

CTG-BR

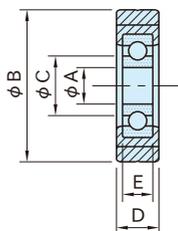
GUIDE ROLLERS (Light-Duty)



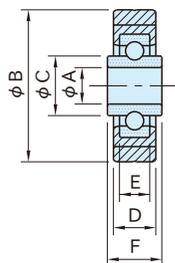
CTG-BR



CTG-BR-D



CTG-BR
(Non-Collar)



CTG-BR-D
(Double-Collar)

Body	Bearing
Polyurethane Shore hardness A95 Dark brown	Steel Double rubber-sealed

CTG-BR (Non-Collar)

Part Number	A		B	C	D	E	Special Bearing Type	Weight (g)	Applicable Roller Pins
CTG-BR20	6	+0 -0.008	20	8.6	8	5	696-2RS	5	RLP0605
CTG-BR25			25	10.3	9	6	626-2RS	10	RLP0606
CTG-BR30	8	+0 -0.008	30	12	11	7	608-2RS	17	RLP0807
CTG-BR35			35					20	
CTG-BR40	10	+0 -0.008	40	14	12	8	6000-2RS	30	RLP1008
CTG-BR45	12		45	16.8	14	10	6201-2RS	50	RLP1210
CTG-BR50		50	56						
CTG-BR55	15	+0 -0.008	55	20	15	11	6202-2RS	70	RLP1511
CTG-BR60			60					77	
CTG-BR65	17	+0 -0.008	65	23	16	12	6203-2RS	104	RLP1712
CTG-BR70			70					113	
CTG-BR75	20	+0 -0.01	75	27.6	18	14	6204-2RS	164	RLP2014
CTG-BR80			80					176	

CTG-BR-D (Double-Collar)

Part Number	A		B	C	D	E	F	Special Bearing Type	Weight (g)	Applicable Roller Pins
CTG-BR20D	6	+0 -0.02	20	8.6	8	5	11	696-2RS	7	RLP0611
CTG-BR25D			25	9.3	9	6	12	626-2RS	12	
CTG-BR30D	8	+0 -0.04	30	12	11	7	15	608-2RS	21	RLP0813
CTG-BR35D			35						24	
CTG-BR40D	10	+0 -0.04	40	14	12	8	16	6000-2RS	34	RLP1016
CTG-BR45D	12		45	18.3	14	10	18	6201-2RS	60	RLP1216
CTG-BR50D		50	66							
CTG-BR55D	15	+0.005 -0.012	55	21.6	15	11	19	6202-2RS	82	RLP1517
CTG-BR60D			60						90	
CTG-BR65D	17	+0.005 -0.012	65	24.6	16	12	20	6203-2RS	120	RLP1720
CTG-BR70D			70						130	
CTG-BR75D	20	+0.005 -0.012	75	29.3	18	14	22	6204-2RS	188	RLP2018
CTG-BR80D			80						199	

Features:

- Use as rollers for sliding doors or carriers.
- Light-duty.
- The urethane part and the special bearing are integral molded for prevention of separation. (The urethane part is single-layered for Guide Rollers with O.D. of 20 to 35mm, and double-layered for those with O.D. of 40 to 80mm.)
- The urethane body provides silent running.

Notes:

- Do not use in applications where an offset load is applied.
- Do not use in applications where temperature and humidity are high and exposure to water is possible.
- Resistant to oil that does not contain a solvent. Solvent-containing oil can cause swelling or strength deterioration.
- Poorly resistant to strong acid, strong alkali, ester, ketone, aromatic solvents, trichloroethylene, aniline, or the like.

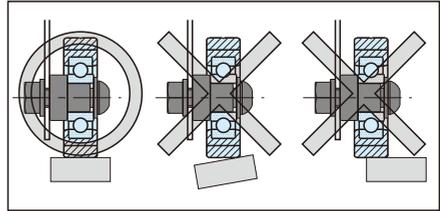


Chart Of Part Selection By Revolution Speed & Load

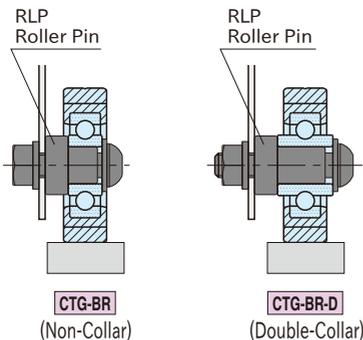
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Revolution Speed (min ⁻¹)	φ 20	φ 25	φ 30	φ 35	φ 40	φ 45	φ 50	φ 55	φ 60	φ 65	φ 70	φ 75	φ 80
300	63	93	167	225	314	402	470	510	539	588	637	764	850
320	62	91	161	218	302	386	451	490	519	568	617	739	823
340	61	90	155	210	290	370	431	470	500	549	598	713	798
360	60	88	149	202	278	355	412	451	480	529	578	688	771
380	59	87	143	194	267	339	392	431	461	510	559	662	746
400	58	86	137	186	255	323	372	412	441	490	539	637	719
420	57	85	131	178	243	308	353	392	421	470	519	612	693
440	57	82	125	171	231	292	333	372	402	451	500	582	667
460	56	81	120	163	220	276	314	353	382	431	480	561	641
480	55	80	114	155	208	261	294	333	363	412	461	535	615
500	55	79	108	147	196	245	274	314	343	392	441	510	589

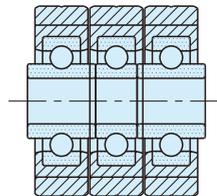
Note : Consider the above load values as reference because load capacity varies with use conditions or environments.

How to Use

Installation Examples



Example Of Using Multiple Guide Rollers In Combination

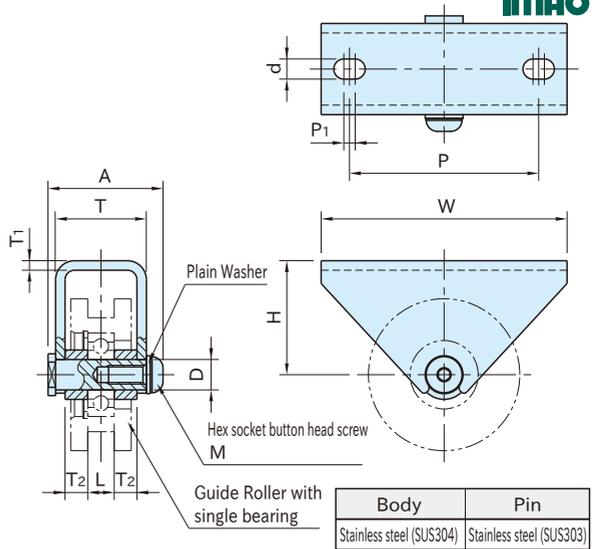


GRL-BL-SUS

GUIDE ROLLER BRACKETS



Note : Guide Rollers must be ordered separately.

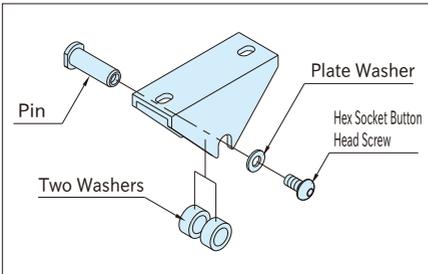


Part Number	D	L	W	H	A	T	T ₁	T ₂	M	d	P	P ₁
GRL40BL-SUS	8	7	65	30	30.4	24	2.5	6	M5×0.8	5.3	50	3
GRL50BL-SUS	10	8	80	35	35.6	28	3	7	M6×1	6.3	60	4
GRL60BL-SUS	12	10	95	40	40.6	32		8	M8×1.25	8.3	75	

Part Number	Weight (g)	Applicable Guide Rollers
GRL40BL-SUS	95	OD φ40
GRL50BL-SUS	165	OD φ50
GRL60BL-SUS	235	OD φ60

How To Use

Use as brackets for Guide Rollers.



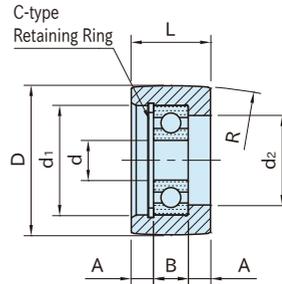
GRL-C

CROWN GUIDE ROLLERS



GRL-S-C
(Steel)

GRL-J-C
(Plastic)



Type	Body	Bearing/Retaining Ring
GRL-S-C	S45C steel Electroless nickel plated	Steel
GRL-J-C	Polyacetal plastic Black	

Part Number	d	D	d1	d2	L	A	B	R	Bearing Type	Applicable Roller Pins				
GRL-S-C	30	6	22	17	13	12	3	6	R 50	606ZZ	-	RLP0606	RLP06E	RLP06S
	40	8	30	22	18	16	4.5	7	R100	608ZZ	RLP0807F	RLP0807	RLP08E	RLP08S
GRL-J-C	50	10	36	26	22	19	5.5	8		6000ZZ	6000ZZ	RLP1008F	RLP1008	RLP10E
	60	12	42	32	26	23	6.5	10	R150	6201ZZ	RLP1210F	RLP1210	RLP12E	RLP12S
	70	15	46	35	29	28	8.5	11	R200	6202ZZ	-	RLP1511	RLP15E	RLP15S

Steel		Plastic	
Part Number	Weight (g)	Part Number	Weight (g)
GRL30S-C	23	GRL30J-C	10
GRL40S-C	55	GRL40J-C	22
GRL50S-C	95	GRL50J-C	35
GRL60S-C	155	-	-
GRL70S-C	215	-	-

Features:

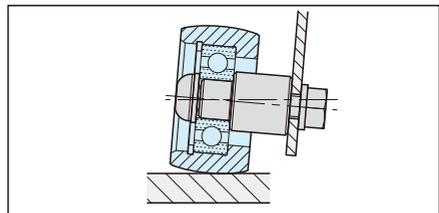
Use as rollers for sliding doors or carriers.
Medium-duty

Technical information:

Load Rating of Bearings

Bearing Type	Basic Load Rating Cr (N)	Basic Static Load Rating Cor (N)
606ZZ	2260	840
608ZZ	3300	1360
6000ZZ	4550	1970
6201ZZ	6800	3050
6202ZZ	7650	3700

Application Example



Related Product Page

Applicable Roller Pins

RLP-F FLANGED ROLLER PINS

RLP ROLLER PINS

RLP-S ROLLER PINS

RLP-E ECCENTRIC ROLLER PINS

GRL-F

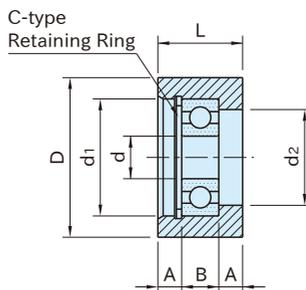
FLAT GUIDE ROLLERS



GRL-J-F
(Plastic)



GRL-S-F
(Steel)



Type	Body	Bearing/Retaining Ring
GRL-S-F	S45C steel Electroless nickel plated	Steel
GRL-J-F	Polycetal plastic Black	

Steel	Plastic	d	D	d ₁	d ₂	L	A	B	Bearing Type	Applicable Roller Pins				
Part Number	Part Number													
GRL30S-F	GRL30J-F	6	22	17	13	12	3	6	606ZZ	-	RLP0606	RLP06E	RLP06S	
GRL40S-F	GRL40J-F	8	30	22	18	16	4.5	7	608ZZ	RLP0807F	RLP0807	RLP08E	RLP08S	
GRL50S-F	GRL50J-F	10	36	26	22	19	5.5	8	6000ZZ	RLP1008F	RLP1008	RLP10E	RLP10S	
GRL60S-F	GRL60J-F	12	42	32	26	23	6.5	10	6201ZZ	RLP1210F	RLP1210	RLP12E	RLP12S	
GRL70S-F	GRL70J-F	15	46	35	29	28	8.5	11	6202ZZ	-	RLP1511	RLP15E	RLP15S	

Steel		Plastic	
Part Number	Weight(g)	Part Number	Weight(g)
GRL30S-F	23	GRL30J-F	10
GRL40S-F	60	GRL40J-F	22
GRL50S-F	100	GRL50J-F	35
GRL60S-F	170	GRL60J-F	75
GRL70S-F	220	GRL70J-F	85

Features:

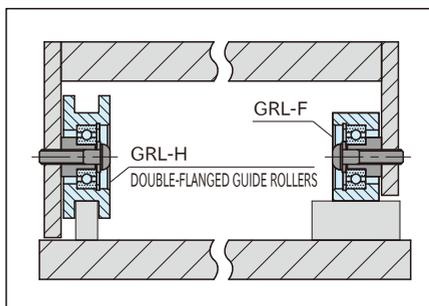
- Use as rollers for sliding doors or carriers.
- Medium-duty

Technical information:

Load Rating of Bearings

Bearing Type	Basic Load Rating Cr (N)	Basic Static Load Rating Cor (N)
606ZZ	2260	840
608ZZ	3300	1360
6000ZZ	4550	1970
6201ZZ	6800	3050
6202ZZ	7650	3700

Application Example



GRL-F flat guide rollers can be used with **GRL-H**.

GRL-H

DOUBLE-FLANGED GUIDE ROLLERS



GRL-S-H
(Steel)



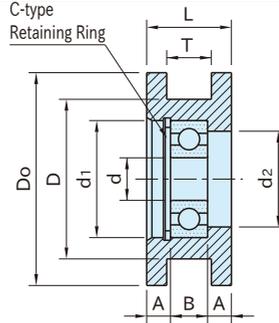
GRL-SH-H
(Hardened Steel)



GRL-J-H
(Plastic)



GRL-H-SUS
(Stainless Steel)



Type	Body	Bearing	Retaining Ring
GRL-S-H	S45C steel Electroless nickel plated	Steel	Steel
GRL-SH-H	SCM435 Steel Black oxide finished Heat treated to Rc40-45		
GRL-J-H	Polyacetal plastic Black		
GRL-H-SUS	Stainless steel (SUS303)	Stainless steel (SUS440C)	Stainless steel (SUS304)

Size	d	Do	D	d1	d2	L	T	A	B	Bearing Type	Applicable Roller Pins				
GRL-S-H	30	6	30	22	17	13	12	5	3	6	606ZZ	-	RLP0606	RLP06E	RLP06S
GRL-SH-H	40	8	40	30	22	18	16	7	4.5	7	608ZZ	RLP0807F	RLP0807	RLP08E	RLP08S
GRL-J-H	50	10	50	36	26	22	19	10	5.5	8	6000ZZ	RLP1008F	RLP1008	RLP10E	RLP10S
GRL-H-SUS	60	12	60	42	32	26	23	13	6.5	10	6201ZZ	RLP1210F	RLP1210	RLP12E	RLP12S
	70	15	70	46	35	29	28	17	8.5	11	6202ZZ	-	RLP1511	RLP15E	RLP15S

Steel		Hardened Steel		Plastic		Stainless Steel	
Part Number	Weight(g)	Part Number	Weight(g)	Part Number	Weight(g)	Part Number	Weight(g)
GRL30S-H	40	-	-	GRL30J-H	13	-	-
GRL40S-H	85	GRL40SH-H	85	GRL40J-H	25	GRL40-H-SUS	85
GRL50S-H	155	GRL50SH-H	155	GRL50J-H	45	GRL50-H-SUS	155
GRL60S-H	260	GRL60SH-H	260	GRL60J-H	80	GRL60-H-SUS	260
GRL70S-H	400	-	-	GRL70J-H	115	-	-

Features:

- Use as rollers for sliding doors or carriers.
- Medium-duty
- This product can accept a polished square steel bar that is available commercially.
- Hardened-steel guide rollers are wear-resistant and prevent damage from intrusion of foreign matter such as chips.

How To Use

For the application example, see FLAT GUIDE ROLLERS.

GRL-F

Technical Information:

Load Rating of Bearings

Bearing Type	Basic Load Rating Cr(N)	Basic Static Load Rating Cor(N)
606ZZ	2260	840
608ZZ	3300	1360
6000ZZ	4550	1970
6201ZZ	6800	3050
6202ZZ	7650	3700

GRL-P-F-SUS

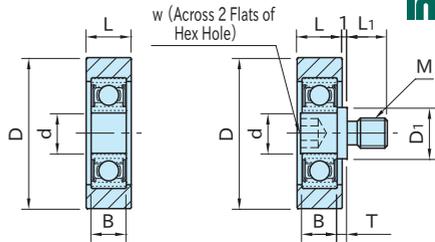
FLAT PLASTIC GUIDE ROLLERS



GRL-P-F-SUS
(Without Stud)



GRL-M-P-F-SUS
(With Stud)



GRL-P-F-SUS

GRL-M-P-F-SUS

Type	Body	Bearing	Stud
GRL-P-F-SUS	Polycetal plastic	SUS440C	—
GRL-M-P-F-SUS	White	stainless steel	SUS303 stainless steel

GRL-P-F-SUS (Without Stud)

Part Number	d	D	L	B	Bearing Type	Allowable Load (N)	Weight (g)
GRL1304P-F-SUS	4	13	5	4	SMR104ZZ	49	1.7
GRL1404P-F-SUS		14					1.9
GRL1805P-F-SUS	5	18			695HZZ	68.6	3.2
GRL1905P-F-SUS		19					3.4
GRL1906P-F-SUS	6	19	6	5	696HZZ	98	4.7
GRL2006P-F-SUS		20					5
GRL2406P-F-SUS		24					6.1
GRL2506P-F-SUS		25					6.4
GRL3008P-F-SUS	8	30	9	7	608HZZ	196	16
GRL3508P-F-SUS		35					19.1

GRL-M-P-F-SUS (With Stud)

Part Number	d	D	L	B	M	L1	D1	T	w	Bearing Type	Allowable Load (N)	Weight (g)			
GRL13M4P-F-SUS	4	13	5	4	M4×0.7	5	6	1.5	2	SMR104ZZ	49	2.7			
GRL14M4P-F-SUS		14										2.9			
GRL18M4P-F-SUS	5	18					695HZZ	68.6	2.5	7	1.5	3	696HZZ	98	4.4
GRL19M4P-F-SUS		19													4.6
GRL19M6P-F-SUS	6	19	6	5	M6×1	8	8	1.5	3	696HZZ	98	7.4			
GRL20M6P-F-SUS		20										7.6			
GRL24M6P-F-SUS		24					8.8								
GRL25M6P-F-SUS		25					9.1								
GRL30M6P-F-SUS	8	30	9	7		10.2	2	5	608HZZ	196	20.4				
GRL35M6P-F-SUS		35									23.6				

Feature

The plastic body provides silent running.

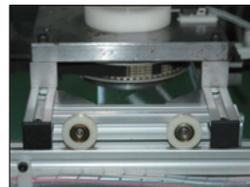
Notes

- Roller pin for “Without Stud” type should be prepared by the customer.
- Do not use in applications where impact load or thrust load is applied.
- “Allowable Load” mentioned above means allowable radial load based on the test of rotating the roller a million times at the speed of 300min⁻¹. Consider the above load values as reference since load capacity varies with use conditions or environments.

Technical Information

Heatresistant Temperature 105°C

How To Use



GRL-P-U-SUS

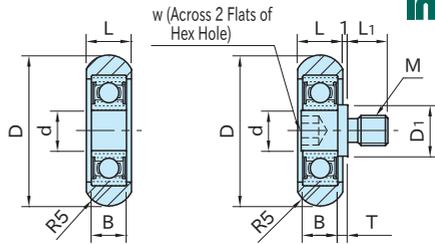
ROUND PLASTIC GUIDE ROLLERS



GRL-P-U-SUS
(Without Stud)



GRL-M-P-U-SUS
(With Stud)



GRL-P-U-SUS

GRL-M-P-U-SUS

Type	Body	Bearing	Stud
GRL-P-U-SUS	Polyacetal plastic	SUS440C	—
GRL-M-P-U-SUS	White	stainless steel	SUS303 stainless steel

GRL-P-U-SUS (Without Stud)

Part Number	d	D	L	B	Bearing Type	Allowable Load (N)	Weight (g)
GRL1304P-U-SUS	4	13	5	4	SMR104ZZ	49	1.7
GRL1404P-U-SUS		14					1.8
GRL1805P-U-SUS	5	18			695HZZ		3.1
GRL1905P-U-SUS		19					3.3
GRL1906P-U-SUS	6	19	6	5	696HZZ	98	4.5
GRL2006P-U-SUS		20					4.8
GRL2406P-U-SUS		24					5.9
GRL2506P-U-SUS		25					6.2
GRL3008P-U-SUS	8	30	9	7	608HZZ	196	15.1
GRL3508P-U-SUS		35					17.9

GRL-M-P-U-SUS (With Stud)

Part Number	d	D	L	B	M	L ₁	D ₁	T	w	Bearing Type	Allowable Load (N)	Weight (g)
GRL13M4P-U-SUS	4	13	5	4	M4×0.7	5	6	1.5	2	SMR104ZZ	49	2.6
GRL14M4P-U-SUS		14										2.8
GRL18M4P-U-SUS	5	18					695HZZ	4.4				
GRL19M4P-U-SUS		19						4.6				
GRL19M6P-U-SUS	6	19	6	5	M6×1	8	8	1.5	3	696HZZ	98	7.2
GRL20M6P-U-SUS		20										7.4
GRL24M6P-U-SUS		24					8.5					
GRL25M6P-U-SUS		25					8.9					
GRL30M6P-U-SUS	8	30	9	7		10.2	2	5	608HZZ	196	19.4	
GRL35M6P-U-SUS		35									22.2	

Feature

The plastic body provides silent running.

Technical Information

Heatresistant Temperature 105°C

Notes

- Roller pin for “Without Stud” type should be prepared by the customer.
- Do not use in applications where impact load or thrust load is applied.
- “Allowable Load” mentioned above means allowable radial load based on the test of rotating the roller a million times at the speed of 300min⁻¹. Consider the above load values as reference since load capacity varies with use conditions or environments.

GRL-R

U GROOVE GUIDE ROLLERS



GRL-S-R
(Steel)



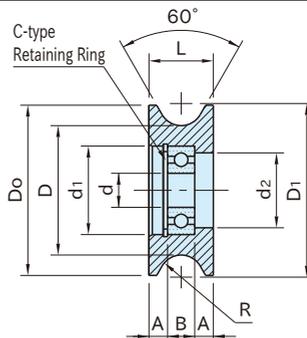
GRL-SH-R
(Hardened Steel)



GRL-J-R
(Plastic)



GRL-R-SUS
(Stainless Steel)



Type	Body	Bearing	Retaining Ring
GRL-S-R	S45C steel Electroless nickel plated	Steel	Steel
GRL-SH-R	SCM435 Steel Black oxide finished Heat treated to Rc40-45		
GRL-J-R	Polyacetal plastic Black	Stainless steel (SUS440C)	Stainless steel (SUS304)
GRL-R-SUS	Stainless steel (SUS303)		

Size	d	Do	D	d1	d2	L	R	D1	A	B	Bearing Type	Applicable Roller Pins				Applicable Rails For Guide Rollers	
GRL-S-R	30	6	30	22	17	13	12	R 4.5	31	3	6	606ZZ	-	RLP0606	RLP06E	RLP06S	-
GRL-SH-R	40	8	40	30	22	18	16	R 5.5	41	4.5	7	608ZZ	RLP0807F	RLP0807	RLP08E	RLP08S	-
GRL-J-R	50	10	50	38	26	22	19	R 6.5	51	5.5	8	6000ZZ	RLP1008F	RLP1008	RLP10E	RLP10S	RLR12
GRL-R-SUS	60	12	60	44	32	26	23	R 8.5	61	6.5	10	6201ZZ	RLP1210F	RLP1210	RLP12E	RLP12S	RLR16
	70	15	70	51	35	29	28	R10.5	72	8.5	11	6202ZZ	-	RLP1511	RLP15E	RLP15S	-

Steel		Hardened Steel		Plastic		Stainless Steel	
Part Number	Weight (g)	Part Number	Weight (g)	Part Number	Weight (g)	Part Number	Weight (g)
GRL30S-R	35	-	-	GRL30J-R	13	-	-
GRL40S-R	90	-	-	GRL40J-R	25	GRL40-R-SUS	90
GRL50S-R	155	GRL50SH-R	155	GRL50J-R	45	GRL50-R-SUS	155
GRL60S-R	260	GRL60SH-R	260	GRL60J-R	80	GRL60-R-SUS	260
GRL70S-R	460	-	-	GRL70J-R	125	-	-

Features:

- Use as rollers for sliding doors or carriers.
- Medium-duty
- Use **RLR** Rails For Guide Rollers for this product (to be ordered separately).
- Hardened-steel guide rollers are wear-resistant and prevent damage from intrusion of foreign matter such as chips.

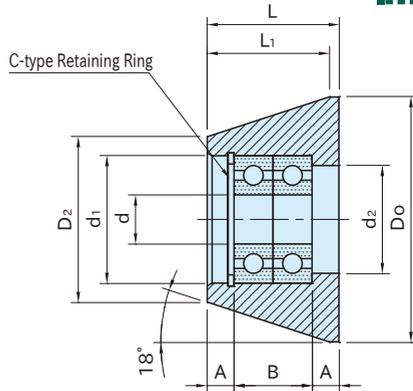
Technical Information:

Load Rating of Bearings

Bearing Type	Basic Load Rating Cr (N)	Basic Static Load Rating Cor (N)
606ZZ	2260	840
608ZZ	3300	1360
6000ZZ	4550	1970
6201ZZ	6800	3050
6202ZZ	7650	3700

GRL-S2-D

TAPERED GUIDE ROLLERS (DOUBLE BEARINGS)



Body	Bearing/Retaining Ring
S45C steel Electroless nickel plated	Steel

Part Number	d	Do	D2	d1	d2	L	L1	A	B	Bearing Type	Weight (g)	Applicable Roller Screws
GRL50S2-D	10	50	33.8	26	22	27	25	5.5	16	6000ZZ×2	235	RLB1016
GRL60S2-D	12	60	39.9	32	26	33	31	6.5	20	6201ZZ×2	405	RLB1220
GRL70S2-D	15	70	46	35	29	39	37	8.5	22	6202ZZ×2	650	RLB1522

Features:

- Use as rollers for carriers.
- Heavy-duty

Technical Information:

Load Rating of Bearings

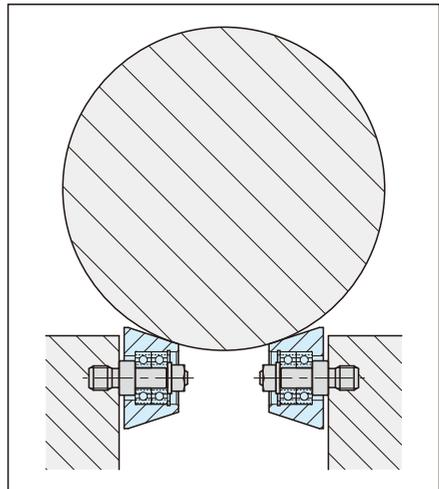
Bearing Type	Basic Load Rating Cr (N)	Basic Static Load Rating Cor (N)
6000ZZ×2	7370	3190
6201ZZ×2	11010	4940
6202ZZ×2	12390	5990

Related Product Page

Applicable Roller Screws

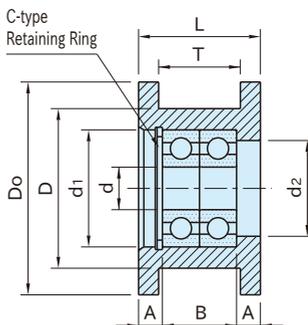
RLB ROLLER SCREWS

Application Example



GRL-S2-H

DOUBLE-FLANGED GUIDE ROLLERS (DOUBLE BEARINGS)



Body	Bearing/Retaining Ring
S45C steel Electroless nickel plated	Steel

Part Number	d	Do	D	d1	d2	L	T	A	B	Bearing Type	Weight (g)	Applicable Roller Screws
GRL30S2-H	6	30	22	17	13	18	10	3	12	606ZZ×2	50	RLB0612
GRL40S2-H	8	40	30	22	18	23	14	4.5	14	608ZZ×2	125	RLB0814
GRL50S2-H	10	50	36	26	22	27	18	5.5	16	6000ZZ×2	215	RLB1016
GRL60S2-H	12	60	42	32	26	33	23	6.5	20	6201ZZ×2	350	RLB1220
GRL70S2-H	15	70	46	35	29	39	28	8.5	22	6202ZZ×2	510	RLB1522

Features:

- Use as rollers for sliding doors or carriers.
- Heavy-duty
- This product can accept a polished square steel bar that is available commercially.

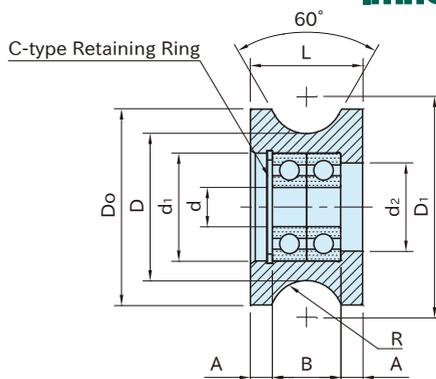
Technical Information:

Load Rating of Bearings

Bearing Type	Basic Load Rating Cr (N)	Basic Static Load Rating Cor (N)
606ZZ×2	3660	1360
608ZZ×2	5340	2200
6000ZZ×2	7370	3190
6201ZZ×2	11010	4940
6202ZZ×2	12390	5990

GRL-S2-R

U GROOVE GUIDE ROLLERS (DOUBLE BEARINGS)



Body	Bearing/Retaining Ring
S45C steel Electroless nickel plated	Steel

Part Number	d	Do	D	d ₁	d ₂	L	R	D ₁	A	B	Bearing Type	Weight (g)	Applicable Roller Screws
GRL40S2-R	8	40	30	22	18	23	R 7.5	45	4.5	14	608ZZ×2	140	RLB0814
GRL50S2-R	10	50	38	26	22	27	R10.5	59	5.5	16	6000ZZ×2	255	RLB1016
GRL60S2-R	12	60	44	32	26	33	R11.5	67	6.5	20	6201ZZ×2	440	RLB1220
GRL70S2-R	15	70	51	35	29	39	R14.5	80	8.5	22	6202ZZ×2	700	RLB1522

Features:

- Use as rollers for sliding doors or carriers.
- Heavy-duty

Related Product Page

Applicable Roller Screws
RLB ROLLER SCREWS

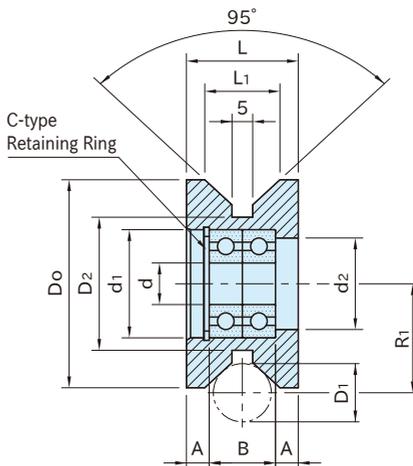
Technical Information:

Load Rating of Bearings

Bearing Type	Basic Load Rating Cr (N)	Basic Static Load Rating Cor (N)
608ZZ×2	5340	2200
6000ZZ×2	7370	3190
6201ZZ×2	11010	4940
6202ZZ×2	12390	5990

GRL-S2-Y

Y GROOVE GUIDE ROLLERS (DOUBLE BEARINGS)



Body	Bearing/Retaining Ring
S45C steel Electroless nickel plated	Steel

Part Number	d	D ₀	D ₂	d ₁	d ₂	L	L ₁	min.		max.		A	B	Bearing Type
								D ₁	R ₁	D ₁	R ₁			
GRL50S2-Y	10	50	32	26	22	27	18.1	14	26.2	20	30.3	5.5	16	6000ZZ×2
GRL60S2-Y	12	60	38	32	26	33	22.5	16	30.5	25	36.6	6.5	20	6201ZZ×2
GRL70S2-Y	15	70	41	35	29	39	30.1	22	36.1	38	47.0	8.5	22	6202ZZ×2

Part Number	Weight (g)	Applicable Roller Screws
GRL50S2-Y	260	RLB1016
GRL60S2-Y	450	RLB1220
GRL70S2-Y	670	RLB1522

*) D₁ and R₁ dimensions are for polished round steel bar that is available commercially.

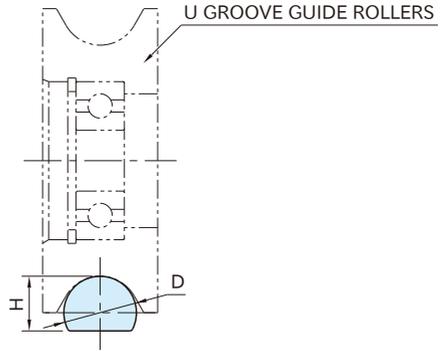
Features:

- Use as rollers for sliding doors or carriers.
- Heavy-duty
- This product can accept a polished round steel bar and a angle steel bar that is available commercially.

Technical information:

Load Rating of Bearings

Bearing Type	Basic Load Rating Cr (N)	Basic Static Load Rating Cor (N)
6000ZZ×2	7370	3190
6201ZZ×2	11010	4940
6202ZZ×2	12390	5990

RLR**RAILS FOR GUIDE ROLLERS**

Part Number	D	H	Weight (kg/m)	Standard Length(m)
RLR12-2M	12	9	0.75	2
RLR16-2M	16	11	1.15	

Body
S45C steel ISONITE Treated (Nitrocarburized)

*) Cutting service is available with an additional charge.

Note:

For rails shorter than 2m, extra cutting cost will be added to the list price.

How To Use

- Use as rails for U-groove Guide Rollers.
- Remove the surface treatment for welding.

Vertical Guide Rollers / Rollers with Oil Free Bushings

Urethane Rollers / End Feed Rollers With Side Through Holes

■ Features: Preassembled rollers contribute to labor savings.

Vertical Guide Rollers

RoHS

Type	Material				Surface Treatment		
	Roller	Shaft	Retaining Ring	Bearing	Roller	Shaft	Retaining Ring
TGRB	S45C Equivalent	S45C Equivalent	Spring Steel	Steel	Electroless Nickel Plating	Electroless Nickel Plating	-
TGRS	SUS304	SUS304	SUS304		-	-	-
TGRA	Aluminum Alloy	S45C	Spring Steel	-	Clear Anodize	Electroless Nickel Plating	-
TGRAU	A5052	SUS304	SUS304	-	Urethane Lining (Natural Color)	-	-
TGRSU	SUS304	SUS304	SUS304	-	-	-	-

Core Only

Urethane Lined

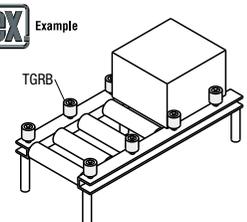
Please use these products for vertical applications.

Part Number Type	D	L Selection	N	d	l	C	B	r	n	m	dh	D1	F	M (Coarse)	W	Used Bearing	Retaining Ring Standards Shape JIS Nominal	Unit Price						
																		TGRB	TGRS	TGRA	TGRAU	TGRSU		
Core Only Urethane TGRB (S45C) TGRS (SUS304) TGRA (A5052)	20	25	10	6	9	10	8	5	2	0.7	10	15	5	6	8	696ZZ	E Type No.5							
		30																40	50					
	25	30		40	50	8	12	12	10	7	0.9	15	19	6	8	10	698ZZ	E Type No.7						
		40		50																				
	30	30		40	50	10	15	15	13	9.6	3	18	22	10	13	6900ZZ	C Type No.10							
		40		50																				
	40	25		30	40	50	12	18	18	14	11.5	1.15	24	28	8	12	14	6001ZZ	C Type No.12					
		30		40	50																			
	50	25		30	40	50	12	18	18	14	11.5	1.15	24	32	10	12	14	6201ZZ	C Type No.12					
		30		40	50																			

Ordering Example: Part Number - L
TGRS30 - 30
TGRSU30 - 50

Alterations Example: Part Number - L - (NC)
TGRB25 - 30 - NC15

Alteration	Code	Spec.
N Dimension Changes	NC	Ordering Code NC15 NC=1mm Increment 5≤NC≤30 Dimensions other than N dim. will not change.



■ Use of oil free bushings instead of bearings accomplished lower cost and space savings.

Rollers with Oil Free Bushings

RoHS

Type	Roller		Oil Free Bushings
	Material	Surface Treatment	
FRTA	A5052	Clear Anodize	Filler Added PTFE Layer Sintered Bronze Layer
FRTS	SUS304	-	
FRTAU	A5052	Urethane Lining (Natural Color) Shore A90	Steel-backed Metal Layer (SPCC: Tin Plating)
FRTSU	SUS304	-	

Core Only

Urethane Lined

Bushing Details

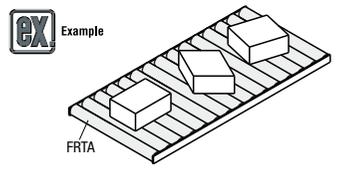
d	F	d1	H
3	+0.062	5	4.6
5	0	5	7
6	+0.065	8	8
8	0	10	10
10	0	10	12
12	+0.068	10	14
15	0	10	17
20	0	10	23

For L20, oil free bushing F dim. will be 10 or less.

Part Number Type	D	d (I.D.) Selection	L Selection	t	Unit Price			
					FRTA	FRTS	FRTAU	FRTSU
Core Only FRTA (A5052) FRTS (SUS304)	8	3	20' 25 30 40 50	0.8				
	10	5						
	12	5						
	15	6						
	18	8						
	20	8						
	25	10						
Urethane FRTAU (A5052) FRTSU (SUS304)	20	10 12						
	25	10 12 15						
30	10 12 15							

For Oil Free Bushing details, see P378. L20 cannot be selected for *d15.

Ordering Example: Part Number - d - L
FRTA10 - 5 - 30



■ Features: Can be used as a set with shaft collar shown on P.279, 281.

Urethane Rollers with Side Through Holes

RoHS

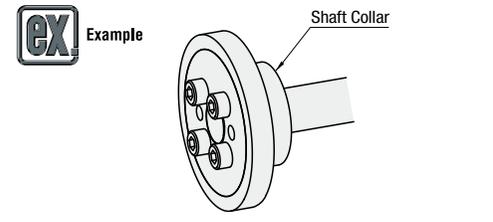
Type	Material		Hardness
	Core	Lining	
ULSH	A5052	Urethane	A90

Urethane is baked on the outer circumference of the core material.

Part Number Type	D	d Selection	L	T	P	P2	S	S2	Unit Price
	50	12	22	22	5.5	5.5			
	60	15	10	5	25	26	6.5	6.5	
		20			34	6.5			
	70	15	10	5	25	26	6.5	6.5	
		20			34	6.5			
	80	20	10	5	32	34	6.5	6.5	
		25			38	6.5			

Shaft collar shown on P.281 may not be installable depending on the B size.

Ordering Example: Part Number - D - d
ULSH - 40 - 10



Alterations Example: Part Number - D - d - (MC)
ULSH - 40 - 10 - MC

Alteration Code	Tapping	
	MC	Change S to tapped hole
Spec.	S	M
	4.5	M4
	5.5	M5
	6.5	M6
Ordering Code MC		

End Feed Rollers

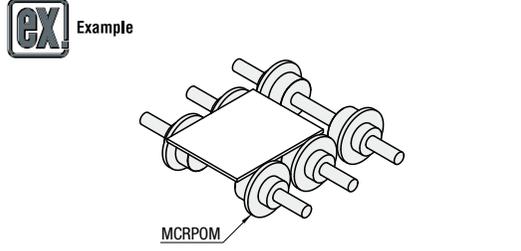
End Feed Rollers

RoHS

Type	Material	
	Core	Lining
MCRPOM	Polyacetal	
MCRUPE	UHMWPE	

Part Number Type	D	d	P	L 1mm Increment	W	l	D1	M	Unit Price	
									MCRPOM	MCRUPE
MCRPOM MCRUPE	30	6 8 10 12	40 45 50 55 60	3-10	8	13-(P-D)/√3 (4.34-10.11)	d+20	4		
	35	6 8 10 12 15	45 50 55 60 65							
	40	8 10 12 15 20	50 55 60 65 70							
	45	10 12 15 20	55 60 65 70 75							
	50	12 15 20	60 65 70 75 80							
	55	15 20 30	65 70 75 80							
	60	15 20 30	70 75 80							

Ordering Example: Part Number - d - P - L
MCRPOM30 - 8 - 50 - 3



Threaded Bearings / Urethane Molded Bearings Shafts / Eccentric Bushings

Note that, for some of the types shown here, order might be unable to be received by the MISUMI Indonesia offices.

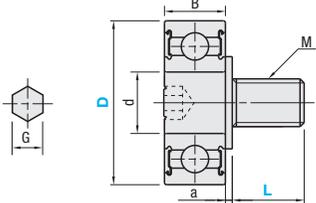
Cantilever Rollers

■ Features: As a mounting screw is already included, no extra retaining part is required.

■ Threaded Bearings



Type	Material	Surface Treatment
Standard Threaded	Bearing: Steel, Shaft: SUS	Electroless Nickel Plating
Long Threaded	Bearing: Steel, Shaft: SUS	Electroless Nickel Plating
NTBG	Bearing: Steel, Shaft: SUS	Electroless Nickel Plating
NTSBG	Bearing: Stainless Steel, Shaft: SUS303	-



RoHS

⚠ The base of thread contains an incomplete thread portion.

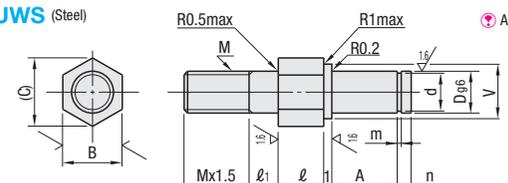
Part Number Type	D	L		B	d	a	G	M (Coarse)	Bearing	Unit Price		
		Standard Threaded	Long Threaded							NTBG	NTSBG	NTBGT
Standard Threaded	6	4	6	2.5	3			M3	673ZZ			
	7	4	6	3	3			M3	W683ZZ			
	8	5	8	2.5	5		1.5	M4	675ZZ			
	9	5	8	4	4			M4	W684A×50ZZ			
	13	5	8	5	4			M4	624ZZ			
	16	5	8	5	5			M4	625ZZ			
Long Threaded	19	8	12	6	6		2.5	M6	626ZZ			
	22	8	12	7	8		4	M6	608ZZ			
	26	8	12	8	10	2.5	5	M6	6000ZZ			
	30	8	12	9	10	2	5	M6	6200ZZ			
	32	12	20	9	15	2.5	5	M10	6002ZZ			
	35	12	20	11	15	3	5	M10	6202ZZ			
	37	12	20	9	20	2.5	8	M10	6904ZZ			
	47	12	20	14	20	3	8	M10	6204ZZ			
	52	12	20	15	25	3	10	M10	6205ZZ			

⚠ For bearing detailed dimensions, see P989, 991.

■ Urethane Molded Bearing Shafts



UWS (Steel)



⚠ Applicable to the products on P.1151, 1152. $\frac{63}{\sqrt{15}}$

Material: SS400
Surface Treatment: Black Oxide
Accessory: Nut, Retaining Ring-C Type
⚠ Retaining Ring-E Type for No. 312-830.

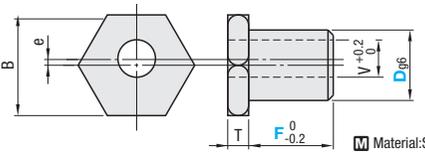
Part Number Type	No.	Dg6	A	ℓ	ℓ1	V	d	Tolerance	M	B	(C)	m	Dimension Tolerance	n	Applicable Urethane Molded Bearing		Unit Price
															UMBB	UMBBR	
UWS	312	3	3	-	4	2.05	+0.06	3	5	5.8	0.5	+0.05	0	2	UMBB	UMBBR	3-12
	413	4	4	1	5	3.05	0	4	7	8.1	0.7	0	0	2	UMBS	UMBSR	4-13
	416	4	4	1	6	3.05	0	4	7	8.1	0.7	0	0	2	UMBS	UMBSR	4-16
	516	5	5	2	6.9	4.05	+0.075	5	8	9.2	0.7	0	0	2	UMBG	UMBGR	5-16
	620	5	5	2	7.5	4.05	0	5	8	9.2	0.7	0	0	2	UMBG	UMBGR	5-20
	628	6	6	3	8	5.05	0	6	10	11.5	0.9	+0.1	0	2	UMBL	UMBLR	6-20
	828	6	6	3	9	5.05	0	6	10	11.5	0.9	0	0	2	UMBL	UMBLR	6-28
	830	8	7	10	12	7.1	+0.09	8	14	16.2	0.9	0	0	2	UMBL	UMBLR	8-28
	1030	8	7	10	13	7.1	0	8	14	16.2	0.9	0	0	2	UMBD	UMBDR	8-30
	1040	10	9	16	9.6	-0.09	10	19	21.9	1.15	+0.14	0	0	2	SUMBB	SUMBBR	10-30
	1540	10	9	16	9.6	-0.09	10	19	21.9	1.15	+0.14	0	0	2	UMSB	UMBSR	10-40
	1545	15	11	19	14.3	-0.11	12	21	24	1.35	0	0	0	2	UMSW	UMSWR	15-40
	2045	9	9	23	19	0	16	27	31.2	1.35	0	0	0	2	UMSG	UMSGR	15-45
	2055	20	14	25	19	-0.21	16	27	31.2	1.35	0	0	0	2	UMSG	UMSGR	20-45

Ordering Example Part Number UWS312

■ Eccentric Bushings



ECCB



Material: S45C Equivalent

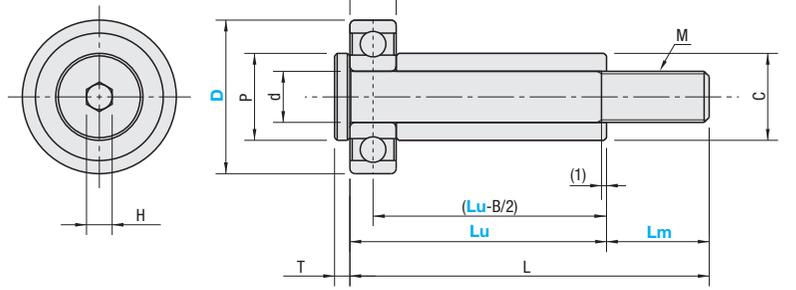
Part Number Type	Dg6	F Selection	Applicable Bearing	V	B	T	e	Unit Price
6	6	606ZZ, 626ZZ	3	10		0.3		
8	6	698ZZ	4	12		0.5		
8	7	608ZZ	4	12		0.5		
8	8	628ZZ	4	12		0.5		
10	6	6900ZZ	5	14	3	1		
10	8	6000ZZ	5	14	3	1		
10	9	6200ZZ	5	14	3	1		
12	6	6901ZZ	6	17		1.2		
12	8	6001ZZ	6	17		1.2		
15	7	6201ZZ	8	19		1.5		

⚠ For bearing detailed dimensions, see P989.

■ Features: Rollers that use bearings. Spacer thickness can be specified from 1mm, and any mounting height can be selected.



RoHS



⚠ Bearing and Spacer can be shipped in an intact state by tightening the gap between O.D. of Pin and I.D. of Spacer. It can prevent falling or missing of parts and reduce time and effort during assembly.

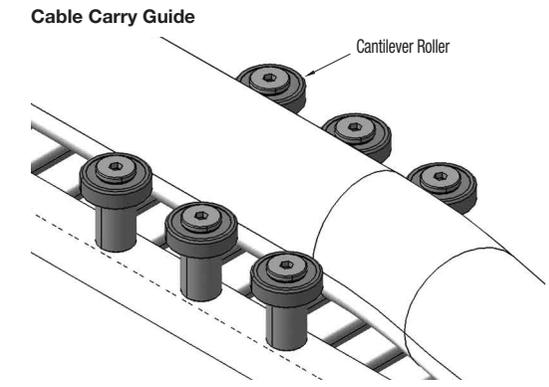
Type	Bearing	Pin	Spacer	Surface Treatment
BWP	SUJ2	S45C	SS400	Black Oxide

Part Number Type	1mm Increment			L	B	d	M (Coarse)	H (Hex Socket)	T	C=P	Bearing Part No.	Unit Price 1 ~ 4 pc(s).
	D	Lu	Lm									
BWP	11	6~25	5~10	Lu+Lm	5	5	M5	2.5	2	8	685ZZ	
	13	5~25	5~10								695ZZ	
	16	6~40	8~16		6	8	M8	4	3	11	688ZZ	
	19	7~40	8~16								698ZZ	
	22	8~40	8~16		7	8	M8	4	3	11	608ZZ	
	26	9~50	10~20								6000ZZ	
	30	10~50	10~20		8	10	M10	5	14	6200ZZ		
					9	10	M10	5	17	6200ZZ		

⚠ Regardless of the specified dimension, (Lm dimension + 1mm) is the threaded section.

Ordering Example Part Number BWP11 - Lu - Lm - 17 - 10

ex Example



Guide Rollers

V Groove 60°, V Groove 90°, Sheave (for Wire Cables)

■ **Features:** Can be used for a various guides for rails and workpieces. For 60°= Wire, for 90°= L channel, for Sheaves = Wire Cable.

Type			Body Material	Surface Treatment	Material	
60°: For Wire	90°: For Channel	Sheave (for Wire Cable)			Retaining Ring	Bearing
VMRN	VMQN	-	S45C Equivalent	-	Spring Steel	Steel
VMRB	VMQB	-		Black Oxide	Spring Steel	
VMRG	VMQG	-		Electroless Nickel Plating		
VMRA	-	-	Aluminum Alloy	Clear Anodize	Stainless Steel	Steel
VMRP	-	-	Polycetal	-	Spring Steel	
VMRM	-	-	Conductive MC Nylon	-		
-	-	SMRN	MC Nylon	-	Spring Steel	-

* Bearing Accuracy JIS B 1514, 0 Class
 ⚙ Bearings are press-fit.

For Wire 60°
 For L Channel Track 90°
 Sheave (for Wire Cable) 40°

6.3 / (1.6 /)

RoHS

⚙ For bearing detailed dimensions, see P989.

Part Number Type	D	Z Groove Depth		d	P	dh	T	S	B	r	Applicable Wire Cable Dia.	Bearing Used
		60° Sheave	90°									
For Wire VMRN VMRB VMRG VMRA VMRP VMRM	(20)	4	3	3	10	8	10	3	4	-	-	623ZZ
				5	16	13	2.5	5	-	-	625ZZ	
				6	19	16	12	3	6	-	-	626ZZ
	(30)	5	-	6	19	16	12	3	6	-	-	626ZZ
				8	24	21	14	8	-	-	628ZZ	
				8	24	21	14	8	-	-	628ZZ	
	(40)	7	5	10	26	23	14	3	8	-	-	6000ZZ
				10	26	23	14	3	8	2.2	4	6000ZZ
				10	26	23	16	4	8	3.3	6	6000ZZ
	*50	9	-	10	26	23	18	5	8	4.4	8	6000ZZ
				10	26	23	16	4	8	-	-	6000ZZ
				10	26	23	16	4	8	-	-	6000ZZ
*60	10A	-	10	26	23	16	4	8	-	-	6000ZZ	
			10	26	23	18	5	8	4.4	8	6000ZZ	
			10	26	23	16	4	8	-	-	6000ZZ	
(60)	11	6	10	26	23	16	4	8	-	-	6000ZZ	
			12	28	25	20	6	8	5.5	10	6001ZZ	
			12	28	25	16	4	8	-	-	6001ZZ	

⚙ 90°: Channel Type are available in sizes in () only.
 ⚙ For Sheave Type (for Wire Cables), only * marked sizes are available.

Ordering Example

Part Number	Groove Depth Z
VMRA40	5
SMRN50	9
VMQN40	5

D	Z Groove Depth		Unit Price					
	60° Sheave	90°	For Wire				For L Channel Track	Sheave
			VMRN (x1.0)	VMRA	VMRP	VMRM	VMQN (x1.0)	SMRN
20	4	3	VMRB (x1.1)	VMRG (x1.2)			VMQB (x1.1)	VMQG (x1.2)
30								
40								
30	5	-						
40								
40								
50	7	5						
50								
60								
60	9	-						
60								
60								
60	10	-						
60								
60								
60	10A	-						
60								
60								
100	11	6						

⚙ The unit price for VMRB and VMQB is a multiplier (x1.1) applied to the price shown in the list. The unit price for VMRG and VMQG is a multiplier (x1.2) applied to the price shown in the list.

Guide Rollers

Flat, Double Flanged, Tapered

Type			Body Material	Surface Treatment	Material	
Flat	Double Flanged	Tapered			Retaining Ring	Bearing
FTMRN	HMRN	TMRN	S45C Equivalent	-	Spring Steel	Steel
FTMRB	-	-		Black Oxide	Spring Steel	
FTMRG	-	-		Electroless Nickel Plating		
FTMRA	HMRA	-	Aluminum Alloy	Clear Anodize	Stainless Steel	Steel
FTMRP	HMRP	-	Polycetal	-	Spring Steel	

* Bearing Accuracy JIS B 1514, 0 Class
 ⚙ Bearings are press-fit.

Flat
 Double Flanged
 Tapered

6.3 / (1.6 /)

RoHS

⚙ For bearing detailed dimensions, see P989.

Part Number Type	D	Double Flanged		Tapered	d	P	dh	T	S	B	Bearing Used	
		V Groove Width	F 0.5mm Increment	Z 0.5mm Increment								
Flat FTMRN FTMRB FTMRG FTMRA FTMRP	15	4	0.5~2.0	-	3	10	8	9	-	4	623ZZ	
					4	13	11	10	2.5	5	624ZZ	
					5	16	13	10	2.5	5	625ZZ	
	(30)	5	0.5~2.0	-	0.5~3.0	6	19	16	12	3	6	626ZZ
						4	13	11	10	2.5	5	624ZZ
						5	16	13	10	2.5	5	625ZZ
	*20	6	-	-	-	6	19	16	11	3	6	626ZZ
						8	24	21	14	3	8	628ZZ
						8	24	21	14	3	8	628ZZ
	(40)	8	-	-	0.5~3.0	5	16	13	10	2.5	5	625ZZ
						6	19	16	11	3	6	626ZZ
						8	24	21	14	3	8	628ZZ
*30	6	0.5~2.0	-	-	5	16	13	10	2.5	5	625ZZ	
					6	19	16	11	3	6	626ZZ	
					8	24	21	14	3	8	628ZZ	
(50)	8	-	-	-	10	26	23	14	3	8	6000ZZ	
					6	19	16	11	2.5	6	626ZZ	
					8	24	21	14	3	8	628ZZ	
*40	8	0.5~2.0	-	0.5~3.0	6	19	16	11	2.5	6	626ZZ	
					8	24	21	14	3	8	628ZZ	
					10	26	23	14	3	8	6000ZZ	
*50	10	-	-	-	6	19	16	11	2.5	6	626ZZ	
					8	24	21	14	3	8	628ZZ	
					10	26	23	14	3	8	6000ZZ	
(60)	12	-	-	-	8	24	21	14	3	8	628ZZ	
					10	26	23	14	3	8	6000ZZ	
					12	28	25	16	4	8	6001ZZ	

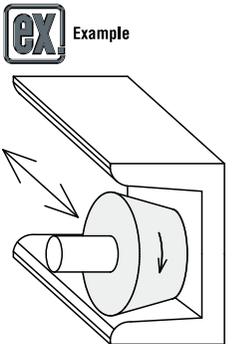
⚙ Flat Type are available in sizes in () only.
 ⚙ Tapered Type are available in * marked sizes only.

Ordering Example

Part Number	V Groove Width	F	Z
FTMRN40	4	F0.5	Z3.0
HMRA30			
TMRN20			

D	V Groove Width	Unit Price						
		Flat			Double Flanged			Tapered
		FTMRN (x1.0)	FTMRA	FTMRP	HMRN	HMRA	HMRP	TMRN
15	4	FTMRB (x1.1)						
20								
30								
20	5							
30								
40								
30	6							
40								
50								
40	8							
50								
60								
100	11							

⚙ The unit price for FTMRB is a multiplier (x1.1) applied to the price shown in the list. The unit price for FTMRG is a multiplier (x1.2) applied to the price shown in the list.



Suitable for use with channel steel. EX.) Guides for elevators, etc.