <sup>+0.062</sup> <sub>+0.032</sub>	65 <sup>-0.060</sup> <sub>-0.090</sub>	3	3	3									●	●	●	●	●	●
70	+0.060 +0.030	85 <sup>+0.062</sup> <sub>+0.032</sub>	70 <sup>-0.060</sup> <sub>-0.090</sub>	3	3	3										●	●	●	●	●
75	+0.060 +0.030	90 <sup>+0.072</sup> <sub>+0.037</sub>	75 <sup>-0.060</sup> <sub>-0.090</sub>	4	4	4											●	●	●	●
80	+0.060 +0.030	100 <sup>+0.072</sup> <sub>+0.037</sub>	80 <sup>-0.060</sup> <sub>-0.090</sub>	4	4	4												●	●	●
90	+0.071 +0.036	110 <sup>+0.072</sup> <sub>+0.037</sub>	90 <sup>-0.072</sup> <sub>-0.107</sub>	4	4	4													●	●
100	+0.071 +0.036	120 <sup>+0.072</sup> <sub>+0.037</sub>	100 <sup>-0.072</sup> <sub>-0.107</sub>	4	4	4														●
110	+0.071 +0.036	130 <sup>+0.083</sup> <sub>+0.043</sub>	110 <sup>-0.072</sup> <sub>-0.107</sub>	4	4	4														●
120	+0.071 +0.036	140 <sup>+0.083</sup> <sub>+0.043</sub>	120 <sup>-0.072</sup> <sub>-0.107</sub>	5	5	5														●
130	+0.083 +0.043	150 <sup>+0.083</sup> <sub>+0.043</sub>	130 <sup>-0.085</sup> <sub>-0.125</sub>	5	5	5														●
140	+0.083 +0.043	160 <sup>+0.083</sup> <sub>+0.043</sub>	140 <sup>-0.085</sup> <sub>-0.125</sub>	5	5	5														●



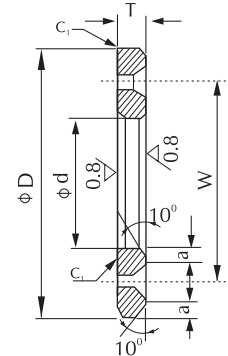
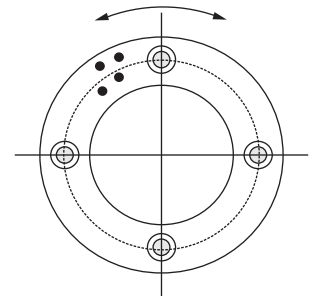
Directions of Motion



Unit : mm

Designations	φd	φD	T <sup>0</sup> <sub>-0.10</sub>	w	Flat Head Screw	No. of Holes	a Chamfer
JTW10	10.2	30	3	20	M3	2	1.5
JTW12	12.2	40	3	28	M3	2	2
JTW13	13.2	40	3	28	M3	2	2
JTW14	14.2	40	3	28	M3	2	2
JTW15	15.2	50	3	35	M3	2	2
JTW16	16.2	50	3	35	M3	2	2
JTW18	18.2	50	3	35	M3	2	2
JTW20	20.2	50	5	35	M5	2	2.5
JTW25	25.2	55	5	40	M5	2	2.5
JTW30	30.2	60	5	45	M5	2	2.5
JTW35	35.2	70	5	50	M6	2	3
JTW40	40.2	80	7	60	M6	2	3
JTW45	45.2	90	7	70	M6	2	4
JTW50	50.3	100	8	85	M6	4	4
JTW55	55.3	110	8	85	M6	4	5
JTW60	60.3	120	8	90	M8	4	5
JTW65	65.3	125	8	95	M8	4	5
JTW70	70.3	130	10	100	M8	4	5
JTW75	75.3	140	10	110	M8	4	5
JTW80	80.3	150	10	120	M8	4	5
JTW90	90.5	170	10	140	M10	4	5
JTW100	100.5	190	10	160	M10	4	5

Directions of Motion



E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)

Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)





# MNB

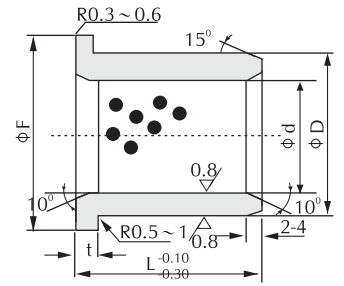
## SOLID LUBRICATING BUSHES



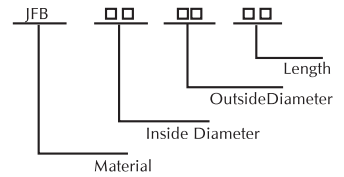
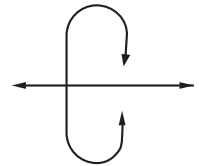
### JDBF STANDARD SERIES OF JDBF FLANGED BUSHES

Unit : mm

d (F7)	D (p7)	F -0.25	Axle diameter	t -0.10	10	15	20	25	30	L <sup>-0.10 -0.30</sup>	35	40	50	60	70	80	100
14	20	27	14	3	●	●	●										
15	21	28	15	3	●	●	●	●	●								
16	22	29	16	3		●	●	●	●								
20	28	40	20	5		●	●	●	●								
25	33	45	25	5		●	●	●	●	●							
30	38	50	30	5		●	●	●	●	●	●						
35	45	60	35	8			●	●	●	●	●	●					
40	50	65	40	8			●	●	●	●	●	●	●				
45	55	70	45	8				●	●	●	●	●	●	●			
50	60	75	50	5					●	●	●	●	●	●			
55	70	80	55	5						●	●	●	●	●	●		
60	75	90	60	7.5							●	●	●	●	●		
65	80	95	65	7.5								●	●	●	●	●	
70	85	105	70	7.5									●	●	●	●	●
75	90	110	75	7.5										●	●	●	●
80	100	120	80	10											●	●	●
90	110	130	90	10												●	●
100	120	150	100	10													●
120	140	170	120	10													



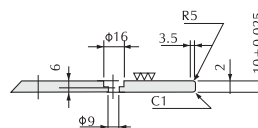
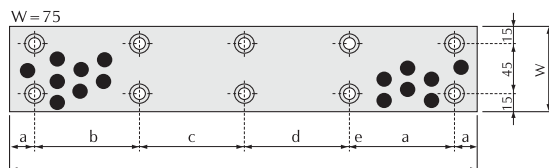
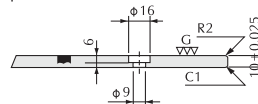
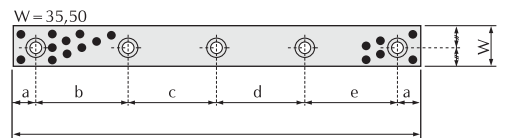
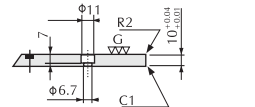
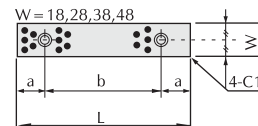
Directions of Motion



### JSP STANDARD SERIES OF JSP SLIDES

Unit : mm

Designations	W	L	A B C D E					No. of Holes
			A	B	C	D	E	
JSP-1875	18	75	15	45				2
JSP-18100	18	100	25	50				2
JSP-18125	18	125	25	75				2
JSP-18150	18	150	25	100				2
JSP-2875	28	75	15	45				2
JSP-28100	28	100	25	50				2
JSP-28125	28	125	25	75				2
JSP-28150	28	150	25	100				2
JSP-35100	35	100	20	60				2
JSP-35150	35	150	20	55	55			3
JSP-35200	35	200	20	55	50	55		4
JSP-35250	35	250	20	70	70	50		4
JSP-35300	35	300	20	65	65	70	65	5
JSP-35350	35	350	20	80	75	75	80	5
JSP-3875	38	75	15	45				2
JSP-38100	38	100	25	50				2
JSP-38125	38	125	25	75				2
JSP-38150	38	150	25	100				2
JSP-4875	48	75	15	45				2
JSP-48100	48	100	25	50				2
JSP-48125	48	125	25	75				2
JSP-48150	48	150	25	100				2
JSP-50100	50	100	20	60				2
JSP-50150	50	150	20	55	55			3
JSP-50200	50	200	20	55	50	55		4
JSP-50250	50	250	20	70	70	50		4
JSP-50300	50	300	20	65	65	70	65	5
JSP-50400	50	400	20	90	75	75	90	5
JSP-75150	75	150	20	110				4
JSP-75200	75	200	20	80	80			6
JSP-75250	75	250	20	105	105			6
JSP-75300	75	300	20	85	90	85		8
JSP-75400	75	400	20	120	120	120		8
JSP-75500	75	500	20	115	115	115	115	10



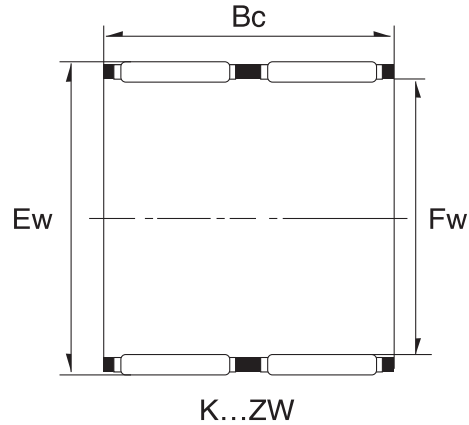
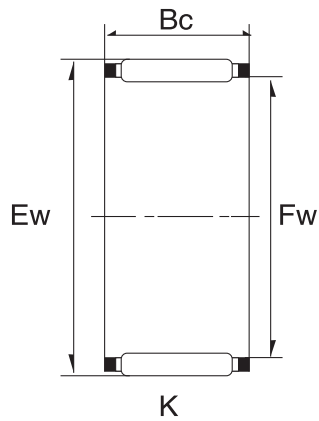
E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)

Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)



# MNB

## K SERIES



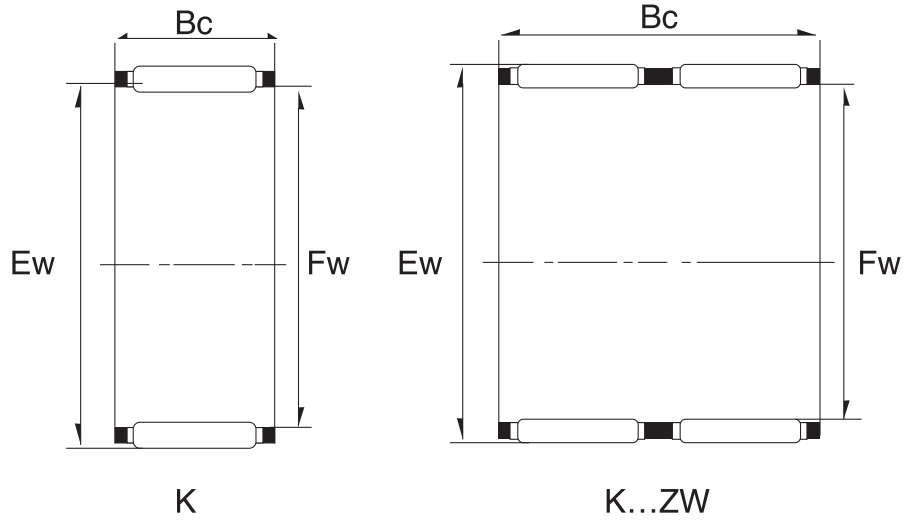
d		Fw	Ew	B0
3	K 3 x 5 x 7TN	3	5	7
4	K 4 x 7 x 8TN	4	7	8
5	K 5 x 8 x 10TN	5	8	10
	K 5 x 8 x 10TN	5	8	10
6	K 6 x 9 x 10TN	6	9	10
8	K 8 x 12 x 8TN	8	12	8
	K 8 x 12 x 8	8	12	8
	K 8 x 11 x 16TN	8	11	16
9	K 9 x 12 x 13FV	9	12	13
10	K 10 x 13 x 10TN	10	13	10
	K 10 x 14 x 10FV	10	14	10
	K 10 x 14 x 10TN	10	14	10
	K 10 x 14 x 13	10	14	13
	K 10 x 14 x 25	10	14	25
12	K 12 x 15 x 10TN	12	15	10
	K 12 x 16 x 10TN	12	16	10
	K 12 x 17 x 10FV	12	17	10
	K 12 x 16 x 12TN	12	16	12
13	K 13 x 18 x 10TN	13	18	10
14	K 14 x 18 x 10FV	14	18	10
	K 14 x 18 x 13	14	18	13
	K 14 x 20 x 10	14	20	10
	K 14 x 18 x 17	14	18	17
15	K 15 x 19 x 10	15	19	10
	K 15 x 20 x 13	15	20	13
	K 15 x 21 x 15	15	21	12
16	K 16 x 20 x 13	16	20	13
	K 16 x 20 x 17	16	20	17
	K 16 x 21 x 10	16	21	10
	K 16 x 22 x 20	16	22	20
17	K 17 x 21 x 10	17	21	10
	K 17 x 21 x 13	17	21	13
	K 17 x 21 x 17	17	21	17
	K 17 x 23 x 20TN	17	23	10

d		Fw	Ew	B0
18	K 18 x 22 x 13	18	22	13
	K 18 x 22 x 17	18	22	17
	K 18 x 24 x 12	18	24	13
	K 18 x 25 x 20	18	24	20
20	K 20 x 24 x 13	20	24	13
	K 20 x 24 x 17	20	24	17
	K 20 x 26 x 13	20	26	13
	K 20 x 28 x 20	20	28	20
	K 20 x 26 x 17	20	26	17
	K 20 x 30 x 31.8TN	20	30	61.8
	K 20 x 27 x 11TN	20	27	11
22	K 22 x 26 x 10	22	26	10
	K 22 x 26 x 17	22	26	17
	K 22 x 26 x 17TN	22	26	17
23	K 23 x 27 x 14.8	23	27	14.8
24	K 24 x 28 x 13	24	28	13
	K 24 x 28 x 17	24	28	17
25	K 25 x 29 x 13	25	29	13
	K 25 x 30 x 20TN	25	30	20
	K 25 x 30 x 12.8TN	25	30	12.8
	K 25 x 30 x 27ZW	25	30	27
	K 25 x 32 x 16	25	32	16
28	K 27 x 33 x 13	28	33	13
	K 28 x 33 x 17	28	33	17
	K 28 x 35 x 17TN	28	35	17
30	K 30 x 35 x 13	30	35	13
	K 30 x 35 x 27	30	35	27
	K 35 x 40 x 33TN	35	40	33
32	K 32 x 37 x 17	32	37	17
	K 32 x 37 x 25TN	32	37	25
	K 32 x 37 x 20TN	32	37	20
35	K 35 x 40 x 13	35	40	13
	K 35 x 40 x 27	35	40	27
	K 35 x 40 x 24TN	35	40	24



# MNB

## K / K - ZW SERIES

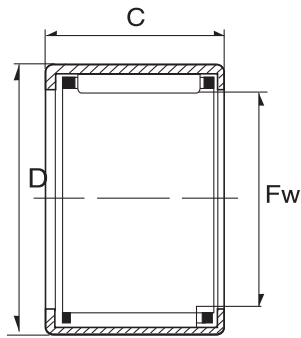


d		Fw	Ew	B0
40	K 40 45 17	40	45	17
	K 40 45 27	40	45	27
42	K 42 47 13	42	47	13
	K 42 50 20	42	50	20
45	K 45 50 17	45	50	17
	K 45 50 27	45	50	27
47	K 47 52 17	47	52	17
	K 47 53 25	47	53	25
55	K 55 60 20	55	60	20
	K 55 62 18	55	62	18
	K 66 60 27	55	60	27
60	K 60 65 30	60	65	30
	K 60 68 20	60	68	20
65	K 65 70 20	65	70	20
	K 65 70 30	65	70	30
	K 65 73 30	65	73	30
70	K 70 78 23	70	78	23
75	K 75 81 30	75	81	30
80	K 80 88 30	80	88	30
	K 80 88 40ZW	80	88	40
90	K 90 97 20	90	97	20
	K 90 98 30	90	98	30
100	K 100 107 21	100	107	21

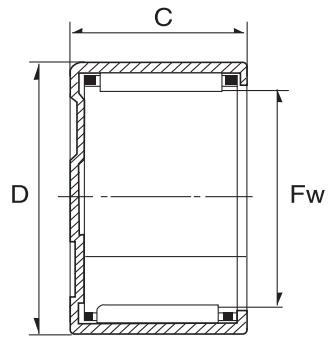


# MNB

## HK / BK SERIES



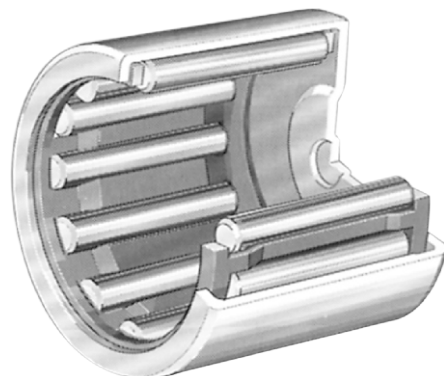
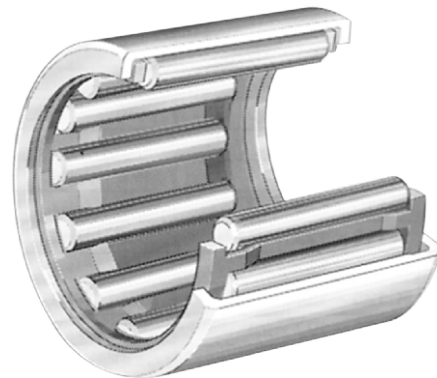
HK



BK

d	HK	BK	Fw	D	C
3	HK 0306TN	BK 306 TN	3	6.5	6
4	HK 0408TN	---	4	8	8
	HK 0408H	---	4	8	8
5	HK 0509	---	5	8	9
6	HK 0609	BK 0609	6	10	9
7	HK 0709	BK 0709	7	11	9
8	HK 0810	BK 0810	8	12	$\frac{10}{12}$
9	HK 0910	---	9	13	$\frac{10}{12}$
	HK 0912	BK 0912	9	13	12
10	HK 1010	---	10	14	10
	HK 1012	BK 1012	10	14	12
	HK 1015	---	10	14	15
12	HK 1210	---	12	16	10
	HK 1212	BK 1212	12	18	12
13	HK 1312	---	13	19	12
14	HK 1412	---	14	20	$\frac{12}{16}$
15	HK 1512	BK 1512	15	21	$\frac{12}{16}$
	HK 1522	---	15	21	22
16	HK 1612	BK 1616	16	22	$\frac{12}{16}$
	HK 1622	---	16	22	22
18	HK 1812	BK 1812	18	24	$\frac{12}{16}$
20	HK 2012	---	20	26	12
	HK 2016	BK 2016	20	26	$\frac{16}{20}$
22	HK 2216	BK 2216	22	28	16
	HK 2220	---	22	28	20
25	HK 2516	---	25	32	16
	HK 2520	BK 2520	25	32	20
	HK 2518	---	25	32	38
28	HK 2816	BK 2816	28	35	16
	HK 2820	---	28	35	20
30	HK 3012	---	30	37	12
	HK 3020	BK 3020	30	37	20
	HK 3026	BK 3026	30	37	26
	HK 3018	---	30	37	38

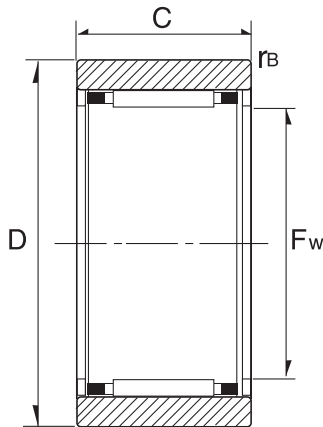
d	HK	BK	Fw	D	C
35	HK 3512	---	35	42	12
	HK 3516	BK 3516	35	42	16
	HK 3520	---	35	42	60
40	HK 4012	---	40	47	12
	HK 4020	BK 4020	40	47	20
45	HK 4516	BK 4516	45	52	16
	HK 4520	---	45	52	20
50	HK 5020	---	50	58	20
	HK 5025	BK 5025	50	58	25
60	HK 6012	---	60	68	12
	HK 6020	---	60	68	20



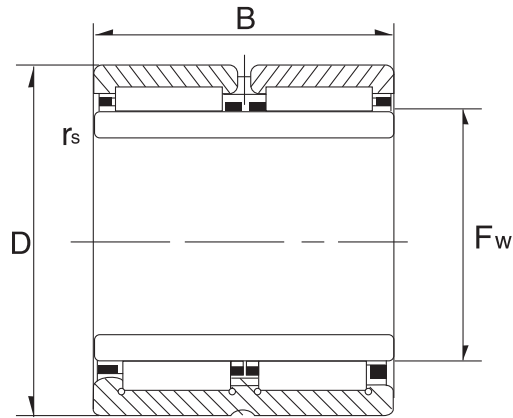


# MNB

## NK / NKS / RNA SERIES



NK ( $F_w \leq 10\text{mm}$ )  
NKS ( $F_w \leq 10\text{mm}$ )



NA 69 ( $d > 32\text{mm}$ )

d	NK	NKS	RNA 49	RNA 69	g	Fw	D	C	r
5	NK 5/12TN	—	—	—	3.3	5	10	10	0.15
6	NK 6/10TN	—	—	—	4.9	6	12	10	0.15
7	NK 7/10TN	—	—	—	7	7	14	10	0.3
8	NK 8/12TN	—	—	—	8.9	8	15	12	0.3
	—	NKS 8TN	—	—	11.3	8	16	13	0.3
9	NK 9/12TN	—	—	—	10.5	9	16	12	0.3
10	NK 10/12	—	—	—	10.2	10	17	12	0.3
12	NK 12/12	—	—	—	13.4	12	19	12	0.3
14	NK 14/20	—	—	—	27	17	22	20	0.3
	—	—	RNA 4900	—	17	14	22	13	0.3
15	NK 5/16	—	—	—	22.0	15	23	12	0.3
	—	NKS 15TN	—	—	32	15	26	16	0.3
16	NK 16/16	—	—	—	23	16	24	16	0.3
	NK 16/20	—	—	—	29	16	24	20	0.3
	—	—	—	—	18	16	24	13	0.3
	—	—	RNA 4901	—	31.5	16	24	22	0.3
17	NK 17/20	—	—	RNA 6901	30	17	25	20	0.3
18	NK 18/16	—	—	—	25	18	26	16	0.3
19	NK 19/16	—	—	—	26.7	19	27	16	0.3
	NK 19/20	—	—	—	32	19	27	20	0.3
20	NK 20/16	—	—	—	28	20	28	16	0.3



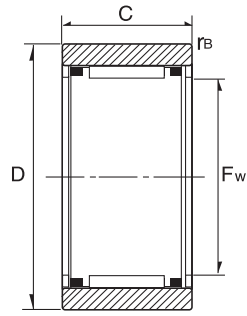


# MNB

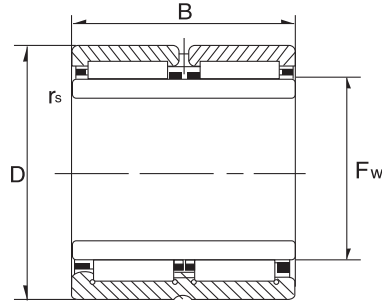
## NK / NKS / RNA SERIES



### NK SERIES



NK ( $F_w \leq 10\text{mm}$ )  
NKS ( $F_w \leq 10\text{mm}$ )



NA 69 ( $d \geq 32\text{mm}$ )

Fw	PART NO.			D	C
5	NK 5/10			10	10
5	NK 5/12			10	12
6	NK 6/12			12	12
7	NK 7/10			14	10
7	NK 7/12			14	12
8	NK 8/12			15	12
8	NK 8/16			15	16
9	NK 9/12			16	12
9	NK 9/16			16	16
10	NK 10/12			17	12
10	NK 10/16			17	16
12	NK 12/12			19	12
12	NK 12/16			19	16
14	NK 14/16			22	16
14	NK 14/20			22	20
14		RNA 4900		22	13
15	NK 15/16			23	16
15	NK 15/20			23	20
16	NK 16/16			24	16
16	NK 16/20			24	20
16		RNA 4901		24	13
16			RNA 6901	24	22
17	NK 17/16			25	16
17	NK 17/20			25	20
18	NK 18/16			26	16
18	NK 18/20			26	20

Fw	PART NO.			D	C	
19	NK 19/16			27	16	
19	NK 19/20			27	20	
20	NK 20/16			28	16	
20	NK 20/20			28	20	
20			RNA 4902	28	13	
20				RNA 6902	28	23
20		NKS 20		32	20	
21	NK 21/16			29	16	
21	NK 21/20			29	20	
22	NK 22/16			30	16	
22	NK 22/20			30	20	
22			RNA 4903	30	13	
22				RNA 6903	30	23
22		NKS 22		35	20	
24	NK 24/16			32	16	
24	NK 24/20			32	20	
24		NKS 24		37	20	
25	NK 25/16			33	16	
25	NK 25/20			33	20	
25			RNA 4904	37	17	
25				RNA 6904	37	30
25		NKS 25		38	20	
26	NK 26/16			34	16	
26	NK 26/20			34	20	
28	NK 28/20			37	20	
28	NK 28/30			37	30	

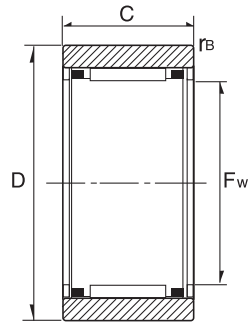


# MNBN

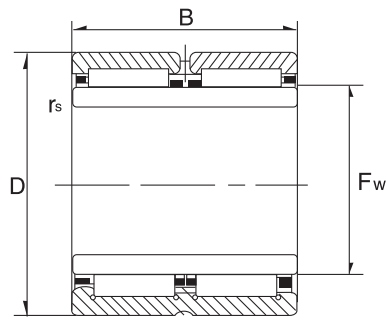
## NK / NKS / RNA SERIES



### NK SERIES



NK ( $F_w \leq 10\text{mm}$ )  
NKS ( $F_w \leq 10\text{mm}$ )



NA 69 ( $d \geq 32\text{mm}$ )

Fw	PART NO.			D	C
28		RNA 49/22		39	17
28			RNA 69/22	39	30
28		NKS 28		42	20
29	NK 29/20			38	20
29	NK 29/30			38	30
30	NK 30/20			40	20
30	NK 30/30			40	30
30		RNA 4905		42	17
30			RNA 6905	42	30
30		NKS 30		45	22
32	NK 32/20			42	20
32	NK 32/30			42	30
32		RNA 49/28		45	17
32			RNA 69/28	45	30
32		NKS 32		47	22
35	NK 35/20			45	20
35	NK 35/30			45	30
35		RNA 4906		47	17
35			RNA 6906	47	30
35		NKS 35		50	22
37	NK 37/20			47	20
37	NK 37/30			47	30
37		NKS 37		52	22
38	NK 38/20			48	20
38	NK 38/30			48	30

Fw	PART NO.			D	C
40	NK 40/20			50	20
40	NK 40/30			50	30
40		RNA 49/32		52	20
40			RNA 69/32	52	36
40		NKS 40		55	22
42	NK 42/20			52	20
42	NK 42/30			52	30
42		RNA 4907		55	20
42			RNA 6907	55	36
43	NK 43/20			53	20
43	NK 43/30			53	30
43		NKS 43		58	22
45	NK 45/20			55	20
45	NK 45/30			55	30
45		NKS 45		60	22
47	NK 47/20			57	20
47	NK 47/30			57	30
48		RNA 4908		62	22
48			RNA 6908	62	40
50	NK 50/25			62	25
50	NK 50/35			62	35
50		NKS 50		65	22
52		RNA 4909		68	22
52			RNA 6909	68	40
55	NK 55/25			68	25

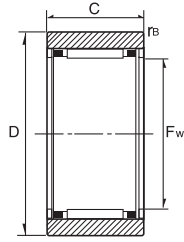


# MNB

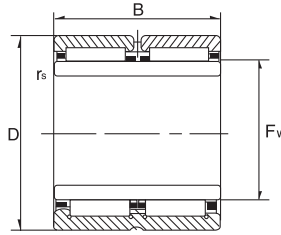
## NK / NKS / RNA SERIES



### NK SERIES



NK (Fw ≤ 10mm)  
NKS (Fw ≤ 10mm)



NA 69 (d > 32mm)

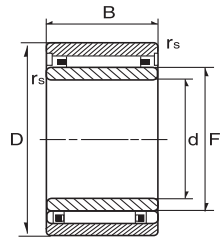
Fw	PART NO.			D	C
55	NK 55/35			68	35
55		NKS 55		72	22
58			RNA 4910	72	22
58			RNA 6910	72	40
60	NK 60/25			72	25
60	NK 60/35			72	35
60		NKS 60		80	28
63			RNA 4911	80	25
63			RNA 6911	80	45
65	NK 65/25			78	25
65	NK 65/35			78	35
65		NKS 65		85	28
68	NK 68/25			82	25
68	NK 68/35			82	35
68			RNA 4912	85	25
68			RNA 6912	85	45
70	NK 70/25			85	25
70	NK 70/35			85	35
70		NKS 70		90	28
72			RNA 4913	90	25
72			RNA 6913	90	45
73	NK 73/25			90	25
73	NK 73/35			90	35
75	NK 75/25			92	25
75	NK 75/35			92	35
75		NKS 75		95	28
80	NK 80/25			95	25
80	NK 80/35			95	35

Fw	PART NO.			D	C
80			RNA 4914	100	30
80			RNA 6914	100	54
85	NK 85/25			105	25
85	NK 85/35			105	35
85			RNA 4915	105	30
85			RNA 6915	105	54
90	NK 90/25			110	25
90	NK 90/35			110	35
90			RNA 4916	110	30
90			RNA 6916	110	54
95	NK 95/26			115	26
95	NK 95/36			115	36
100	NK 100/26			120	26
100	NK 100/36			120	36
100			RNA 4917	120	35
100			RNA 6917	120	63
105	NK 105/26			125	26
105	NK 105/36			125	36
105			RNA 4918	125	35
105			RNA 6918	125	63
110	NK 110/30			130	30
110	NK 110/40			130	40
110			RNA 4919	130	35
110			RNA 6919	130	63
115			RNA 4920	140	40

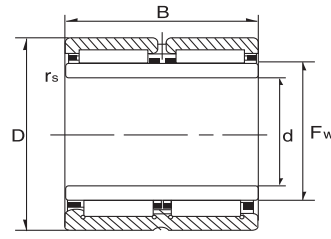


# MNB

## NKI / NKIS / NA SERIES



NKI.NKIS (d ≤ 7mm)



NA 69 (d > 32mm)

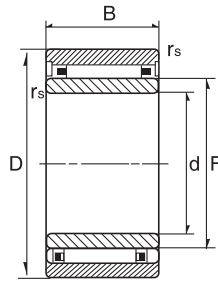
d	PART NO.			F	D	B
5	NKI	5/12		8	15	12
5	NKI	5/16		8	15	16
6	NKI	6/12		9	16	12
6	NKI	6/16		9	16	16
7	NKI	7/12		10	17	12
7	NKI	7/16		10	17	16
9	NKI	9/12		12	19	12
9	NKI	9/16		12	19	16
10	NKI	10/16		14	22	16
10	NKI	10/20		14	22	20
10		NA	4900	14	22	13
12	NKI	12/16		16	24	16
12	NKI	12/20		16	24	20
12		NA	4901	16	24	13
12		NA	6901	16	24	22
15	NKI	15/16		19	27	16
15	NKI	15/20		19	27	20
15		NA	4902	20	28	13
15		NA	6902	20	28	23
15		NKIS	15	22	35	20
17	NKI	17/16		21	29	16
17	NKI	17/20		21	29	20
17		NA	4903	22	30	13
17		NA	6903	22	30	23
17		NKIS	17	24	37	20
20	NKI	20/16		24	32	16
20	NKI	20/20		24	32	20
20		NA	4904	25	37	17
20		NA	6904	25	37	30
20		NKIS	20	28	42	20
22	NKI	22/16		26	34	16

d	PART NO.			F	D	B
22	NKI	22/20		26	34	20
22		NA	49/22	28	39	17
22		NA	69/22	28	39	30
25	NKI	25/20		29	38	20
25	NKI	25/30		29	38	30
25		NA	4905	30	42	17
25		NA	6905	30	42	30
25		NKIS	25	32	47	22
28	NKI	28/20		32	42	20
28	NKI	28/30		32	42	30
28		NA	49/28	32	45	17
28		NA	69/28	32	45	30
30	NKI	30/20		35	45	20
30	NKI	30/30		35	45	30
30		NA	4906	35	47	17
30		NA	6906	35	47	30
30		NKIS	30	37	52	22
32	NKI	32/20		37	47	20
32	NKI	32/30		37	47	30
32		NA	49/32	40	52	20
32		NA	69/32	40	52	36
35	NKI	35/20		40	50	20
35	NKI	35/30		40	50	30
35		NA	4907	42	55	20
35		NA	6907	42	55	36
35		NKIS	35	43	58	22
38	NKI	38/20		43	53	20
38	NKI	38/30		43	53	30
40	NKI	40/20		45	55	20
40	NKI	40/30		45	55	30

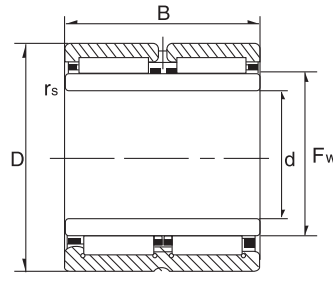


# MNB

## NKI / NKIS / NA SERIES



NKI.NKIS ( $d \leq 7\text{mm}$ )



NA 69 ( $d > 32\text{mm}$ )

d	PART NO.				F	D	B
40	NKI 42/20				47	57	20
40	NKI 42/30				47	57	30
40			NA 4908		48	62	22
40				NA 6908	48	62	40
40		NKIS 40			50	65	22
45	NKI 45/25				50	62	25
45	NKI 45/35				50	62	35
45			NA 4909		52	68	22
45				NA 6909	52	68	40
45		NKIS 45			55	72	22
50	NKI 50/25				55	68	25
50	NKI 50/35				55	68	35
50			NA 4910		58	72	22
50				NA 6910	58	72	40
50		NKIS 50			60	80	28
55	NKI 55/25				60	72	25
55	NKI 55/35				60	72	35
55			NA 4911		63	80	25
55				NA 6911	63	80	45
55					65	85	28
60	NKI 60/25	NKIS 55			68	82	25
60	NKI 60/35				68	82	35
60			NA 4912		68	85	25
60				NA 6912	68	85	45
60		NKIS 70			70	90	28
65	NKI 65/35				73	90	35
65			NA 4913		72	90	25
65				NA 6913	72	90	45
65		NKIS 65			75	95	28

d	PART NO.				F	D	B
70	NKI 70/25				80	95	25
70	NKI 70/35				80	95	35
70			NA 4914		80	100	30
70				NA 6914	80	100	54
75	NKI 75/25				85	105	25
75	NKI 75/35				85	105	35
75			NA 4915		85	105	30
75				NA 6915	85	105	54
80	NKI 80/25				90	110	25
80	NKI 80/35				90	110	35
80			NA 4916		90	110	30
80				NA 6916	90	110	54
85	NKI 85/26				95	115	26
85	NKI 85/36				95	115	36
85			NA 4917		100	120	35
85				NA 6917	100	120	63
90	NKI 90/26				100	120	26
90	NKI 90/36				100	120	36
90			NA 4918		105	125	35
90				NA 6918	105	125	63
95	NKI 95/26				105	125	26
95	NKI 95/36				105	125	36
95			NA 4919		110	130	35
95				NA 6919	110	130	63
100	NKI 100/30				110	130	30
100	NKI 100/40				110	130	40
100			NA 4920		115	140	40

E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)

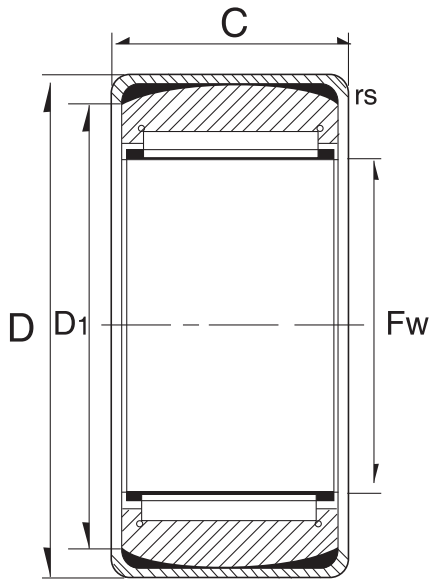
Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)





# MNBB

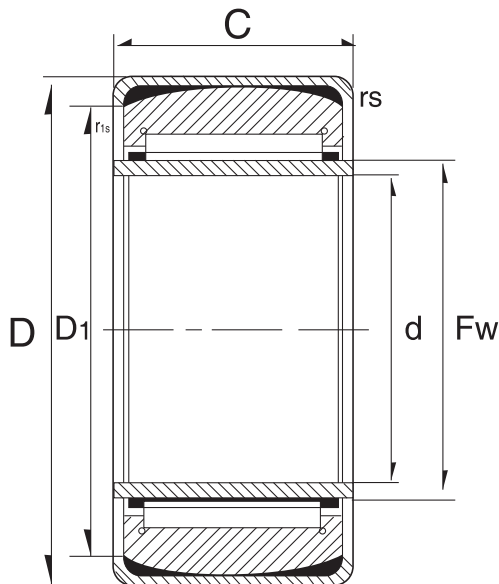
## RPNA / PNA SERIES



RPNA

RPNA	g	FW	D	C	D1
RPNA 15/23	35	15	28	12	24.5
RPNA 18/32	54	18	32	16	27
RPNA 20/35	67	20	35		30.5
RPNA 25/42	111	25	42	20	36.5
RPNA 28/44	128	28	44		38.5
RPNA 30/47	130	30	47		42
RPNA 35/52	141	35	52		47.5
RPNA 40/55	149	40	55		50.5
RPNA 45/62	184	45	62		58

## PNA SERIES



PNA

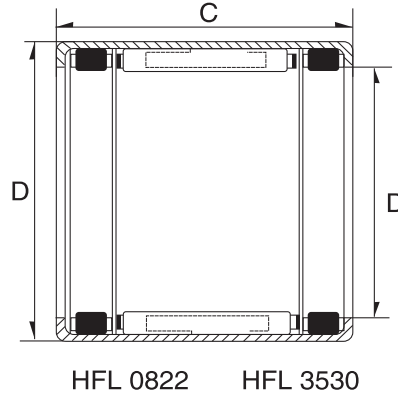
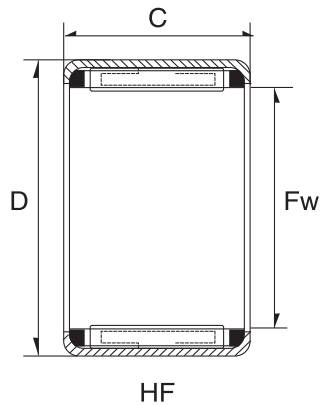
PNA	g	FW	D	C	D1
PNA 12/28	40	12	28	12	24.5
PNA 15/32	65	15	32	16	27
PNA 17/35	77	17	35		30.5
PNA 20/42	141	20	42	20	36.5
PNA 22/44	152	22	44		38.5
PNA 25/47	163	25	47		42
PNA 30/52	190	30	52		47.5
PNA 35/55	184	35	55		50.5
PNA 40/62	239	40	62		58



# MNB



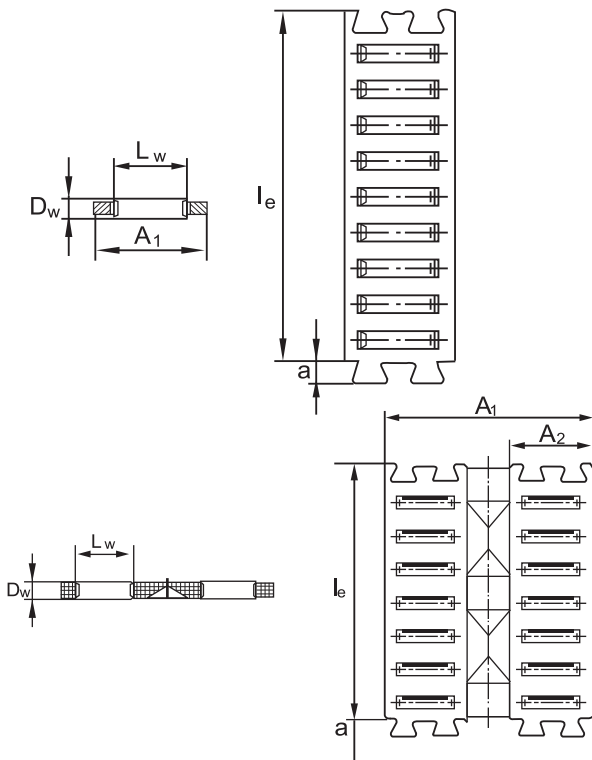
## HF/HFL/FF/ FF - ZW SERIES



d	HF	Fw	D	C
4	HF 0406	4	8	6
6	HF 0612	6	10	12
8	HF 0812	8	12	12
10	HF 1012	10	14	12
12	HF 1216	12	18	16
14	HF 1416	14	20	16
16	HF 1616	16	22	16
18	HF 1816	18	24	16
20	HF 2016	20	26	15
25	HF 2520	25	32	20
30	HF 3020	30	37	20
35	HF 3520	35	42	20

d	HFL	Fw	D	C
8	HFL 0822	8	12	22
10	HFL 1022	10	14	22
12	HFL 1226	12	18	26
14	HFL 1426	14	20	26
16	HFL 1626	16	22	26
18	HFL 1826	18	24	26
20	HFL 2026	20	26	26
25	HFL 2530	25	32	30
30	HFL 3030	30	37	30
35	HFL 3530	35	42	30

## FF SERIES



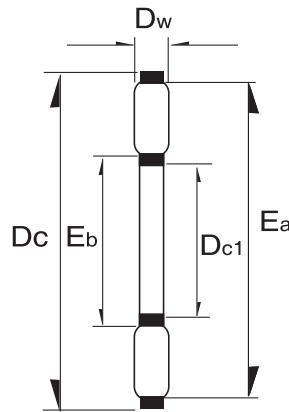
	A1	Dw	Lw	A	Le	Ze
FF 2010	10	2	6.8	2	32	10.3
FF 2515	15	2.5	9.8	2.5	45	15.3
FF 3020	20	3	13.8	3	60	20.4
FF 3525	25	3.5	17.8	3	75	25.4

	A1	A2	Dw	Lw	A	Le	Ze	Ca	Ca1
FF 2025 ZW	25	10	2	6.8	2	32	7	25.4	22
FF 2535 ZW	35	15	2.5	9.8	2.4	45	8	35.5	30
FF 3045 ZW	45	20	3	13.8	3	60	9	45.5	39
FF 3555 ZW	55	25	3.5	17.8	3.2	75	10	55.5	48



# MNB

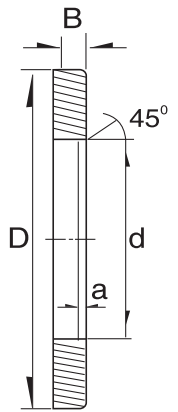
## AXK / AS SERIES



AXK



AS

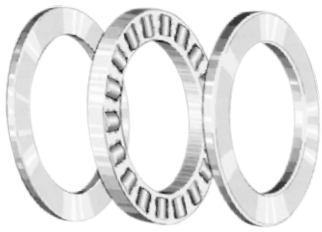


LS

AXK	AS	LS	Dc1	Dc	Dw	d	D	B	B1	
AXK 0614 TN	AS 0614	----	6	14	2	6	14	2.75	0.3	
AXK 0619 TN	AS 0619	LS 0619		19			19			
AXK 0821 TN	AS 0821	LS 0821	8	21		8	21			
AXK 1024	AS 1024	LS 1024	10	24		10	24			
AXK 1226	AS 1226	LS 1226	12	26		12	26			
AXK 1528	AS 1528	LS 1528	15	28		15	28			
AXK 1730	AS 1730	LS 1730	17	30		17	30			
AXK 2035	AS 2035	LS 2035	20	35		20	35			
AXK 2542	AS 2542	LS 2542	25	42		25	42			3
AXK 304T	AS 304T	LS 304T	30	47		30	47			3.5
AXK 3552	AS 3552	LS 3552	35	52	35	52				
AXK 4060	AS 4060	LS 4060	40	60	3	40	60	4		
AXK 4565	AS 4565	LS 4565	45	65		45	65			
AXK 5070	AS 5070	LS 5070	50	70		50	70	5		
AXK 5578	AS 5578	LS 5578	55	78		55	78	4.75		
AXK 6085	AS 6085	LS 6085	60	85		60	85			
AXK 6590	AS 6590	LS 6590	65	90		65	90	5.25		
AXK 7095	AS 7095	LS 7095	70	95	4	70	95	1		
AXK 75100	AS 75100	LS 75100	75	1100		75	1100		5.75	
AXK 80105	AS 80105	LS 80105	85	105		85	105		6.5	
AXK 85115	AS 85115	LS 85115	85	115		85	115			
AXK 90120	AS 90120	LS 90120	90	120		90	120		7	
AXK 100135	AS 100135	LS 100135	100	135		100	135			
AXK 110145	AS 110145	LS 110145	110	145	5	110	145	9.5		
AXK 120155	AS 120155	LS 120155	120	155		120	155			
AXK 130170	AS 130170	LS 130170	130	170		130	170		9	
AXK 140180	AS 140180	LS 140180	140	180		140	180		9.5	
AXK 150190	AS 150190	LS 150190	150	190		150	190			
AXK 160200	AS 160200	LS 160200	160	200		160	200			

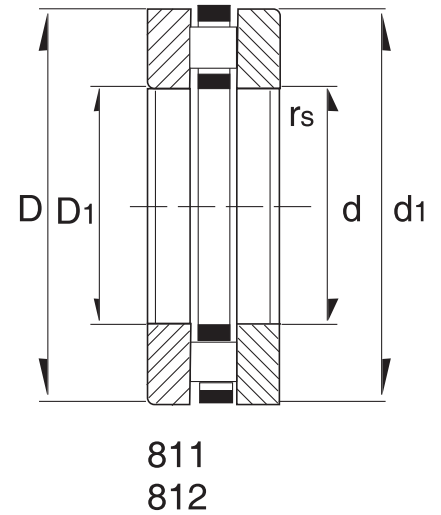
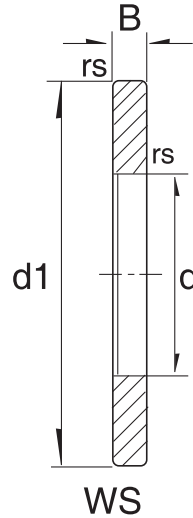
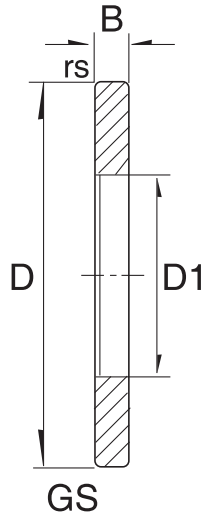
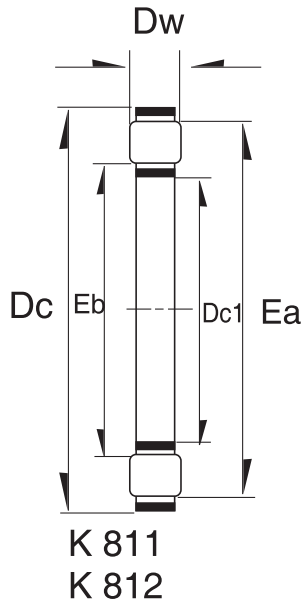
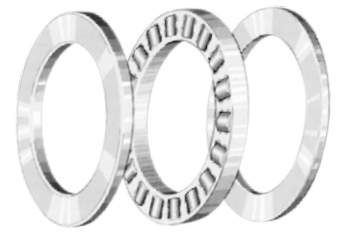
E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)

Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)

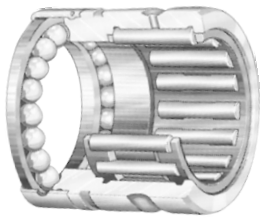


# MN B

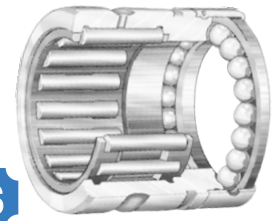
## NEEDLE THRUST BEARING



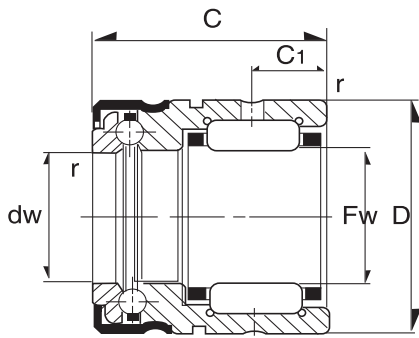
811	812	WS	GS	Dc1	Dc	Dw	d1	D1	B
81102 TN	-----	WS 81102	GS 81102	15	28	3.5	28	16	2.75
81103 TN	-----	WS 81103	GS 81103	17	30		30	18	
81104 TN	-----	WS 81104	GS 81104	20	35	4.5	35	21	
81105 TN	-----	WS 81105	GS 81105	25	42	5	42	26	3
81106 TN	-----	WS 81106	GS 81106	30	47		47	32	
-----	K81206TN	WS 81106	GS 81106		52	7.5	52	37	4.25
81107 TN	-----	WS 81107	GS 81107	35	5	62	62		3.5
-----	K81207TN	WS 81107	GS 81107		62			7.5	5.25
81108 TN	-----	WS 81108	GS 81108	40	60	6	60	42	3.5
-----	K81206TN	WS 81108	GS 81108		68	9		68	5
81109 TN	-----	WS 81109	GS 81109	45	65	6	65	47	4
81110 TN	-----	WS 81110	GS 81110	50	70		70	52	
-----	K81210	WS 81210	GS 81210		78	9	78		6.5
81111 TN	-----	WS 81111	GS 81111	55	6	90	90	57	5
-----	K81211TN	WS 81211	GS 81211					90	7
-----	K81212TN	WS 81212	GS 81212	60	95	11	95	62	7.5
-----	K81214TN	WS 81214	GS 81214	70	105		105	72	8
-----	K81215TN	WS 81215	GS 81215	75	110		110	77	



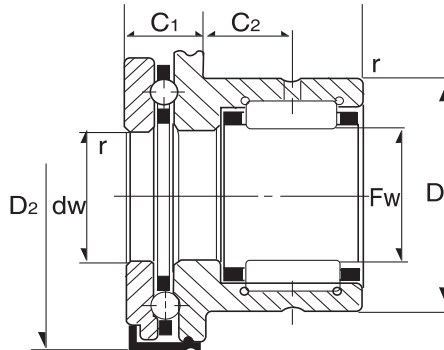
# MNB



## NX / NX-Z / NKX / NKX-Z SERIES



NX...Z



NKX...Z

NX	NX...Z	NKX	NKX...Z	g	Fw	D	D2	C	C1	C2	dw
NX 7TN	NX 7 ZTN	—	—	16	7	14	—	18	4.7	—	7
NX 10	NX 10Z	NKX 10Z	—	26.5	10	19	—	18	4.7	—	10
NX 12	NX 12Z	NKX 12Z	—	29.5	12	21	—	18	4.7	—	12
NX 15	NX 15Z	NKX 15Z	—	49.8	15	24	—	28	8	—	15
NX 17	NX 17Z	NKX 17Z	—	55	17	26	—	28	8	—	17
NX 20	NX 20Z	NKX 20Z	—	70	20	30	—	28	8	—	20
NX 25	NX 25Z	NKX 25Z	—	120	25	37	—	30	8	—	25
NX 30	NX 30Z	NKX 30Z	—	135	30	42	—	30	10	—	30
NX 35	NX 35Z	NKX 35Z	—	167	35	47	—	30	109	—	35
—	—	NKX 10TN	NX 10ZTN	36	10	19	25.2	23	9	6.5	10
—	—	NKX 12	NX 12Z	40.5	12	21	27.2	23	9	6.5	12
—	—	NKX 15	NX 15Z	48	15	24	29.2	23	9	6.5	15
—	—	NKX 17	NX 17Z	57	17	26	31.2	25	9	8	17
—	—	NKX 20	NX 20Z	92	20	30	36.2	30	10	10.5	20
—	—	NKX 25	NX 25Z	133	25	37	43.2	30	11	9.5	25
—	—	NKX 30	NX 30Z	150	30	42	48.2	30	11	9.5	30
—	—	NKX 35	NX 35Z	171	35	47	53.2	30	12	9	35
—	—	NKX 40	NX 40Z	212	40	52	61.2	32	13	10	40
—	—	NKX 45	NX 45Z	270	45	58	66.5	32	14	9	45
—	—	NKX 50	NX 50Z	310	50	62	71.5	35	14	10	50
—	—	NKX 60	NX 60Z	390	60	72	86.5	40	17	12	60
—	—	NKX 70	NX 70Z	530	70	85	96.5	40	18	11	70

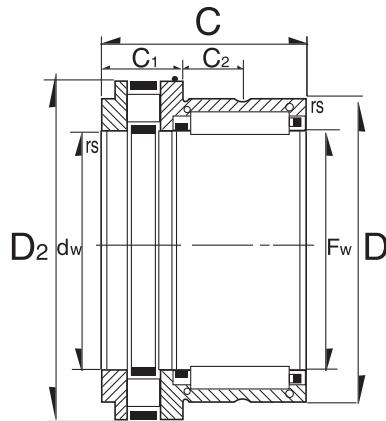




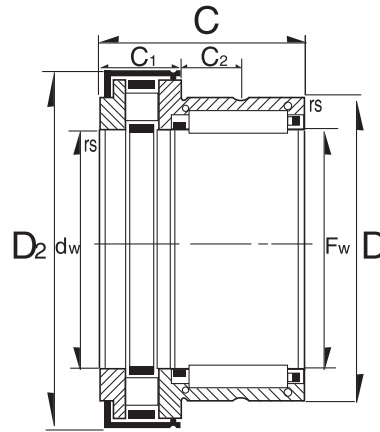
# MNB



## NKXR / NKXR - Z / ZARN SERIES



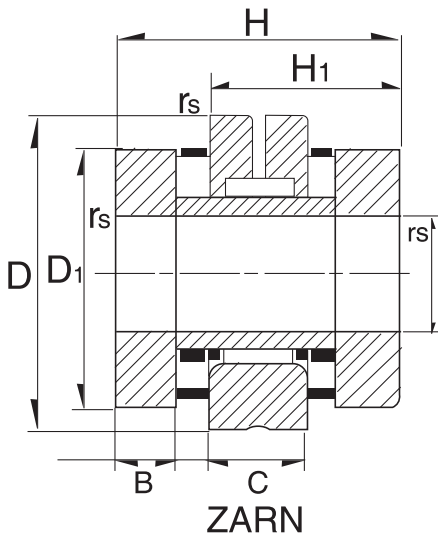
NKXR



NKXR...Z

NKXR	NKXR...Z	g	D	Fw	D1	D2	C	C1	C2	dw
NKXR 15	NKXR 15Z	44	24	15	28	29.2	23	9	6.5	15
NKXR 17	NKXR 17Z	52	26	17	30	31.2	25		8	17
NKXR 20	NKXR 20Z	83	30	20	35	36.2	30	10	10.5	20
NKXR 25	NKXR 25Z	124	37	25	42	43.2		11	9.5	25
NKXR 30	NKXR 30Z	139	62	30	47	48.2				30
NKXR 35	NKXR 35Z	163	47	35	52	53.2	32	12	9	35
NKXR 40	NKXR 40Z	211	52	40	60	61.2		13	10	40
NKXR 45	NKXR 45Z	257	58	45	65	66.5				14
NKXR 50	NKXR 50Z	272	62	50	70	71.5	35	10	50	

## ZARN SERIES

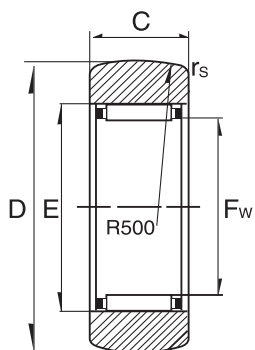


ZARN	g	D	D1	d	C	B	H	H1
ZARN 1545TN	0.37	45	35	45	16	7.5	40	28
ZARN 1747TN	0.4	47	38	17		9	43	29.5
ZARN 2052TN	0.45	52	42	20		46	31	
ZARN 2557TN	0.56	57	47	25	20	10	50	35
ZARN 3062TN	0.65	62	52	30				
ZARN 3570TN	0.84	70	60	35		11	54	37
ZARN 4075TN	0.95	75	65	40	25	11.5	60	42.5
ZARN 4580TN	1.18	80	70	45				
ZARN 5090TN	1.5	90	78	50				

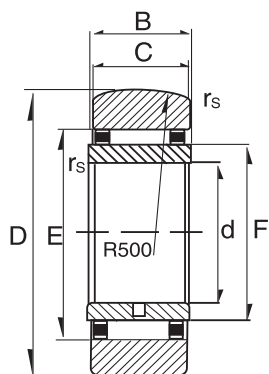


# MNBB

## RSTO / STO SERIES



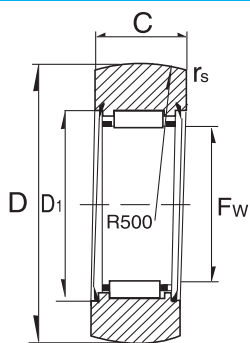
RSTO



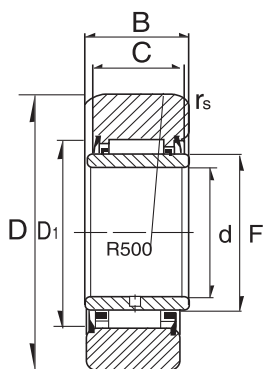
STO

	RSTO		STO		g		D	d	C	B	Fw	E
	RSTO	5TN	STO	5TN	9	-	16	-	7.8	-	7	10
	RSTO	6TN	STO	6TN	13	18	19	6	9.8	10	10	13
	RSTO	8TN	STO	8TN	22	27	24	8			12	15
	RSTO	10	STO	10	41	47	30	10			14	20
	RSTO	12	STO	12	50	58	32	12	11.8	12	16	22
	RSTO	15	STO	15	51	64	35	15			20	26
	RSTO	17	STO	17	89	108	40	17			22	29
	RSTO	20	STO	20	132	155	47	20	15.8	16	25	32
	RSTO	25	STO	25	153	180	52	25			30	37
	RSTO	30	STO	30	260	310	62	30			38	46
	RSTO	35	STO	35	380	445	72	35	19.8	20	42	50
	RSTO	40	STO	40	427	540	80	40			50	58
	RSTO	45	STO	45	457	580	85	45			55	63
	RSTO	50	STO	50	486	620	90	50			60	68

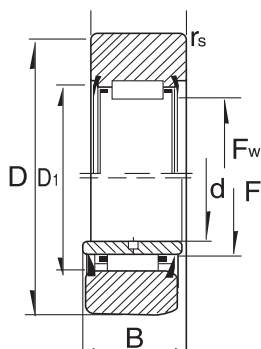
### NA 22..2RS SERIES



RNA 22...2RS



NA 22...2RS

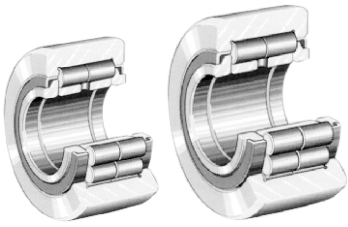


NA 22...2RS SL

	RNA22...2RS	NA22...2RS	g		D	d	C	B	Fw
	RNA22/6. 2RS	NA22/6. 2RS	18.5	21	19	6	11.8	12	10
	RNA22/8. 2RS	NA22/8. 2RS	30	36	24	8			12
	RNA2200. 2RS	NA2200. 2RS	54	62	30	10			14
	RNA2201. 2RS	NA2201. 2RS	59	68	32	12	9.8	14	16
	RNA2202. 2RS	NA2202. 2RS	63	27	35	15			20
	RNA2203. 2RS	NA2203. 2RS	96	115	40	17	13.8	16	22
	RNA2204. 2RS	NA2204. 2RS	155	180	47	20	17.8	18	25
	RNA2205. 2RS	NA2205. 2RS	180	214	52	25			30
	RNA2206. 2RS	NA2206. 2RS	288	329	62	30	19.8	20	35
	RNA2207. 2RS	NA2207. 2RS	440	510	72	35	22.8	23	42
	RNA2208. 2RS	NA2208. 2RS	537	640	80	40			48
	RNA2209. 2RS	NA2209. 2RS	550	660	85	45			52
	RNA2210. 2RS	NA2210. 2RS	570	700	80	50			58

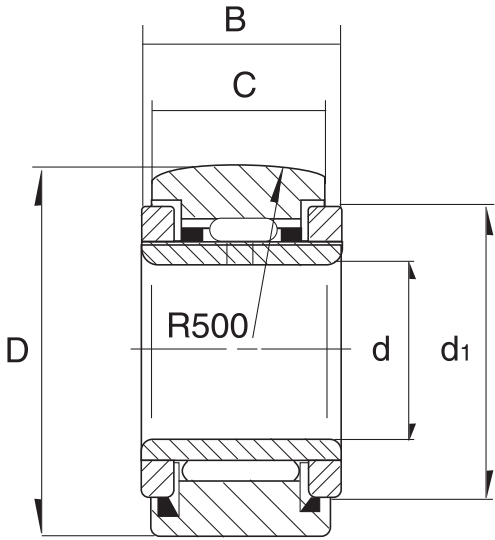
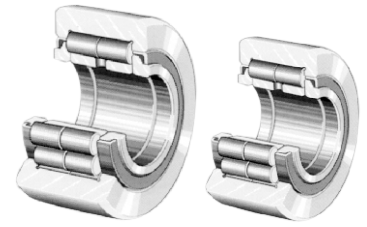
E-mail: [vmaruti@vmtraders.net](mailto:vmaruti@vmtraders.net) • [vinodmaruti@vmtraders.net](mailto:vinodmaruti@vmtraders.net)

Website: [www.vmtraders.com](http://www.vmtraders.com) • [slideandscrew.com](http://slideandscrew.com)

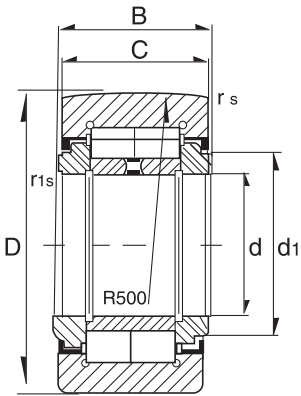


# MNMB

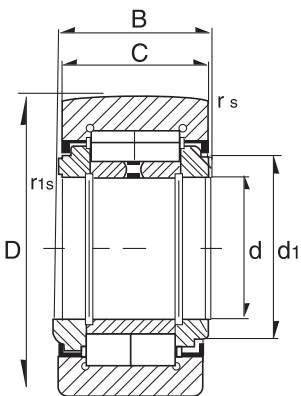
## NART / NUTR SERIES



	NART...VR	NART...VUUR	g	D	d	C	B	d1
	NART 5VR	NART 5VUUR	15	16	5	11	12	12
	NART 6VR	NART 6VUUR	15.8	19	6			14
	NART 8VR	NART 8VUUR	42	24	8	14	15	19
	NART 10VR	NART 10VUUR	65	30	10			23
	NART 12VR	NART 12VUUR	74	32	12			25
	NART 15VR	NART 15VUUR	107	35	15	18	19	27
	NART 17VR	NART 17VUUR	153	40	17	20	21	32
	NART 20VR	NART 20VUUR	260	47	20	24	25	34
	NART 25VR	NART 25VUUR	290	52	25			42
	NART 30VR	NART 30VUUR	485	62	30	28	29	51
	NART 35VR	NART 35VUUR	649	72	35			58
	NART 40VR	NART 40VUUR	890	80	40	30	32	66
	NART 45VR	NART 45VUUR	930	85	45			72
	NART 50VR	NART 50VUUR	999	90	50			



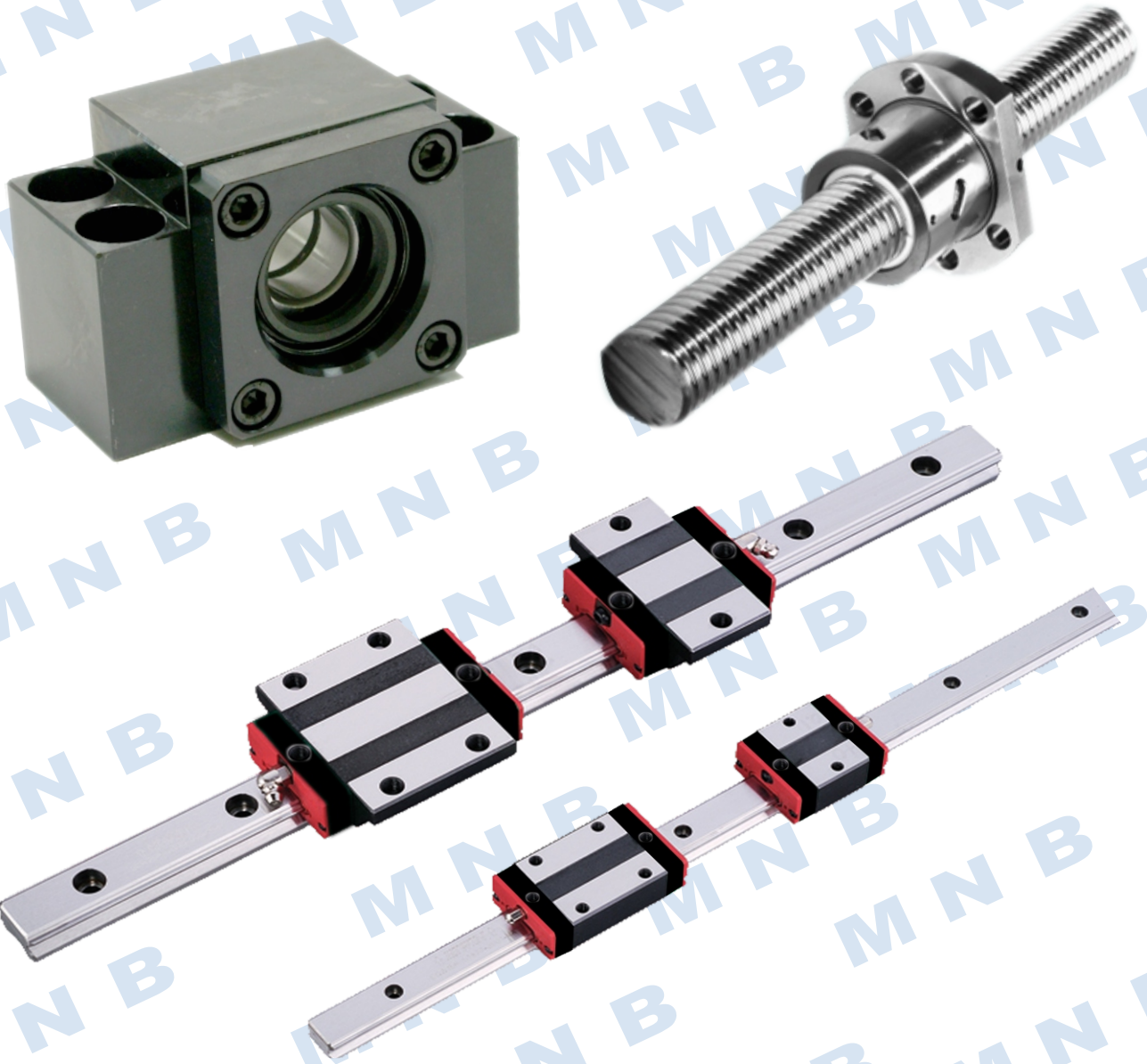
NUTR



NUTR...SL

d	NUTR	g	D	d	C	B	d1
15	NUTR 15	100	35	15	18	19	20
17	NUTR 17	150	40	17	20	21	22
15	NUTR 1542	160	42	15	18	19	20
17	NUTR 1747	222	47	17	20	21	22
20	NUTR 20	250		20	24	25	27
	NUTR 2052	324	52	25			31
25	NUTR 25	285	62	30	28	29	38
	NUTR 2562	457					
30	NUTR 30	470	72	40	30	32	51
	NUTR 3072	700					45
35	NUTR 35	635	80	45	30	32	51
	NUTR 3580	840					50
40	NUTR 40	820	90	50	30	32	55
45	NUTR 45	886					85
40	NUTR 4090	1130	100	45	30	32	60
50	NUTR 50	955					90
45	NUTR 45100	1400	110	50	30	32	55
50	NUTR 50110	1700					100

# AUTHORIZED DISTRIBUTOR



**V M TRADERS**

Authorized Distributor

Head Office : 112, YUSUF MEHERALI ROAD, KESHAVJI JADHAVJI BUILDING, 1ST FLOOR, ROOM NO.17 A, MUMBAI - 400 003.

Tel. : 022 - 2341 4240 / 24116964 Fax : 022 - 2342 7021 Mobile : 93222 27959, 98201 50116, 9320063362

E- mail : vmaruti@vmtraders.net / vinodmanruti@vmtraders.net • website : www.vmtraders.com

## Our Branches:

Ahmedabad : + 91 9375126775 •Tel Fax : 079 - 22870744 •E - mail : vmtvarun@vmtraders.net

Bangalore : + 91 93437 32768 •Tel. : 080 - 26606729 •Fax : 080 - 2660 6728 •E - mail : vmtbangalore@vmtraders.net

Coimbatore : + 91 93442 99266 / 67 •Tel. : 0422-2213104 •Fax : 0422 - 2213 105 •E - mail : vmtcbe@vmtraders.net

Delhi : + 91 932355666 / 9540425729 E-Mail : vmtdelhi@vmtraders.net

Hyderabad : + 91 93904 57876, + 91 939045875 •Telfax : 040 - 2307 5292 •E-mail vmthyd@vmtraders.net

Pune : + 91 93733 13139 •Tel.: 020-6532 7624 / 25 •Fax : 020 - 27109026 •E-mail : vmtpune@vmtraders.net