

Rollers & Conveyor Components

Rollers & Conveyor Components



Product Name	Rollers - Straight / Crowned -	Rollers - With Bearings -	Rollers - Urethane Thickness Selectable -	Resin Rollers
Page	1119	1121	1123	1124



Core Material Press Fit Straight Type -	With Core Material Press Fit with Bearings -	Hollow Aluminum Rollers	Rollers - Tapped Straight / Crowned Type -	Rollers - Set Screw Holes -
1125	1126	1126	1127	1128



Rollers - With Keyway -	Keywayed and Tapped	Grooved Rollers	With Bearings -	Vertical Guide Rollers - Core Material / Urethane Type -	Rollers with Oil Free Bushings - Core Material / Urethane Type -	Side Through Hole Rollers
1129	1129	1130	1130	1131	1131	1132



End Feed Rollers	Urethane Rollers with Collars	Knurled Urethane Rollers - Set Screw Type -	Bearing Adhesive Integrated Urethane Rollers	Urethane Rollers - Set Screw Type -	Knurled Urethane Rollers	Hollow Rollers - Straight -
1132	1133	1133	1134	1134	1134	1135



With Bearings -	Economy Type -	Pipe Roller with One Way Clutch -	Set Screw Type -	Long Hollow Rollers	Hollow Rollers with Shafts	Precision Rollers	Urethane Rollers with Shafts
1136	1137	1138	1139	1140	1141	1142	1143



Both Ends Threaded -	Urethane Thickness Configurable -	Belt Tensioners - Screw Type -	Spring-Loaded -	Urethane Molded Bearings - Protruded Inner Ring -	Urethane Press-Fit Bearings	Silicon Rubber / Urethane Molded Bearings -	R Type -
1143	1144	1145	1147	1149	1149	1151	1152



Hubbed Type -	Threaded Flat Type -	Threaded R Type -	Threaded Bearings	Urethane Molded Bearing Shafts	Eccentric Bushings	Cantilever Rollers	Engineered Plastic Bearings - Antistatic -
1152	1153	1154	1155	1155	1155	1156	1157



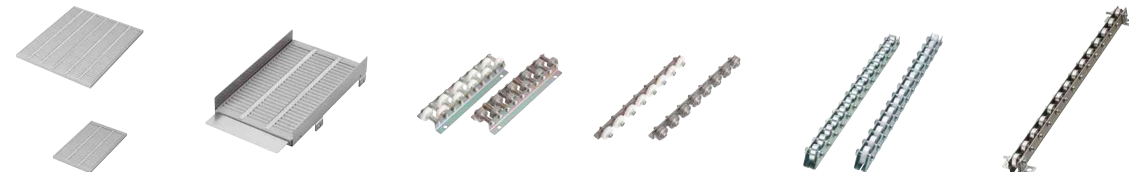
Flat Type -	Engineered Plastic Bearings - R Type -	With Bracket -	Engineered Plastic Bearings - U Groove -	V Groove Type -
1157	1157	1158	1158	1158



One Side Flanged -	Guide Rollers	Motor Rollers	Conveyor Rollers Urethane Lined Type -	Conveyor Rollers - Shaft & Roller Sets -	Roller with Sprocket	Plastic Conveyor Rollers
1158	1159, 1160	1162	1163	1164	1164	1164



Conveyor Roller Shafts	Miniature Conveyor Rollers	Resin Conveyor Rollers DIA. 20, 30, 50mm -	Roller Conveyors	Conveyor Wheels	Rubber and Urethane Lined Wheels for Conveyors
1165	1165	1167	1168 / 1169	1171	1171



Miniature Roller Panels -	Miniature Roller Chutes -	Roller Carriers - Cantilever Type -	Zigzag Type -	Roller Width 7-9 / 15 / 25mm Milled -	With Bracket -
1172	1172	1173	1174	1175 ~ 1178	1175 ~ 1178



Press Formed Rollers / Urethane Rollers -	Roller Width 50mm Type -	Ball Rollers - Hex Head Stud -	Press Fit -	Insertion / Adhesive Type -	Plunger Type Ball Rollers / Press Fit -	Threaded Type -
1176	1178	1179	1179	1179	1179	1179



Nut Mount / Flange Mounting Type -	Set Screw Type -	Round Bolt -	Ball Roller Units	Ball Rollers - Milled Steel Type -	Steel Press Formed Type -
1180	1180	1180	1181	1182	1182



Engineering Plastic Rails - Flat Type -	Engineering Plastic Rails - Shaped Type -	Slide Tapes / Strong Double-Sided Tapes	Guide Rails	Stainless Steel Sliding Plates	Product Chute Thin Plates
1183	1185	1186	1186	1187	1187

Rollers

Straight, Crowned-(L=15~100)



Type				Material	Surface Treatment (Lining)	Hardness	Straight	Crowned
L Selectable	L Configurable	L Selectable	L Configurable					
Core				EN 1.1191 Equiv.	Black Oxide	-		
ROLB	-	-	-	EN 1.4301 Equiv.	Electroless Nickel Plating	-		
ROLS	-	ROCS	-	EN AW-5052 Equiv.	Clear Anodize	-		
ROLA	-	ROCA	-	EN 1.4301 Equiv.	Urethane (Natural Color)	Shore A95		
ROKS	-	-	-	EN AW-5052 Equiv.	Urethane (Natural Color)	Shore A95		
ROKA	-	-	-	EN 1.4301 Equiv.	Urethane (Natural Color)	Shore A90		
ROUS	ROFUS	ROCUS	-	EN AW-5052 Equiv.	Urethane (Natural Color)	Shore A90		
ROUA	ROFUA	ROCUA	ROFCUA	EN 1.4301 Equiv.	Urethane (Natural Color)	Shore A90		
ROGS	-	ROCGS	-	EN 1.4301 Equiv.	Urethane (Natural Color)	Shore A70		
ROGA	ROFGA	ROCGA	-	Aluminum Alloy 5000 series	Urethane (Natural Color)	Shore A50		
ROHS	ROFHS	ROCHS	-	EN 1.4301 Equiv.	Antistatic Urethane (Gray)	Shore A90		
ROHA	ROFHA	ROCHA	-	EN AW-5052 Equiv.	Antistatic Urethane (Gray)	Shore A90		
ROMS	-	-	-	EN 1.4301 Equiv.	Silicon Rubber (Light Gray)	Shore A70		
ROMA	-	-	-	EN AW-5052 Equiv.	Silicon Rubber (Light Gray)	Shore A50		
ROSS	ROFSS	ROCSS	-	EN 1.4301 Equiv.	Heat Resistant Urethane (Red Brown)	Shore A90		
ROSA	-	-	-	EN AW-5052 Equiv.	NBR (Black)	Shore A60		
ROJA	-	-	-	EN AW-5052 Equiv.	NBR (Black)	Shore A60		
ROTS	-	-	-	EN AW-5052 Equiv.	NBR (Black)	Shore A60		
ROTA	-	-	-	EN AW-5052 Equiv.	NBR (Black)	Shore A60		
RONA	-	-	-	EN AW-5052 Equiv.	NBR (Black)	Shore A60		

④ Urethane, Silicon Rubber and NBR are baked on the roller's outer diameter.

④ When L≤dx3, hole d is machined from the same direction.

④ When L>dx3, hole d is machined from both ends as shown below. There may be no relief in some cases.

L Selectable

Part Number			D	dH7 Selection				L Selection								
Type																
Straight Core Only ROLB ROLM ROLS ROLA	Urethane	Silicon Rubber	20	8				15	20	25	30	40	50			
	ROKS ROKA ROUS ROUA ROGS ROGA ROHS ROHA ROMS ROMA	ROSS ROSA ROJA	25	8	10	12		15	20	25	*30	40	50			
		Heat Resistant Urethane	30	8	10	12	*15	15	20	25	30	40	50			
			35		10	*12	15	20	*20	25	30	*40	50			
		NBR	40		10	12	15	*20	20	25	30	40	50			
	Crowned Core Only ROCS ROCA	Urethane	Silicon Rubber	50			12	15	20	25		25	30	40	50	100
		ROCUS ROCUA ROCGS ROCHA	ROCSS	60			12	15	20	25	30		30	40	50	100
				80				15	20	*25	30			40	50	100

④ D60 and D80 are not available for ROSS, ROSA, ROJA, ROCSS and RONA. ④ * marked sizes are not available for Core Only Type.

L Configurable

Part Number		D	dH7 Selection						L	
Type									1mm Increment	
Straight Urethane ROFUS ROFUA ROFGA ROFHS ROFHA Crowned Urethane ROFCUA	Silicon Rubber ROFSS	20	8						16~49	
		25	8	10	12					
		30	8	10	12	*15				
		35	10 *12 15 20						21~49	
		40	10 12 15 *20							
		50	12 15 20 25							
		60	12 15 20 25 30						31~99	
		80	15 20 *25 30						41~99	

④ * marked sizes are not available for Core Only Type. ④ Urethane may discolor over time, but there is no effect on physical properties.

④ D60 and D80 are not available for ROFSS. ④ L dimensions that can be configured in L Selectable Type, cannot be selected.



Ordering Example
Part Number - d - L
ROLB20 - 8 - 30

L Dimension Selectable - Straight

D	L	Unit Price																	
		Straight																	
		Core Only				Urethane				Antistatic Urethane		Silicon			Heat Resistant Urethane		NBR		
		ROLB	ROLM	ROLS	ROLA	ROKS	ROKA	ROUS	ROUA	ROGS	ROGA	ROHS	ROMA	ROSS	ROSA	ROJA	ROTS	ROTA	RONA
20	15~25																		
	30~50																		
25	15~25																		
	30~50																		
30	15~25																		
	30~50																		
35	20~25																		
	30~50																		
40	20~25																		
	30~50																		
50	25																		
	30~50																		
	100																		
60	30~50													-	-	-			-
	100													-	-	-			-
80	40~50													-	-	-			-
	100													-	-	-			-

- Crowned

D	L	Unit Price						
		Crowned						
		Core Only		Urethane			Silicon	
		ROCS	ROCA	ROCUS	ROCUA	ROCGS	ROCGA	ROCSS
20	15~25							
25	30~50							
30	15~25							
35	30~50							
40	20~25							
50	30~50							
60	20~25							
80	30~50							

L Dimension Selectable - Straight, Crowned

D	L	Unit Price						
		Straight						
		Urethane				Silicon		Crowned
		ROFUS	ROFUA	ROFHS	ROFGA	ROFSS	ROFCUA	Urethane
20	16~25							
25	26~49							
30	16~25							
35	26~49							
40	21~25							
50	26~49							
60	31~50							
80	51~99							



Alterations
Part Number - d - L - (MC, UDC)
ROUS20 - 8 - 30 - UDC

Alterations	Code	Spec.
Tapping 	MC	Adds 2 tapped holes at 90°. D M 20, 25, 30 3 35, 40 4 50, 60, 80 5 Ordering Code MC

Alterations	Code	Spec.
Change to Antistatic Urethane (Urethane Color: Gray)	UDC	Change Urethane (Shore A90) to Antistatic Urethane Ordering Code UDC Specific Volume Resistivity 2.1 x 10 ⁹ Ω·cm Surface Resistivity 4.0x10 ⁹ Ω (Temperature 30°C / Humidity 60%)

④ For Core Only and Urethane (Natural Color) Tapped Type, refer to the next page.

With Bearings (L=15 ~ 100)

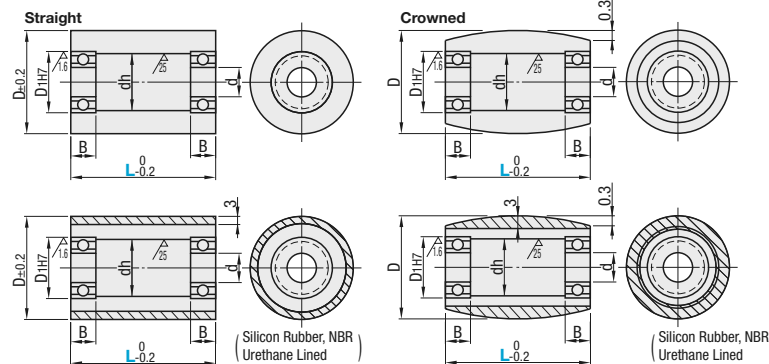


Rot-

For bearing detailed dimensions, see  **P.989, 993.**

Type		Material	Surface Treatment (Lining)	Bearing	Hardness	
Straight	Crowned					
L Selectable	L Configurable	L Selectable	Core			
RORB	-	ROCRB	EN 1.1191	Black Oxide	-	
RORM	-	ROCRM	-	Electroless Nickel Plating	-	
RORS	-	ROCRS	EN 1.4301 Equiv.	-	-	
RORA	-	ROCAR	EN AW-5052 Equiv.	Clear Anodize	-	
RORKS	-	-	EN 1.4301 Equiv.	Urethane (Natural Color)	Steel	Shore A95
ROKA	-	-	EN AW-5052 Equiv.			
RORUS	ROFRUS	ROCRUS	EN 1.4301 Equiv.			
RORUZ	-	-	EN 1.4301 Equiv.			
RORUA	ROFRUA	ROCRUA	EN AW-5052 Equiv.		Stainless Steel	Shore A90
ROUP	-	-	MC Nylon			
RORGS	-	ROCRGS	EN 1.4301 Equiv.		Steel	Shore A70
ROGA	ROFRGA	ROCRGA	Aluminum Alloy 5000 series			
RORHS	-	ROCRHS	EN 1.4301 Equiv.			
ROPHA	ROFRHA	-	EN AW-5052 Equiv.			
RORSS	ROFRSS	ROCRSS	EN 1.4301 Equiv.	Silicon Rubber (Light Gray)	Shore A70	
RORSA	-	-	EN AW-5052 Equiv.			
RORSJ	-	-	EN 1.4301 Equiv.			
RORIA	-	-	EN AW-5052 Equiv.			
ROWRS	-	-	EN 1.4301 Equiv.	Silicon Rubber (White)	Steel	Shore A70
RORTS	ROFRTS	-	EN 1.4301 Equiv.			
ORTA	-	-	EN AW-5052 Equiv.			
RORNS	-	-	EN 1.4301 Equiv.			
ORNA	-	-	EN AW-5052 Equiv.	Operating Temperature: ~ 110°C		Shore A90
			NBR (Black)		Shore A60	

📌 Urethane, Silicon Rubber and NBR are baked on the roller's outer diameter.

$$\frac{6.3}{\nabla} \left(\frac{25}{\nabla} \frac{1.6}{\nabla} \right)$$


☒ L Selectable

Part Number			D	L Selection	d	D1(H7)	dh	B	Bearing Used		
Type		No.									
Straight Core Material Only	Silicon Rubber RORSS RORSA RORJS RORJA RORWS	Crowned Core Only ROCRB ROCRM ROCRS ROCRA	(20)	20	15 20 25 30 40 50	6	15	10	5	696ZZx2	
			25	25	20 25 30 40 50 60 70 80 90 100	6	15	10	5	696ZZx2	
			30	30	20 25 30 40 50 60 70 80 90 100	8	19	15	6	698ZZx2	
			35A	35	25 30 40 50	8	22	15	7	608ZZx2	
35	25 30 40 50 60 70 80 90 100	10	22		18	6	6900ZZx2				
Urethane RORKS RORKA RORUP RORUS RORUZ RORUA RORGS RORGA RORHS RORHA	Heat Resistant Urethane RORTS RORTA	Urethane ROCRUS ROCRUA ROCRGS ROCRGA ROCRHS	40A	40	25 30 40 50	10	26	18	8	6000ZZx2	
			40		25 30 40 50 60 70 80 90 100	12	28	24	8	6001ZZx2	
			50A		25 30 40 50	100	12	32	24	10	6201ZZx2
			50		25 30 40 50 60 70 80 90 100	15	32	28	9	6002ZZx2	
	NBR RORNS RORNA	Silicon Rubber ROCRSS									

⚠ D20 is only applicable to Core Only Types (RORB, RORM, RORS, RORA, ROCRB, ROCRM, ROCRS and ROCRA).

⚠ No. 35A, 40A, 50A are not available for RORUP.

■ **L Configurable** (Straight Only)

Part Number		D	L 1mm Increment	d	D1(H7)	dh	B	Bearing Used
Type	No.							
Urethane ROFRUS ROFRUA ROFRGA ROFRHA	Silicon Rubber ROFRSS	25	21~49	6	15	10	5	696ZZx2
		30			19	15	6	698ZZx2
		35A		8	22	18	7	608ZZx2
		35					6	6900ZZx2
	Heat Resistant Urethane ROFRTH	40A	10				26	8
		40	12	28	24	6001ZZx2		
		50A	12	32	10	6201ZZx2		
		50	15		28	9	6002ZZx2	

Urethane may discolor over time, but there is no effect on physical properties.

⚠ L dimensions that can be configured in L Selectable Type, cannot be selected.



Ordering Example

Part Number	-	L
RORB30	-	30
ROFRSS40	-	38

☒ L Selectable

[illegible][illegible]

■ L Configurable

D	L	Unit Price				
		Straight				
		Urethane			Silicon	Heat Resistant Urethane
		ROFRUS	ROFRUA	ROFRGA ROFRHA	ROFRSS	ROFRTS
25	21-25					
	26-49					
30	21-25					
	26-49					
35	26-49					
35A						
40	26-49					
40A						
50	26-50					
50A	51-99					



Alterations

Part Number - L - (UDC, SB)
RORNS40 - 50 - SB

Alterations	Code	Spec.
Change to Antistatic Urethane (Urethane Color: Gray)	UDC	Change Urethane (Shore A90) to Antistatic Urethane <u>Ordering Code</u> UDC Specific Volume Resistivity 2.1x10 ⁹ Ω·cm Surface Resistivity 4.0x10 ⁹ Ω (Temperature 30°C / Humidity 60%)

Alterations	Code	Spec.
Bearing Material	SB	Changes the Bearing to Stainless Steel Bearing Ordering Code SB ⊗ Not applicable to RORUZ

Rollers

Core Material Press Fit Straight Type

■ **Features:** Core material is press-fit in the surface material and more economical than the Baked Type.

■ Core Material Press Fit Straight Type

RoHS

Type	Material		Hardness
	Core	Urethane, Plastic	
ROUSP	EN 1.4301 Equiv.	Urethane (Natural Color)	Shore A90
ROUAP	EN AW-5052 Equiv.	Urethane (Natural Color)	Shore A90
ROMAP	EN AW-5052 Equiv.	Foam Urethane (Green)	Shore A65
ROSAP	EN AW-5052 Equiv.	Chloroprene Rubber Sponge	Shore A25

④ Core material is press fit into Urethane, Foam Urethane and Chloroprene Rubber Sponge.

④ When $L \leq dx3$, hole d is machined from the same direction.

④ When $L > dx3$, hole d is machined from both ends as shown below. There may be no relief in some cases.

Part Number																
Type			D		dh7 Selection				L Selection							
Urethane ROMSP ROUAP	Foam Urethane ROMAP	Chloroprene Rubber Sponge ROSAP	20	8					15	20	25	30	40	50		
			(25)	8	10	12			15	20	25	30	40	50		
			(30)	8	10	12	15			15	20	25	30	40	50	
			35			10	12	15	20			20	25	30	40	50
			40			10	12	15	20			20	25	30	40	50
			(50)			12 15 20 25				25 30 40 50						
📌Chloroprene rubber sponge is available in sizes in () only.																

④ Chloroprene rubber sponge is available in sizes in () only.

Ordering Example

Part Number - d - L

ROUSP20 - 8 - 30

Alterations

Part Number - d - L - (MC, UDC)

ROUSP20 - 8 - 30 - UDC

D	L	Unit Price			
		ROUSP	ROUAP	ROMAP	ROSAP
20	15~25				-
	30~50				-
25	15~25				
	30~50				
30	15~25				
	30~50				
35	20~25				-
	30~50				-
40	20~25				-
	30~50				-
50	25				
	30~50				

Urethane Load (Reference)

Material	Load Standard N (kgf)	
	Radial	Axial
Urethane	147(15)	242(25)
Foam Urethane	97(10)	97(10)
Chloroprene Rubber Sponge	-	18(2)

* Data above are for reference only, not guaranteed values.

④ A core material is press fit into urethane, foam urethane and chloroprene rubber sponge, and unbalanced load may cause urethane and sponge part to slip or misalign with the core.

④ Urethane may discolor over time, but there is no effect on physical properties.

Alterations	Code	Spec.
Tapping Urethane	MC	Adds 2 tapped holes at 90°. D M 2, 25, 30 3 35, 40 4 50 5 Ordering Code MC
Change to Antistatic Urethane (Urethane Color: Gray)	UDC	Change Urethane (Shore A90) to Antistatic Urethane Ordering Code UDC Specific Volume Resistivity $2.1 \times 10^9 \Omega \cdot \text{cm}$ Surface Resistivity $4.0 \times 10^9 \Omega$ (Temperature 30°C / Humidity 60%) ④ Not applicable to Foam Urethane Type (ROMAP).

Foam Urethane

Closed-cell foamed urethane. Each bubble is separated by walls resulting in lower absorption of water, oil and chemicals compared to general sponges with connected cells. Also, it excels in gripping power and shock absorption compared to conventional urethane and other general rubber. Especially suitable for conveying thin materials.

Chloroprene Rubber Sponge

A chloroprene polymerized synthetic rubber. In comparison to natural rubber, it excels in rebound resilience, weather resistance, aging resistance, ozone resistance, heat resistance, low temp. resistance, and oil resistance. It is an overall well balance rubber but not well suited for use in low (-35°C and below) temperature. Mainly used for general industrial products.

☞ For the properties, see P2 -389~391.

Rollers / Aluminum Rollers

With Core Material Press Fit Bearings

■ With Core Material Press Fit Bearings

RoHS

Type	Material		Hardness	Bearing
	Core	Urethane, Plastic		
RORUSP	EN 1.4301 Equiv.	Urethane (Natural Color)	Shore A90	Steel
RORUAP	Aluminum Alloy 5000 series	Urethane (Natural Color)	Shore A90	
RORMSP	EN 1.4301 Equiv.	Foam Urethane (Green)	Shore A65	
RORMAP	EN AW-5052 Equiv.	Foam Urethane (Green)	Shore A65	
RORSSP	EN 1.4301 Equiv.	Chloroprene Rubber Sponge	Shore A25	
RORSAP	EN AW-5052 Equiv.	Chloroprene Rubber Sponge	Shore A25	

④ Core material is press fit into Urethane, Foam Urethane and Chloroprene Rubber Sponge.

Part Number		D		L Selection					d	D1(H7)	dh	B	Bearing Used
Type													
Urethane RORUSP RORUAP Foam Urethane RORMSP RORMAP	Chloroprene Rubber Sponge RORSSP RORSAP	25		20	25	30	40	50	6	15	10	5	B696ZZx2
		30		20	25	30	40	50	8	19	15	6	B698ZZx2
		35			25	30	40	50	10	22	18	6	B6900ZZx2
		40			25	30	40	50	12	28	24	8	B6001ZZx2
		50			25	30	40	50	15	32	28	9	B6002ZZx2

④ For bearing detailed dimensions, see P989.

Ordering Example

Part Number - L

RORUSP25 - 30

Alterations

Part Number - L - (UDC, SB)

RORUSP25 - 30 - UDC

D	L	Unit Price					
		RORUSP	RORUAP	RORMSP	RORMAP	RORSSP	RORSAP
25	20~25						
	30~50						
30	20~25						
	30~50						
35	25						
	30~50						
40	25						
	30~50						
50	25						
	30~50						

Alterations	Code	Spec.
Change to Antistatic Urethane (Urethane Color: Gray)	UDC	Change Urethane (Shore A90) to Antistatic Urethane Ordering Code UDC Specific Volume Resistivity $2.1 \times 10^9 \Omega \cdot \text{cm}$ Surface Resistivity $4.0 \times 10^9 \Omega$ (Temperature 30°C / Humidity 60%) ④ Not applicable to Foam Urethane Type.
Bearing Material	SB	Bearing material is changed to stainless steel. ④ Chloroprene Rubber Sponge not applicable

■ Hollow Aluminum Rollers

RoHS

ARO

Material EN AW-5052 Equiv. Surface Treatment: Clear Anodize

Part Number		L	d	B	P	Unit Price				
Type	D	1mm Increment	1mm Increment	1mm Increment	1mm Increment	L50~100	L101~150	L151~200	L201~250	L251~300
AROE	30	50~300	19~55 (d≤D-5)	4~15	15~53 (P≤d-2)					
	40									
	50									
	60									

Ordering Example

Part Number - L - d - B - P

ARO30 - 100 - 24 - B6 - P22

Rollers - Tapped

Straight, Crowned (L=15 ~ 100)

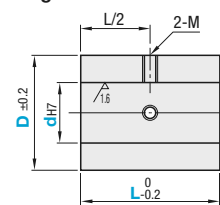


RoHS

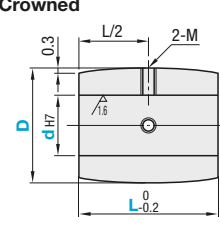
Type	Material	Surface Treatment (Lining)	Hardness
Straight	Crowned		
ROLSN	ROCSN	EN 1.4301 Equiv.	-
ROLAN	ROCAN	EN AW-5052 Equiv.	-
ROUSN	ROCUSN	EN 1.4301 Equiv.	Shore A90
ROUAN	ROCUAN	EN AW-5052 Equiv.	Shore A70
ROGSN	-	EN 1.4301 Equiv.	Shore A50
ROGAN	-	EN AW-5052 Equiv.	-
ROHSN	-	EN 1.4301 Equiv.	-
ROHAN	-	EN AW-5052 Equiv.	-

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

Straight



Crowned



When L≤dx3, hole d is machined from the same direction.
When L>dx3, hole d is machined from both ends as shown below. There may be no relief in some cases.

Part Number		D		dh7		L		M	
Type				Selection		Selection			
Straight Core Only ROLSN ROLAN	Urethane ROUSN ROUAN ROGSN ROGAN ROHSN ROHAN	20		8		15 20 25 30 40 50		M3	
		25		8 10 12		15 20 25 *30 40 50		M3	
		30		8 10 12 *15		15 20 25 30 40 50		M4	
		35		10 *12 15 20		*20 25 30 *40 50		M4	
		40		10 12 15 *20		20 25 30 40 50		M5	
Crowned Core Only ROCSN ROCAN	Urethane ROCUSN ROCUAN	50		12 15 20 25		25 30 40 50 100		M5	
		60		12 15 20 25 30		30 40 50 100		M5	
		80		15 20 *25 30		40 50 100		M5	

* marked sizes are not available for Core Only Type. Urethane may discolor over time, but there is no effect on physical properties.

Ordering Example

Part Number	-	d	-	L
ROLAN30	-	8	-	30
ROUAN40	-	10	-	25

Alterations

Part Number	-	d	-	L	-	(UDC)
ROUSN50	-	12	-	50	-	UDC

D	L	Unit Price									
		Straight						Crowned			
		Core Only		Urethane				Core Only		Urethane	
		ROLSN	ROLAN	ROUSN	ROUAN	ROGSN	ROGAN	ROCSN	ROCAN	ROCUSN	ROCUAN
20	15-25										
	30-50										
25	15-25										
	30-50										
30	15-25										
	30-50										
35	20-25										
	30-50										
40	20-25										
	30-50										
50	25										
	30-50										
	100										
60	30-50										
	100										
80	40-50										
	100										

Rollers

Straight with Set Screw Holes

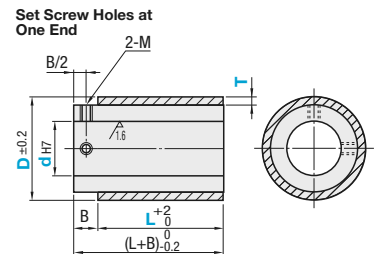


RoHS

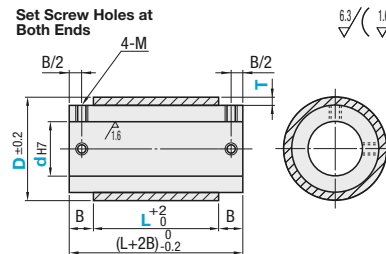
L Selectable	Urethane Thickness Selectable, L Configurable	Material	Hardness
Set Screw Holes at Both Ends	Set Screw Hole at One End	Set Screw Holes at Both Ends	
RONUS	ROEKUS	ROENUS	EN 1.4301 Equiv.
RONUA	ROEKUA	ROENUA	EN AW-5052 Equiv.
RONGS	ROEKGS	-	EN 1.4301 Equiv.
RONGA	ROEKGA	ROENGA	Aluminum Alloy 5000 series
RONHA	ROEKHA	ROENHA	EN AW-5052 Equiv.
RONSS	-	-	EN 1.4301 Equiv.
RONSA	-	-	EN AW-5052 Equiv.
RONTS	-	-	EN 1.4301 Equiv.

Urethane and Silicon Rubber are baked on the outer circumference of the core material.

Set Screw Holes at One End



Set Screw Holes at Both Ends



When L+2B≤dx3, hole d is machined from the same direction.
When L+2B>dx3, hole d is machined from both ends as shown above. There may be no relief in some cases.

L Selectable (Set Screw Holes at Both Ends Type Only)

Part Number		D		dh7 Selection		L Selection						T	B	M			
Type																	
RONUS RONUA RONGS RONGA	RONHA	20	8	25	8	10	12	15	15	20	25	30	40	50	3	8	M3
	RONSS	30	8	10	12	15	15	20	25	30	40	50					
	RONSA	35		10	12	15		20	25	30	40	50					
	RONTS	40		10	12	15		20	25	30	40	50					
			50			12	15			25	30	40	50	100		10	M5

Urethane Thickness Selectable (Set Screw Holes at One End / Both Ends)

Part Number		dH7		L		T Selection	B	M	
Type	D	Selection		10mm Increment					
Set Screw Hole at One End	Set Screw Holes at Both Ends	40	10 12 15		30~50		5	10	M5
		50	10 12 15				5 10		
	ROEKUS	ROENUS	60	12 15 20		30~100			
	ROEKUA	ROENUA	80	15 20 25					
	ROEKGS	ROENGA	100	20 25 30					
	ROEKGA	ROENHA					12	M6	
ROEKHA									

L Selectable (Set Screw Holes at Both Ends Type Only)

D	L	Unit Price							
		Set Screw Holes at Both Ends							
		RONUS	RONUA	RONGS	RONGA	RONSS	RONSA	RONTS	
20	15, 20, 25								
	30, 40, 50								
25	15, 20, 25								
	30, 40, 50								
30	15, 20, 25								
	30, 40, 50								
35	20, 25								
	30, 40, 50								
40	20, 25								
	30, 40, 50								
	25								
50	30, 40, 50								
	100								

Urethane Thickness Selectable (Set Screw Holes at One End / Both Ends)

D	L	Unit Price							
		Set Screw Holes at One End							
		ROEKUS	ROEKUA	ROEKGS	ROEKGA	ROEKHA	ROENUS	ROENUA	ROENGA
40	30~50								
50	30~50								
	60~100								
60	30~50								
	60~100								
80	30~50								
	60~100								
100	30~50								
	60~100								

Urethane may discolor over time, but there is no effect on physical properties.

Ordering Example

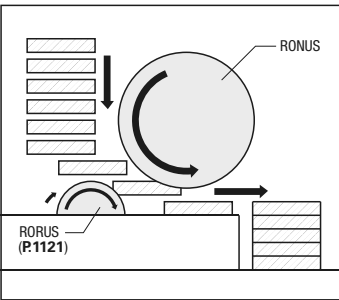
Part Number	-	d	-	L	-	T
RONSS20	-	8	-	30	-	
ROEKUA50	-	15	-	80	-	T10

Alterations

Part Number	-	d	-	L	-	T	-	(UDC)
RONUS20	-	8	-	30	-		-	UDC
ROEKUS50	-	15	-	80	-	T10	-	UDC

Alteration	Code	Spec.
Change to Antistatic Urethane (Urethane Color: Gray)	UDC	Change Urethane Shore A90 to Antistatic Urethane Change to Urethane (Ordering Code) UDC Specific Volume Resistivity 2.1x10 ¹⁰ Ω·cm Surface Resistivity 4.0x10 ¹⁰ Ω (Temperature 30°C / Humidity 60%)

Example



As a Feeding Roller for a Card Collator

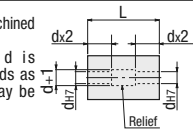
Rollers

Straight with Keyway

■Features: 5th business day shipping is available for shaft bore with keyway machining and Urethane Lined.

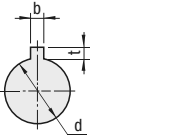


RoHS

L Selectable		Urethane Thickness Selectable		Material		Hardness	When L≤dx3, hole d is machined from the same direction. When L>dx3, hole d is machined from both ends as shown below. There may be no relief in some cases.
Straight	Tapped	Straight	Tapped	Core	Lining		
ROUSK	ROUSKN	ROEUSK	ROEUSKN	EN 1.4301 Equiv.	Urethane (Natural Color)	Shore A90	
ROUAK	ROUAKN	ROEUAK	ROEUAKN	EN AW-5052 Equiv.		Shore A70	
ROGSK	ROGSKN	ROEGSK	ROEGSKN	EN 1.4301 Equiv.		Shore A50	
ROGAK	ROGAKN	ROEGAK	ROEGAKN	Aluminum Alloy 5000 series			
ROHSK	ROHSKN	ROEHSK	ROEHSKN	EN 1.4301 Equiv.			
ROHAK	ROHAKN	ROEHAK	ROEHAKN	EN AW-5052 Equiv.			

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

Keyway Dimensions



Shift Hole Dia.	d	b	t
Reference Dim.	Reference Dim.	Reference Dim.	Reference Dim.
8	3	±0.0125	1.4
10	4	±0.0150	1.8
12	5	±0.0150	2.3
15	6	±0.0180	2.8
20	8	±0.0180	3.3
25			±0.1
30			0

Part Number				L												T	M						
Type	D	dh7 Selection				L Selection																	
Straight	Tapped	20	8					15	20	25	30	40	50	60	70	80	90	100	3	3			
ROUSK	ROUSKN	25	8	10	12					15	20	25	30	40	50	60	70	80			90	100	
ROUAK	ROUAKN	30	8	10	12	15					15	20	25	30	40	50	60	70			80	90	100
ROGSK	ROGSKN	35		10	12	15	20					20	25	30	40	50	60	70			80	90	100
ROGAK	ROGAKN	40		10	12	15	20					20	25	30	40	50	60	70			80	90	100
ROHSK	ROHSKN	50																				4	
ROHAK	ROHAKN	50			12	15	20	25					25	30	40	50	60	70	80	90	100		

Urethane Thickness Selectable										
Part Number		dh7				L		T	M	
Type		D	Selection				10mm Increment	Selection		
Straight ROEUSK ROEUAK ROEGSK ROEGAK ROEHSK ROEHAH	Tapped ROEUSKN ROEUAKN ROEGSKN ROEGAKN ROEHAHN	50	10	12	15		30~100	5	5	
		60	12		15	20				
		80	15		20	25				
		100	20		25	30				



Ordering Example

Part Number - d - L - T

ROUSK20 - 8 - 30

ROGSKN30 - 12 - 40

ROEUSK80 - 20 - 50 - T5



Alterations

Part Number - d - L - T - (UDC, LC)

ROUSK20 - 8 - 30 - UDC

ROEUSK30 - 20 - 50 - T5

ROUAK30 - 10 - 30 - LC29

Alterations	Code	Spec.
Change to Antistatic Urethane (Urethane Color: Gray)	UDC	Change Urethane Shore A90 to Antistatic Urethane Change to Urethane Ordering Code UDC Specific Volume Resistivity 2.1x10 ¹⁰ -cm Surface Resistivity 4.0x10 ¹⁰ Ω (Temperature 30°C / Humidity 60%)
L Dimension	LC	Ordering Code LC11 LC=1mm Increment 10≤LC<L Only applicable to L Selectable Types.

L Selectable		Unit Price					
D	L	Straight - Tapped For Tapped Type, add to the prices shown below.					
		ROUSK (ROUSKN)	ROUAK (ROUAKN)	ROGSK (ROGSKN)	ROHSK (ROHSKN)	ROGAK (ROGAKN)	ROHAK (ROHAKN)
20	15~25						
	30~50						
	60~100						
25	15~25						
	30~50						
	60~100						
30	15~25						
	30~50						
	60~100						
35	20~25						
	30~50						
	60~100						
40	20~25						
	30~50						
	60~100						
50	25						
	30~50						
	60~100						

Urethane Thickness Selectable		Unit Price					
D	L	Straight - Tapped For Tapped Type, add to the prices shown below.					
		ROEUSK (ROEUSKN)	ROEUAK (ROEUAKN)	ROEGSK (ROEGSKN)	ROEGAK (ROEGAKN)	ROEHSK (ROEHSKN)	ROEHAK (ROEHAKN)
50	30~50						
	60~100						
60	30~50						
	60~100						
80	30~50						
	60~100						
100	30~50						
	60~100						

Urethane may discolor over time, but there is no effect on physical properties.

Groove Rollers

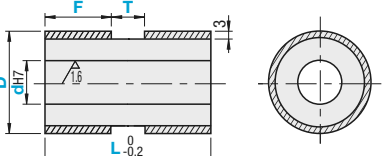


RoHS

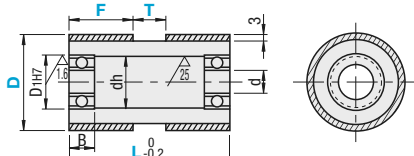
Type	Core	Material Lining	Bearing	Hardness
No Bearing / With Bearings	EN AW-5052 Equiv.	Urethane (Natural Color)	Steel	Shore A90

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

■No Bearing



■With Bearings



Bearings are removable.

No Bearing										
Part Number		dh7 Selection				1mm Increment				
Type	D					L	F	T		
ROUAM ROUSM	25	8	10	12		15~50	0~46 (F+T≤L-2)			
	30	8	10	12	15					
	35	10	12	15	20					
	40	10	12	15	20					
	50	12	15	20	25	25~100	0~96 (F+T≤L-2)			
	60	12	15	20	25	30				30~100
	80	15	20	25	30	40~100				
	80	15	20	25	30	40~100				

When L≤dx3, hole d is machined from the same direction.

When L>dx3, hole d is machined from both ends as shown below. There may be no relief in some cases.

With Bearings									
Part Number		1mm Increment			d	D _{H7}	dh	B	Bearing Used
Type	D	L	F	T					
RORUAM	25	20~50	0~46 (F+T≤L-2)		6	15	10	5	696ZZx2
	30				8	19	15	6	698ZZx2
	35				10	22	18	6	6900ZZx2
	40	25~50			12	28	24	8	6001ZZx2
	50			25~100		15	32	28	9

Relief

Urethane may discolor over time, but there is no effect on physical properties.

For bearing detailed dimensions, see P989.



Ordering Example

Part Number - d - L - F - T

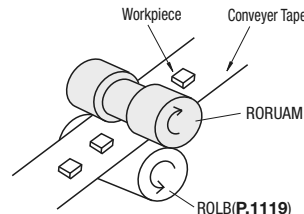
ROUSM30 - 8 - L30 - F10 - T5

RORUAM40 - L40 - F8 - T3

D	L	Unit Price		
		No Bearing	With Bearings	
25	15(20)~25	ROUAM	ROUSM	RORUAM
	26~50			
30	15(20)~25			
	26~50			
35	20(25)~25			
	26~50			
40	20(25)~25			
	26~50			
50	25			
	26~50			
	51~100			
60	30~50			
	51~100			
80	40~50			
	51~100			



Example



Workpiece

Conveyer Tape

RORUAM

ROLB(P.1119)

For clamping rollers of tape feed mechanisms

L dimensions in () are for Bearing Type.

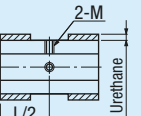
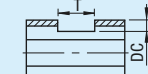


Alterations

Part Number - d - L - F - T - (MC, DC, SB)

ROUSM30 - 8 - L30 - F10 - T5 - MC

RORUAM30 - L40 - F10 - T5 - SB

Alterations	Tapping	Groove Depth	Bearing Material								
Code	MC	DC	SB								
Spec.	 Adds 2 tapped holes at 90°. <table border="1"><thead><tr><th>D</th><th>M</th></tr></thead><tbody><tr><td>25, 30</td><td>3</td></tr><tr><td>35, 40</td><td>4</td></tr><tr><td>50, 60, 80</td><td>5</td></tr></tbody></table> Ordering Code MC 🔴 Applicable to "No Bearing" Type only.	D	M	25, 30	3	35, 40	4	50, 60, 80	5	 🔴 No Bearing: $D-2xDC \geq d+6$ 🔴 With Bearings: $D-2xDC \geq dh+6$ 🔴 $T \geq 4$ 🔴 $DC \leq 15$ Changes groove depth in 1mm increment. Ordering Code DC5	Changes the Bearing to Stainless Steel Bearing. Ordering Code SB 🔴 Applicable to Bearing Type only.
	D	M									
25, 30	3										
35, 40	4										
50, 60, 80	5										

Vertical Guide Rollers / Rollers with Oil Free Bushings

Urethane Rollers / End Feed Rollers

With Side Through Holes

■Features: Preassembled rollers contribute to labor savings.

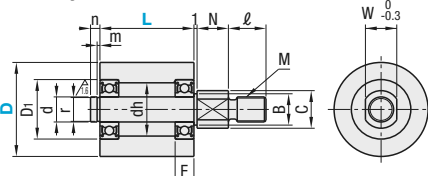
■Vertical Guide Rollers



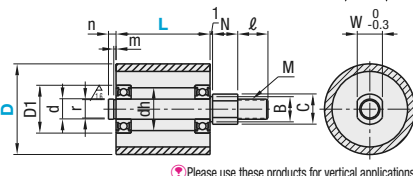
RoHS

Type	Material				Surface Treatment		
	Roller	Shaft	Retaining Ring	Bearing	Roller	Shaft	Retaining Ring
TGRB	EN 1.1191 Equiv.	EN 1.1191 Equiv.	Spring Steel	Steel	Electroless Nickel Plating	Electroless Nickel Plating	-
TGRS	EN 1.4301 Equiv.	EN 1.4301 Equiv.	EN 1.4301 Equiv.		-	-	-
TGRA	Aluminum Alloy 5000 series	EN 1.1191 Equiv.	Spring Steel		Clear Anodize	Electroless Nickel Plating	-
TGRAU	Aluminum Alloy 5000 series	EN 1.4301 Equiv.	EN 1.4301 Equiv.	-	Urethane Lining (Natural Color)	Shore A90	-
TGRSU	EN 1.4301 Equiv.	EN 1.4301 Equiv.	EN 1.4301 Equiv.	-	-	-	-

Core Only



Urethane Lined



Please use these products for vertical applications.

Part Number Type	D	L Selection	N	d	l	C	B	r	m	dh	D ₁	F	M (Coarse)	W	Used Bearing	Retaining Ring Standards Shape JIS Nominal	Unit Price				
																	TGRB	TGRS	TGRA	TGRAU	TGRSU
Core Only TGRB (EN 1.1191 Equiv.) TGRS (EN 1.4301 Equiv.) TGRA (Aluminum Alloy 5000 series)	20	20 25	10	6	9	10	8	5	2	0.7	10	15	5	6	696ZZ	E Type No.5					
	25	30 40 50																			
	30	20 25																			
	35	30 40 50																			
	40	20 25																			
Urethane TGRAU (Aluminum Alloy 5000 series) TGRSU (EN 1.4301 Equiv.)	25	30 40 50	10	6	9	10	8	5	2	0.7	10	15	5	6	696ZZ	E Type No.5					
	30	20 25																			
	35	30 40 50																			
	40	20 25																			
	50	25																			

Ordering Example

Part Number - L

TGRB30 - 30

TGRSU30 - 50

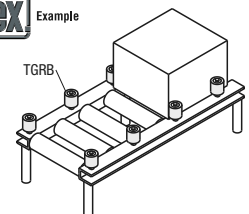
Alterations

Part Number - L - (NC)

TGRB25 - 30 - NC15

Example

TGRB



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.

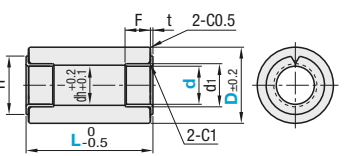
■Rollers with Oil Free Bushings



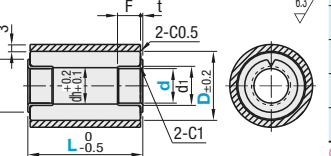
RoHS

Type	Roller		Oil Free Bushings
	Material	Surface Treatment	
FRTA	EN AW-5052 Equiv.	Clear Anodize	Filler Added PTFE Layer Sintered Bronze Layer Steel-backed Metal Layer (EN 1.0330 Equiv.: Tin Plating)
FRTS	EN 1.4301 Equiv.	-	
FRTAU	EN AW-5052 Equiv.	Urethane Lining (Natural Color) Shore A90	
FRTSU	EN 1.4301 Equiv.	-	

Core Only



Urethane Lined



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 (EN AW-5052 Equiv.) FRTS (EN 1.4301 Equiv.)	8	3	20' 25 30 40 50	0.8				
	10	5		1.0				
	12	5 6						
	15	6 8						
	18	8 10						
	20	10 12						
	25	10 12 15						
	30	10 12 15						
Urethane FRTAU (EN AW-5052 Equiv.) FRTSU (EN 1.4301 Equiv.)	8	3	20' 25 30 40 50	0.8				
	10	5		1.0				
	12	5 6						
	15	6 8						
	18	8 10						
	20	10 12						
	25	10 12 15						
	30	10 12 15						

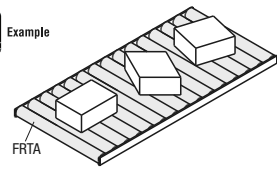
Ordering Example

Part Number - d - L

FRTA10 - 5 - 30

Example

FRTA



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

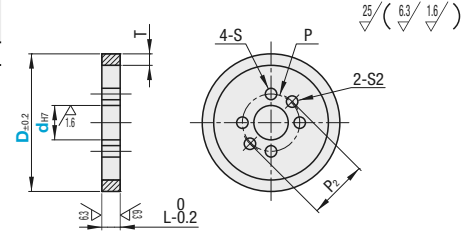
■Urethane Rollers with Side Through Holes



RoHS

Type	Material		Hardness
	Core	Lining	
ULSH	EN AW-5052 Equiv.	Urethane	A90

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



Part Number		d	L	T	P	P ₂	S	S ₂	Unit Price
Type	D	Selection							
ULSH	40	10	8	5	18	20	4.5	5.5	
		12			22	22	5.5	5.5	
	50	12			25	26			6.5
		15					25	26	
	60	15			10	25	26	6.5	6.5
		20	25			26	5.5	5.5	
	70	15	32			34	6.5	6.5	
		20							
	80	20	37			38			
		25							

Ordering Example

Part Number - D - d

ULSH - 40 - 10

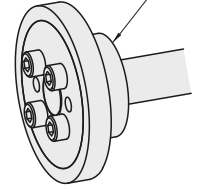
Alterations

Part Number - D - d - (MC)

ULSH - 40 - 10 - MC

Example

Shaft Collar



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

Part Number - D - d - (MC)

ULSH - 40 - 10 - MC

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

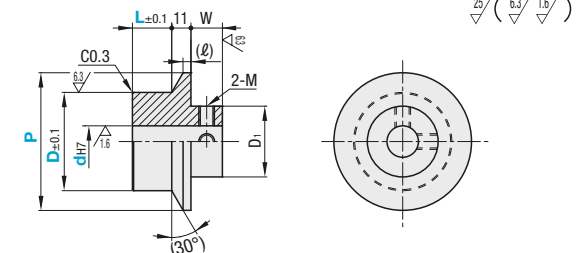
End Feed Rollers

End Feed Rollers



RoHS

Type	Material
MCRPOM	Polyacetal
MCRUPE	UHMWPE



Part Number Type	D	d	P	L 1mm Increment	W	l	D ₁	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					5		
	55	15 20 30	65 70 75 80							
	60	15 20 30	70 75 80							

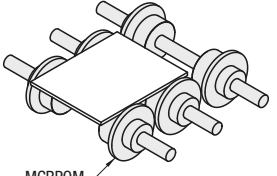
Ordering Example

Part Number - d - P - L

MCRPOM30 - 8 - 50 - 3

Example

MCRPOM



Urethane Rollers with Collars / Knurled Urethane Rollers

Set Screw Type

Urethane Rollers with Collars

Type	Material		Hardness
	Core	Lining	
UMC	EN AW-5052 Equiv.	Urethane	Shore A90
UMCM		(Natural Color)	Shore A70
UMCL			Shore A50

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

L dims. tolerance is ± 0.3 when $D > 50$

Example

* Secure to the shaft with Loctite adhesive.

Part Number	Type	D	d	Selection	L	Selection	t
UMC UMCM UMCL	(Shore A90) (Shore A70) (Shore A50)	10	3		5	10 15 20 25 30	2
		12	3		5	10 15 20 25 30	
		13		4	5	10 15 20 25 30	
		15			5	10 15 20 25 30 40 50	
		16			5	10 15 20 25 30 40 50	3
		20			5	10 15 20 25 30 40 50	
		25			5	10 15 20 25 30 40 50	
		30			5	10 15 20 25 30 40 50	
		35			5	10 15 20 25 30 40 50	4
		40			5	10 15 20 25 30 40 50	
		45			5	10 15 20 25 30 40 50	
		50			5	10 15 20 25 30 40 50	
		55			5	10 15 20 25 30 40 50	5
		60			5	10 15 20 25 30 40 50	
		70			5	10 15 20 25 30 40 50	
		80			5	10 15 20 25 30 40 50	

Ordering Example: Part Number - d - L
UMC30 - 10 - 20

Alterations: Part Number - d - L - (HRC)
UMC30 - 10 - 20 - HRC
UMCL80 - 15 - 50 - MC

Alteration Code	Parallel Knurls HRC	Tapping MC
Spec.	Straight-line knurling is applied to roller surfaces.	Adds two M3 tapped holes at 90°. (Ordering Code) MC Applicable to D dim. 20 or more. Not available for t2

D	Unit Price														
	UMC					UMCM					UMCL				
10	L5	L10	L15	L20	L25	L30	L40	L50	L5	L10	L15	L20	L25	L30	L40
12															
13															
15															
16															
20															
25															
30															
35															
40															
45															
50															
55															
60															
70															
80															

Knurled Urethane Rollers - Set Screw Type

Type	Material		Hardness
	Core	Lining	
UMKH	EN AW-5052 Equiv.	Urethane	Shore A90
UMKM		(Natural Color)	Shore A70
UMKL			Shore A50

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

Example

Part Number	Type	D	dh7	α°	Number of Teeth	D1	D2	W	L	ℓ	M	Unit Price		
												UMKH	UMKM	UMKL
UMKH (Shore A90) UMKM (Shore A70) UMKL (Shore A50)		15	4	5	10	36	8	8						
		20	4	5	7.5	48	10		10	20				
		25			6	60	12		15	25				
		30			8	72			20					
		40			3.75	96	16		20	35				
		50			3	120	18		22					

Ordering Example: Part Number - d
UMKM25 - 6

Bearing Integrated Urethane Rollers / Urethane Rollers / Knurled Urethane Rollers

Set Screw Type

Features: Economical Urethane Rollers with bearings directly adhesive bonded.

Bearing Integrated Urethane Rollers

UMJ

Example

Material: Bearing: Steel
Urethane Roller: Polyurethane (Natural Color)
Hardness: Shore A90

For bearing detailed dimensions, see P989.

Part Number		L Selection (10 mm Increment)	d	D ₁	dh	B	Bearing Used	Unit Price									
Type	D							L20	L30	L40	L50	L60	L70	L80	L90	L100	
UMJ	20	20~100	6	15	10	5	696ZZx2										
	25		6	15	10	5	696ZZx2										
	30		8	19	15	6	698ZZx2										
	35	30~100	10	22	18	6	6900ZZx2	-									
	40		12	28	24	8	6001ZZx2	-									
	50		15	32	28	9	6002ZZx2	-									

Ordering Example: Part Number - L
UMJ30 - 30

Urethane Rollers - Set Screw Type

Type	Material		Hardness
	Core	Lining	
UMHSH	EN 1.4301 Equiv.	Urethane	Shore A90
UMHS			Shore A70
UMHSL			Shore A50
UMHAH	Aluminum Alloy 5000 series		Shore A90
UMHA			Shore A70
UMHAL			Shore A50

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

Example

Part Number	Type	No.	D	d	D1	D2	W	L	ℓ	M	Unit Price					
											UMHSH	UMHS	UMHSL	UMHAH	UMHA	UMHAL
Stainless Steel UMHSH (Shore A90) UMHS (Shore A70) UMHSL (Shore A50)		15	15	4	10	-	6	12	3	3						
		15-5		5												
		20	20	4	16	-	6	12	3	3						
		20-5		5												
		25	25	6	16	20	8	20	6	3						
		25-8		8						4						
Aluminum UMHAH (Shore A90) UMHA (Shore A70) UMHAL (Shore A50)		30	30	6	16	24	8	20	6	3						
		30-8		8						4						
		35	35	8	20	28	10	25	7.5	4						
		35-10		10												
		40	40	8	25	36	10	25	7.5	4						
		40-10		10												
		50	50	10	30	42	10	25	7.5	4						
		50-12		12												

Knurled Urethane Rollers

ULCV

Example

Material: Polyurethane (Natural Color)
Hardness: Shore A50

Part Number	Type	D	L Selection	d	α°	Number of Teeth	Unit Price			
							L6	L10	L15	L20
ULCV (Shore A50)		15	6	10	12	30				
		20	10	15	9	40	-			
		25	10	15	7.2	50	-			
		30	10	15	6	60	-			

Ordering Example: Part Number - L - d
UMHS15
ULCV20 - 10 - 8

Hollow Rollers

Straight (L=100 ~ 500)

■ **Features:** Dedicated drawn aluminum pipes are used. Lightweight and reasonably priced.

■ Straight



Type	Material Core	Surface Treatment (Lining)	Hardness
ROLLA	Aluminum Alloy	Clear Anodize	-
ROLAU		Urethane (Natural Color)	Shore A90
ROLLM		Electroless Nickel Plating	Shore A70
ROLLS	Steel (EN 1.0480 Equiv.)	-	-
	Stainless Steel (EN 1.4301 Equiv.)	-	-

Surface treatment is not applied to shaft end and I.D.
Urethane is baked on the outer circumference of the core material.

Core Only

Urethane Baked

Press Fit Bushing

$L_{-0.2}^0$ (When $L > 300$, $L_{-0.3}^0$)

Ⓜ O.D. of this product is $D+2T$. (Different from other rollers)

Part Number		Urethane Thickness T Selection	dH9 Selection	L Selection			d1			D1	B
Type	D						Aluminum Alloy	Steel	Stainless Steel		
Core Only ROLLA ROLLM ROLLS Urethane Baked ROLAU ROLAG	20	3	6	100	150	200	11	12	13	15	10
	30		8				15	15.8	18	22	
			10								
			12								
			12								
			15								
	40	20	100	17	22.7	22	33				
		15		22							
	50	20	150	17	30	28	40				
		25		27							
		30		22							
		35		32							
60	10	20	400	22	-	-	45				
25		450									
30								500			
80	25		41	-	-	55	15				
	30										
	35										

Ordering Example	Part Number	T	d	L
	ROLLA50	-	20	- L300
	ROLAU60	- T10	- 20	- L400

■ Core Only

Type	D	L100	L150	L200	L250	L300	L350	L400	L450	L500
ROLLA (Aluminum)	20									
	30									
	40									
	50									
	60									
ROLLM (Steel)	20									
	30									
	40									
	50									
	60									
ROLLS (Stainless Steel)	20									
	30									
	40									
	50									
	60									

Ⓜ For ROLAG, the unit prices in the table are to be multiplied by 1.1.

■ Urethane Baked (Core Material Aluminum)

D	T	ROLAU (Unit Price x 1.0)	ROLAG (Unit Price x 1.1)
20	3		
30			
40			
50			
60			
20	5		
30			
40			
50			
60			
20	10		
30			
40			
50			
60			

Ⓜ Urethane may discolor over time, but there is no effect on physical properties.

Hollow Rollers

With Bearings (L=100 ~ 500)

■ **Features:** Dedicated drawn aluminum pipes are used. Lightweight and reasonably priced.

■ With Bearings



Type	Material		Surface Treatment (Lining)	Hardness
	Core	Bearing		
RORLA	Aluminum Alloy	Steel	Clear Anodize	-
RORLAK				
RORLAU			Urethane (Natural Color)	Shore A95
RORLAG				Shore A90
RORLAH				Shore A70
RORLM	Steel (EN 1.0480 Equiv.)		Electroless Nickel Plating	Shore A50
RORLS	Stainless Steel (EN 1.4301 Equiv.)		-	-
RORLSU			Urethane (Natural Color)	Shore A90
RORLSG				Shore A70
RORLSH				Shore A50

Core Only

Urethane Baked

⚠ Bearings can be detached. Temporarily attached with tape for shipping.

⚠ O.D. of this product is D+2T. (Different from other rollers)

Part Number	Type	D	Urethane Thickness T Selection	d	L Selection	Bearing Used	D1	B	Aluminum Alloy	d1 Steel	Stainless Steel
Core Only RORLA RORLM RORLS	Core Only	20	3	6	100 150 200	B696ZZ	15	5	11	12	13
		30		8		B688ZZ	16	6	15	-	-
		40		10		B690ZZ	19	7	15	-	-
		50		12		B690ZZ	22	6	15	15.8	18
		60		15		B690ZZ	24	6	17	18.1	18
		80		20		B690ZZ	28	7	22	-	-
	Urethane Baked	20	10	8	100 150 200 250 300 350 400 450 500	B628ZZ	24	8	17	18.7	20
		30		10		B600ZZ	26	6	22	22.7	22
		40		12		B690ZZ	24	6	17	18	22
		50		15		B690ZZ	28	7	17	-	-
		60		20		B690ZZ	32	9	32	-	-
		80		25		B690ZZ	37	9	41	-	-

Ⓜ For bearing detailed dimensions, see P989. Ⓜ Relief is added to the end faces to prevent contacts with the bearing inner ring. Ⓜ *1. Urethane bonded type not available for D35. Ⓜ For applicable sizes, please check the price list.

Ordering Example	Part Number	T	d	L
	RORLA50	-	20	- L300
	RORLAU60	- T10	- 20	- L400

■ Core Only

Type	D	L100	L150	L200	L250	L300	L350	L400	L450	L500
RORLA (Aluminum)	20									
	30									
	40									
	50									
	60									
RORLM (Steel)	20									
	30									
	40									
	50									
	60									
RORLS (Stainless Steel)	20									
	30									
	40									
	50									
	60									

Alterations	Part Number	T	d	L (LC)
	RORLA50	-	20	- LC151

Alteration	L Dimension
Spec.	
Code	LC

Ⓜ For RORLAK, RORLAG, RORLAH, RORLSG and RORLSH, the unit prices in the table are to be multiplied by 1.1.

■ Urethane Baked (Core Material Aluminum)

D	T	ROLAU (Unit Price x 1.0)	RORLAK (Unit Price x 1.1)	RORLAG (Unit Price x 1.1)	RORLAH (Unit Price x 1.1)
20	3				
30					
40					
50					
60					
20	5				
30					
40					
50					
60					
20	10				
30					
40					
50					
60					

■ Urethane Baked Core (Material Stainless Steel)

D	T	RORLSU (Unit Price x 1.0)	RORLSG (Unit Price x 1.1)	RORLSH (Unit Price x 1.1)
20	3			
30				
40				
50				
60				
20	5			
30				
40				
50				
60				
20	10			
30				
40				
50				
60				

Ⓜ Urethane may discolor over time, but there is no effect on physical properties.

Pipe Roller Economy Type

With Bearings (L=100~500)

■Features: Priced ave. 30% less than conventional products by use of general purpose pipe material.

■With Bearings

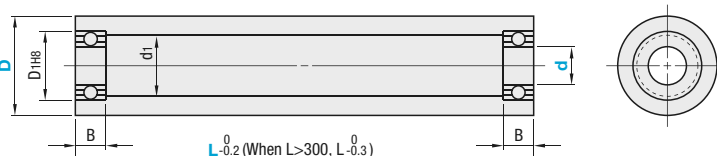


RoHS

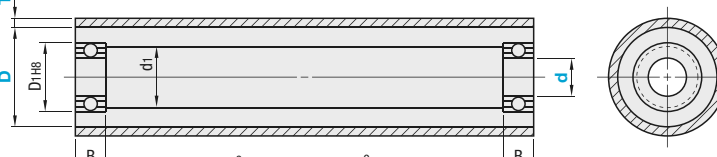
Type	Material	Surface Treatment (Lining)	Hardness
RORELA	Aluminum Alloy	Clear Anodize	-
RORELAU	Aluminum Alloy	Urethane (Natural Color)	Shore A90
RORELAG	Steel	Urethane (Natural Color)	Shore A70
RORELAH	Steel	Urethane (Natural Color)	Shore A50

Surface treatment is not applied to shaft end and I.D.
Urethane is baked on the outer circumference of the core material.

Core Only



Urethane Baked



6.3

⚠Bearings can be detached. Temporarily attached with tape for shipping.

⚠O.D. of this product is D+2T. (Different from other rollers)

Part Number		Urethane Thickness T Selection	d	L Selection	Bearing Used	D ₁	B	d ₁
Type	D							
Core Only RORELA	18	3	8	100	B678ZZ	12	3.5	10
	28		8	150	B608ZZ	22	7	20
	38		10	200	B6900ZZ		6	
	48		15	250	B6002ZZ		9	
Urethane Baked RORELAU RORELAG RORELAH	28	5	20	300	B6804ZZ	32	7	30
	38		20	350	B6202ZZ	35	11	
	48		20	400	B6904ZZ	37	9	
	28		25	450	B6905ZZ	42	7	40
	38		30	500	B6806ZZ			
	48		30	500	B6806ZZ			

⚠For bearing detailed dimensions, see P989. ⚠Relief is added to the end faces to prevent contacts with the bearing inner ring.

Ordering Example

Part Number - T - d - L

RORELA38 - T5 - 15 - L300

RORELAU28 - T5 - 10 - L500

Alterations

Part Number - T - d - L(LC)

RORELA38 - T5 - 15 - LC223

Alteration

Spec.

Code

L Dimension

Ordering Code LC151 (Change L to LC)

LC=1mm Increment

50≤LC≤490

Only Applicable to Core Type

Price of the L dimension larger than and closest to the specified LC is the unit price.

LC

Core Only		Unit Price								
Type	D	L100	L150	L200	L250	L300	L350	L400	L450	L500
RORELA	18									
	28									
	38									
	48									

⚠For RORELAG and RORELAH, the unit prices in the table are to be multiplied by 1.1.

Urethane Baked		Unit Price											
D	T	RORELAU (Unit Price x 1.0)				RORELAG (Unit Price x 1.1)				RORELAH (Unit Price x 1.1)			
		L100	L150	L200	L250	L300	L350	L400	L450	L500			
18	3												
28													
38													
48													
18	5												
28													
38													
48													

⚠Urethane may discolor over time, but there is no effect on physical properties.

Pipe Roller with One Way Clutch

With Bearings (L=50~300)

■Features: One way clutch prevents rotation reversal. It make it easier to adjust the timing when transferring.

■One Way Clutch

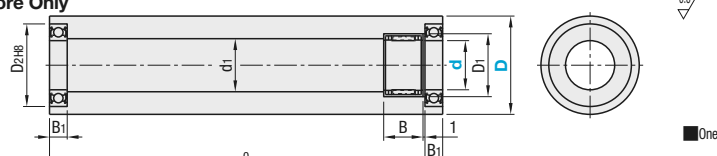


RoHS

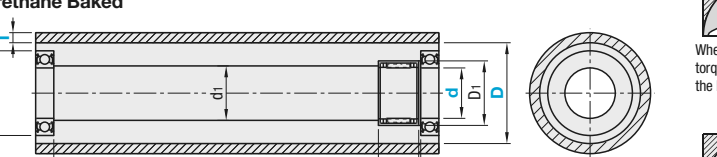
Type	Material	Surface Treatment (Lining)	Hardness
ROROWA	Aluminum Alloy 5000 series	Clear Anodize	-
ROROWAU	Aluminum Alloy 5000 series	Urethane (Natural Color)	Shore A90
ROROWAG	Steel	Urethane (Natural Color)	Shore A70
ROROWAH	Steel	Urethane (Natural Color)	Shore A50

Surface treatment is not applied to shaft end and I.D.
Urethane is baked on the outer circumference of the core material.

Core Only



Urethane Baked



6.3

⚠One way clutch is press fit.

⚠Bearings can be detached. Temporarily attached with tape for shipping.

⚠O.D. of Urethane bonded product is D+2T. (Different from other rollers)

⚠The rotation direction of the One Way Clutch is marked with an arrow sticker.

⚠Hardened shaft with h5 (h6) tolerance is recommended.

One Way Clutch construction

Locked

When locked, the shaft torque is transmitted to the housing

Free

When free spinning, the shaft torque is not transmitted to the housing

Part Number		Urethane Thickness T Selection	d	L 10mm Increment	One Way Clutch Allowable Torque (Nm)		Bearing Used	D ₁	D ₂	B ₁	B	d ₁
Type	D				Shaft: h5 Tolerance	Shaft: h6 Tolerance						
Core Only ROROWA	20	3	8	50~100	3.2	1.6	B688ZZ	12	16	5	12	10
	30		12	50~300	12.2	6.1	B6901ZZ	18	24	6	16	15
	40		20		28.5	14.3	B6804ZZ	26	32	7	16	22
	50		20		66	33	B6904ZZ	26	37	9	16	22
Urethane Baked ROROWAU ROROWAG ROROWAH	20	5	12				B6905ZZ	32	42	9	20	27
	30		20									
	40		25									

⚠Commercially available HF type one way clutch is used. ⚠Relief is added to the end faces to prevent contacts with the bearing inner ring.

Ordering Example

Part Number - T - d - L

ROROWA30 - T5 - 12 - L300

ROROWAU40 - T5 - 20 - L250

Alterations

Part Number - T - d - L(LC)

ROROWAU30 - T3 - 12 - LC213

Alteration

Spec.

Code

L Dimension

Ordering Code LC151 (Change L to LC)

LC=1mm Increment

50≤LC≤290

Only Applicable to Core Type

Price of the L dimension larger than and closest to the specified LC is the unit price.

LC

⚠For ROROWAG and ROROWAH, the unit prices in the table are to be multiplied by 1.1.

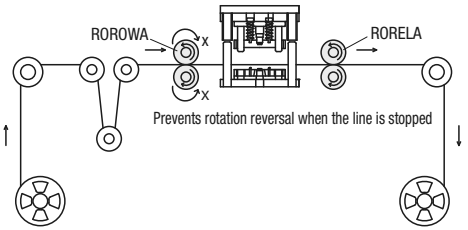
Type	D	T	Unit Price				
			L50 ~100	L110 ~150	L160 ~200	L210 ~250	L260 ~300
Core Only ROROWA	20	-					
	30						
	40						
	50						
Urethane Baked ROROWAU (Unit Price x 1.0)	20	3					
	30						
	40						
	50						
ROROWAG (Unit Price x 1.1)	20	5					
	30						
	40						
	50						

⚠Urethane may discolor over time, but there is no effect on physical properties.



Example

■Cutting process of sheet form workpiece (Film, Paper)



Hollow Rollers

Set Screw Type (L=100~500)

■Features: Drawn aluminum pipes are used. Lightweight and reasonably priced.

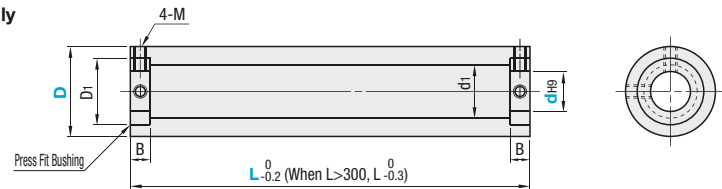
■Set Screw Type



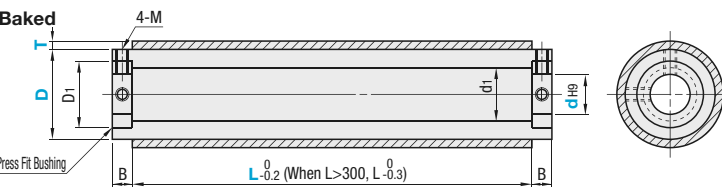
RoHS

Type	Material Core	Surface Treatment (Lining)	Hardness
ROLNLA	Aluminum (Aluminum Alloy 5000 series)	Clear Anodize	-
ROLNAU		Urethane (Natural Color)	Shore A90
ROLNAG		Urethane (Natural Color)	Shore A70
ROLNAH		Urethane (Natural Color)	Shore A50
ROLNLM	Steel (EN 1.0480 Equiv.)	Electroless Nickel Plating	-
ROLNLS	Stainless Steel (EN 1.4301 Equiv.)	-	-

Core Only



Urethane Baked



⚠O.D. of this product is D+2T. (Different from other rollers)

Part Number		Urethane Thickness T Selection	dH9 Selection	L Selection	d1			D1	B	M		
Type	D				Aluminum	Steel	Stainless Steel					
Core Only ROLNLA ROLNLM ROLNLS	30	3	8	100	15	15.8	18	22	10	M4		
			10									
	*35		12		17	18.1	18	27		M4		
			10									
	40		12		17	22.7	22	33		M4		
			15									
	50		5		20	22	22	40		M5		
					15							
	60		10		20	27	30	28		45	M6	
					25							
	80		*100		20	41	-	-		55	15	M8
					30							
Urethane Baked ROLNAU ROLNAG ROLNAH	*100	25	76	-	-	85	20	M8				
		30										
		35										
		40										

⚠Sizes marked with * are not available for Urethane Baked Type.

Ordering Example	Part Number	-	T	-	d	-	L
	ROLNLA50	-	20	-	L300	-	
	ROLNLM30	-	8	-	L350	-	
	ROLNAU60	-	T10	-	20	-	L400

Alterations	Part Number	-	T	-	d	-	LLG
	ROLNLA30	-	12	-	LC315	-	

Alteration	L Dimension
Spec.	(Ordering Code) LC151 (Change L to LC) LC=1mm Increment ⚠50≤LC≤490 ⚠Only Applicable to Core Type ⚠Price of the L dimension larger than and closest to the specified LC is the unit price.
Code	LC

■Core Only

Type	D	Unit Price							
		L100	L150	L200	L250	L300	L350	L400	L500
ROLNLA (Aluminum)	30								
	35								
	40								
	50								
	60								
	80								
ROLNLM (Steel)	30								
	35								
	40								
	50								
ROLNLS (Stainless Steel)	30								
	35								
	40								
	50								

⚠For ROLNAG and ROLNAH, the unit prices in the table are to be multiplied by 1.1.

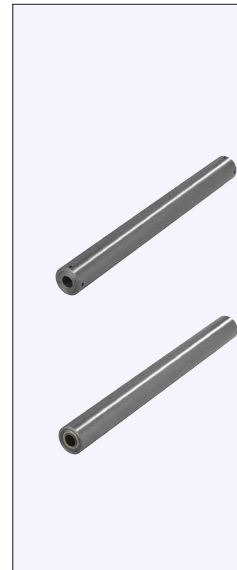
■Urethane Baked (Only Applicable to Aluminum Core Type)

D	T	Unit Price							
		ROLNAU (Unit Price x 1.0)	ROLNAG (Unit Price x 1.1)	ROLNAH (Unit Price x 1.1)	L100	L150	L200	L250	L300
30	3								
35	3								
40	3								
50	3								
60	3								
80	3								
30	5								
40	5								
50	5								
60	5								
80	5								
30	10								
40	10								
50	10								
60	10								
80	10								

⚠Urethane may discolor over time, but there is no effect on physical properties.

Long Hollow Rollers

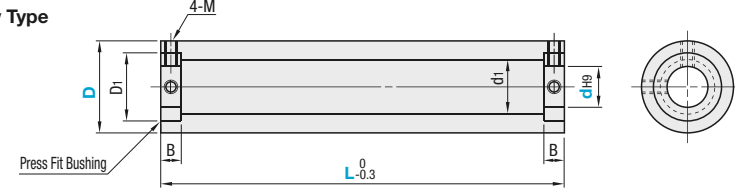
Set Screw Type, With Bearings (L=550~1000)



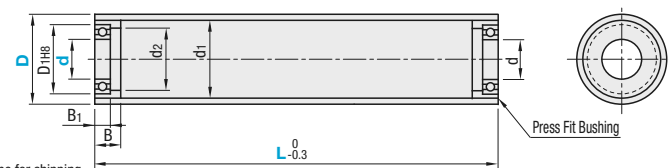
RoHS

Type	Material Core	Surface Treatment
Set Screw Type	ROLNT	Steel (EN 1.0480 Equiv.)
	ROLNS	Stainless Steel (EN 1.4301 Equiv.)
	ROLNA	Aluminum (EN AW-5052 Equiv.)
	RORC	Steel (EN 1.0480 Equiv.)
With Bearings	RORSS	Stainless Steel (EN 1.4301 Equiv.)
	RORAA	Aluminum (EN AW-5052 Equiv.)

■Set Screw Type



■With Bearings



⚠Bearings can be detached.
Temporarily attached with tape for shipping.

■Set Screw Type

Part Number	Type	D	dH9 Selection	L Selection	d1			D1	B	M
					Steel	Stainless Steel	Aluminum			
ROLNT (Steel)	40	*12	15	550	22.7	22	22	32	10	M4
				600	40	28	27	43	10	M6
				750						
ROLNS (Stainless Steel)	50	*25	20	750	49.5	-	32	53	10	M6
				800						
				850						
ROLNA (Aluminum)	80	*30	25	900	68.6	-	41	72	15	M8
				950						
				1000						

⚠Steel (EN 1.0480 Equiv.) applies to sizes with *.



Ordering Example

Part Number	-	d	-	L
ROLNT80	-	25	-	L700
RORC60	-	15	-	L600
ROLNS40	-	12	-	L750
RORAA50	-	12	-	L1000

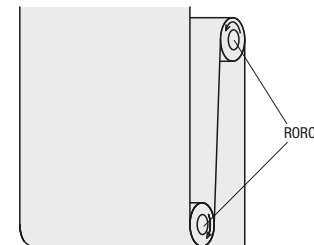
■With Bearings

Part Number	Type	D	d Selection	L Selection	D1	B1	B	d1			d2			Bearing Used
								Steel	Stainless Steel	Aluminum	Steel	Stainless Steel	Aluminum	
RORC (Steel)	40	8	10	550	24	8	12	22.7	22	22	15			B628ZZ
				600	26	9								B6000ZZ
				650	30	9		40	28	27	17			B6200ZZ
	50	10	12	700	28	8	15				22			B6001ZZ
				750	32	10		49.5	-	32	22			B6201ZZ
				800	32	9								B6002ZZ
RORSS (Stainless Steel)	60	15	25	850	52	15	20	68.6	-	41	41	38		B6205ZZ
				900	55	13								B6006ZZ
				950										

⚠For bearing detailed dimensions, see P989, 993.



Example



As Guides for Sheets (Label Films etc.)

■Set Screw Type

Type	D	Unit Price							
		L550	L600	L650	L700	L750	L800	L850	L900
ROLNT (Steel)	40								
	50								
	60								
	80								
ROLNS (Stainless Steel)	40								
	50								
ROLNA (Aluminum)	40								
	50								
	60								

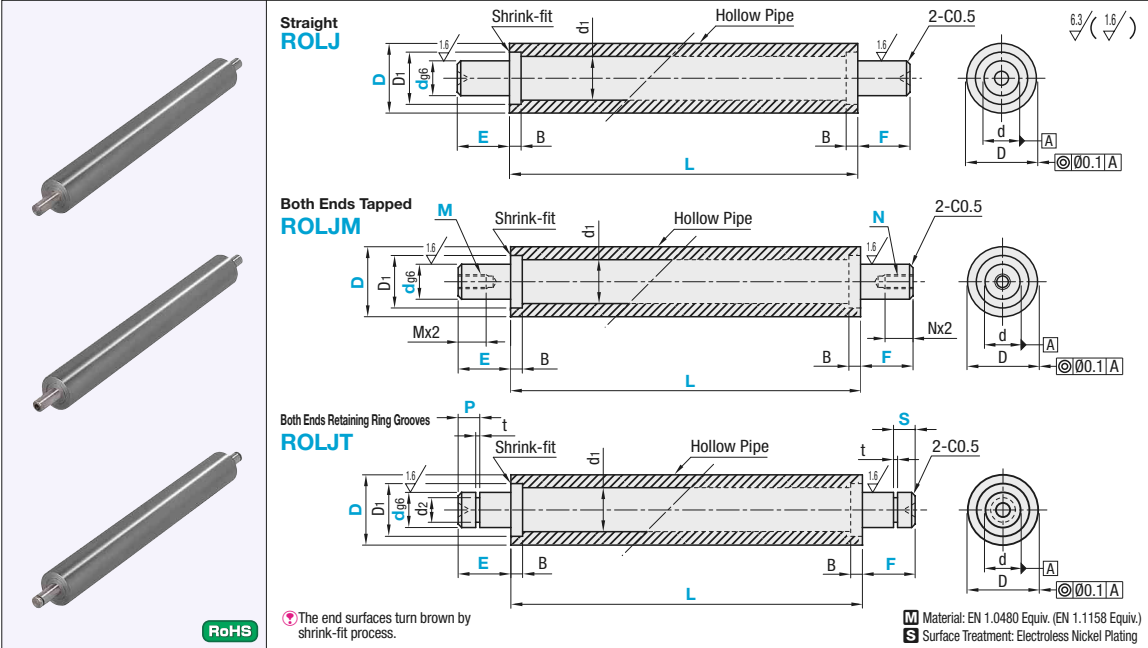
■With Bearings

Type	D	Unit Price							
		L550	L600	L650	L700	L750	L800	L850	L900
RORC (Steel)	40								
	50								
	60								
	80								
RORSS (Stainless Steel)	40								
	50								
RORAA (Aluminum)	40								
	50								
	60								

Hollow Rollers with Shafts

Straight, Both Ends Tapped, Both Ends Retaining Ring Grooves (L=100~800)

■Features: With factory mounted shafts and ready to use out-of-box.



Part Number		d ₆	L 10mm	E, F 1mm	M (Coarse), N (Coarse)	P, S 1mm	d ₁	D ₁	B	t	d ₂	Applicable
Type	D	Selection	Increment	Increment		1mm Increment				Tolerance	Tolerance	Retaining Ring
ROLJ ROLJM ROLJT	50	15	100~800	5~45	5 6	5≤P<E-5 5≤S<F-5	40	43	25	1.15	14.3	JIS C Type 15
		20		5~60	5 6 8 10 12					1.35	19	JIS C Type 20
		25		5~75	5 6 8 10 12 16					1.35	23.9	JIS C Type 25
	60	20		5~60	5 6 8 10 12		49.5	53	30	1.35	19	JIS C Type 20
		25		5~75	5 6 8 10 12 16					1.35	23.9	JIS C Type 25
		30		5~90	8 10 12 16 20					1.65	28.6	JIS C Type 30
	80	25		5~75	5 6 8 10 12 16		68.6	72	40	1.35	23.9	JIS C Type 25
		30		5~90	8 10 12 16 20					1.65	28.6	JIS C Type 30
		35		5~100	8 10 12 16 20 24					1.65	33	JIS C Type 35

Ordering Example: (Straight) ROLJ60 - 20 - 590 - E30 - F30
(Both Ends Tapped) ROLJM80 - 30 - 720 - E20 - F20 - M12 - N12
(Both Ends Retaining Ring Grooves) ROLJT50 - 25 - 800 - E40 - F42 - P15 - S35

Straight

Part Number		Unit Price													
Type	D	L100 ~150	L160 ~200	L210 ~250	L260 ~300	L310 ~350	L360 ~400	L410 ~450	L460 ~500	L510 ~550	L560 ~600	L610 ~650	L660 ~700	L710 ~750	L760 ~800
ROLJ	50														
	60														
	80														

Both Ends Tapped

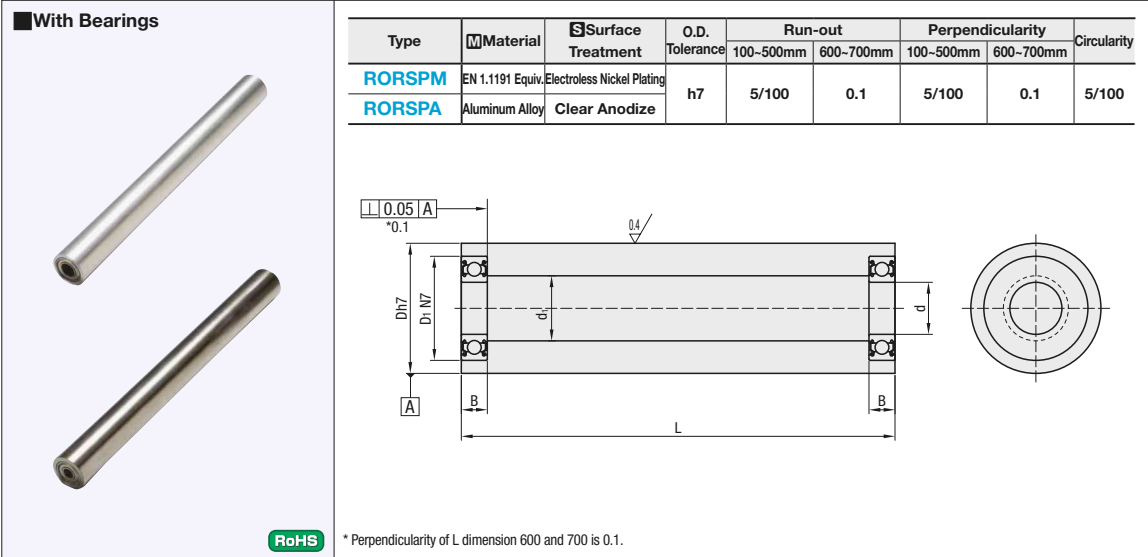
Part Number		Unit Price													
Type	D	L100 ~150	L160 ~200	L210 ~250	L260 ~300	L310 ~350	L360 ~400	L410 ~450	L460 ~500	L510 ~550	L560 ~600	L610 ~650	L660 ~700	L710 ~750	L760 ~800
ROLJM	50														
	60														
	80														

Both Ends Retaining Ring Grooves

Part Number		Unit Price													
Type	D	L100 ~150	L160 ~200	L210 ~250	L260 ~300	L310 ~350	L360 ~400	L410 ~450	L460 ~500	L510 ~550	L560 ~600	L610 ~650	L660 ~700	L710 ~750	L760 ~800
ROLJT	50														
	60														
	80														

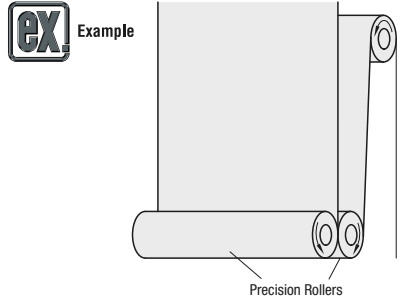
Precision Rollers

■Features: This roller has good O.D. Tolerance and Geometrical Tolerance. Use in carriers that require accuracy.



Part Number			d	L Selection		Bearing Used	d1		D1	B
TYPE	D	d Tolerance		EN 1.1191 Equiv.	Aluminum		EN 1.1191 Equiv.	Aluminum Alloy		
RORSPM RORSPA	30	0 -0.021	8	100 150 200 300 400 500	B608ZZ	15.8	15	22	7	
			10		B6900ZZ			22	6	
			12		B6901ZZ			24	6	
	40	0 -0.025	10		B6000ZZ	21	22	26	8	
			12		B6001ZZ			28	8	
			15		B6902ZZ			28	7	
	20	B6804ZZ	32		7					
	50	0 -0.025	12		B6301ZZ	30	27	37	12	
			15		B6202ZZ			35	11	
			20		B6904ZZ			37	9	
			25		B6905ZZ	42	9			
			15		B6302ZZ	42	13			
	60	0 -0.030	20	300	35	32	37	9		
			25	400			42	9		
			30	500			47	9		
	80	0 -0.030	25	600	49	41	62	17		
			30	700			B6206ZZ	62	16	
			35	B6007ZZ			62	14		

Ordering Example: RORSPM50 - 12 - L300

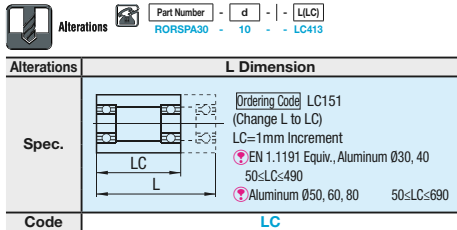


EN 1.1191 Equiv.

Part Number		Unit Price					
D		L100	L150	L200	L300	L400	L500
30							
40							
50							
60							
80							

Aluminum

Part Number		Unit Price						
D		L100	L150	L200	L300	L400	L500	L700
30								
40								
50								
60								
80								



Straight / Both Ends Threaded

	Type	Material		Hardness
		Shaft	Lining	
	USH	EN 1.3505 Equiv. Induction Hardened (Depth 0.8~2mm) 58HRC~	Urethane (Natural Color)	Shore A90
	USM			Shore A70
	USL			Shore A50

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

Part Number	dg6		L	F
Type	D	Selection	1mm Increment	1mm Increment
USH USM USL	10	5 6	50-100	5≤F≤dx2 Fx2<L
	15	6 8 10	50-150	
	20	8 10 12 15	50-200	
	25	10 12 15 20		
	30	15 20		
	35	15 20		

 **Ordering Example** **Part Number** - **d** - **L** - **F**
 USH20 - **8** - **150** - **F10**

Part Number		Unit Price				
Type	D	L50-100	L101-150	L151-200	L201-250	L251-300
USH	10		-	-	-	-
	15			-	-	-
	20				-	-
	25				-	-
	30					
	35					

Part Number		Unit Price				
Type	D	L50-100	L101-150	L151-200	L201-250	L251-300
USM USL	10		-	-	-	-
	15			-	-	-
	20				-	-
	25				-	-
	30					-
	35					

■ Both Ends Threaded

Type	Material		Hardness
	Shaft	Lining	
USMH	EN 1.1191 Equiv.	Urethane (Natural Color)	Shore A90
USMM			Shore A70
USML			Shore A50

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

Technical drawing of a threaded roller. The drawing shows a cross-section of the roller with a central shaft and a urethane lining. Key dimensions and specifications include:

- Material:** USMH, USMM, or USML (Shore A90, A70, or A50 respectively).
- Material:** EN 1.1191 Equiv. (Shaft), Urethane (Natural Color) (Lining).
- Hardness:** Shore A90, Shore A70, or Shore A50.
- Thread:** M Fine Thread (=P).
- Dimensions:**
 - $D \pm 0.2$ (Outer diameter)
 - V (Thread depth)
 - P (Pitch)
 - $\phi 0.05$ (Inner diameter of thread)
 - A (Thread length)
 - B (Roller length)
 - S (Shaft length)
 - T (Urethane thickness)
 - L (Total length)
 - $R0.2$ (Radius)
 - $6.3 / (1.6 / 3.2 / 6)$ (Thread profile)
 - $2-C0.5$ or less (Thread profile)
- Notes:**
 - * When $D=10$, $t=2$
 - When $D \geq 15$, $t=3$

Part Number		L 1mm Increment	Pg6 Selection		1mm Increment									
Type	D				S	B	T							
USMH USMM USML	10	50~100	3			3≤S≤Px5	B=0 or (When P≤6) B≤S-2 (When P=8 or 10) P=3 (When P≥12) B≤S-5	1~30						
	15	50~150	3	4	5				6					
	20	50~200	4						5	6	8	10		
	25		4						5	6	8	10	12	
	30		5						6	8	10	12	15	17
	35	50~300							8	10	12	15	17	20

V and M are as the list below based on P dim.

P	V	M (Fine)
3	5	M 3xP0.35
4	6	M 4xP0.5
5	7	M 5xP0.5
6	8	M 6xP0.75
8	10	M 8xP1.0
10	13	M10xP1.0
12	15	M12xP1.0
15	17	M15xP1.0
17	20	M17xP1.0
20	24	M20xP1.0

 Ordering Example **Part Number** - **L** - **P** - **S** - **B** - **T**
 USMH20 - **180** - **P10** - **S30** - **B25** - **T1**

Part Number		Unit Price				
Type	D	L50-100	L101-150	L151-200	L201-250	L251-300
USMH	10		-	-	-	-
	15			-	-	-
	20				-	-
	25					-
	30					
	35					

Part Number		Unit Price				
Type	D	L50-100	L101-150	L151-200	L201-250	L251-300
USMM USML	10		-	-	-	-
	15			-	-	-
	20				-	-
	25				-	-
	30					
	35					

Alterations  Part Number - **d** - **L** - **F** - **P** - **S** - **B** - **T** - (DKC, UDC)
 USH15 - **8** - **80** - **F5** - **P8** - **S8** - **B5** - **T4** - **DKC**
 USM20 - **120** - **UDC**

Alteration	Code	Spec.
O.D. Tolerance 	DKC	D dimension tolerance is changed. $\begin{matrix} -0.05 \\ 0 \end{matrix}$ d Tolerance [Ordering Code] DKC
Change to Antistatic Urethane (Urethane Color: Gray)	UDC	Only USH and USMH are antistatic Change to Urethane [Ordering Code] UDC Specific Volume Resistivity $2.1 \times 10^9 \Omega \cdot \text{cm}$ Surface Resistivity $4.0 \times 10^9 \Omega$ (Temperature 30°C / Humidity 60%)

Urethane Thickness Configurable



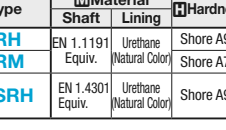
■ Straight

Type	Material		Hardness
	Shaft	Lining	
USRH	EN 1.1191	Urethane	Shore A90
USRM	Equiv.	(Natural Color)	Shore A70
USSRH	EN 1.4301	Urethane	Shore A90
	Equiv.	(Natural Color)	



■ Both Ends Tapped

Type	Material		Hardness
	Shaft	Lining	
USRW	EN 1.1191	Urethane	Shore A90
	Equiv.	(Natural Color)	





Part Number		T 1mm Increment	L 1mm Increment	E, F 1mm Increment	Both Ends Tapped Only
Type	d				M (Coarse), N (Coarse)
Straight USRH USRM USSRH	Both Ends Tapped USRWH	2~5	50~200	5≤E<L/2 5≤F<L/2	3 4 5
	10		4 5 6		
	12		5 6 8		
	15		5 6 8 10		

Ordering Example	Part Number									
	T	L	E	F	M	N				
(Straight)	2	195	E10	F10						
(Both Ends Tapped)	2	195	E10	F10	M5	N6				

■Straight															
d	Unit Price														
	USRH					USRM					USSRH				
	L50 ~100	L101 ~150	L151 ~200	L201 ~250	L251 ~300	L50 ~100	L101 ~150	L151 ~200	L201 ~250	L251 ~300	L50 ~100	L101 ~150	L151 ~200	L201 ~250	L251 ~300
8				-	-				-	-				-	-
10				-	-				-	-				-	-
12				-	-				-	-				-	-
15															

Both Ends Tapped					
d	Unit Price				
	USRW				
	L50 ~100	L101 ~150	L151 ~200	L201 ~250	L251 ~300
8				-	-
10				-	-
12				-	-
15					

Threaded Bearings / Urethane Molded Bearings Shafts / Eccentric Bushings

Cantilever Rollers

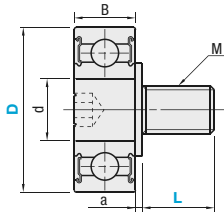
■Features: As threaded studs are swaged-on, no extra retaining measure is required.

■Threaded Bearings



RoHS

Type		Material		Surface Treatment
Standard Threaded	Long Threaded	Bearing	Shaft	Shaft
NTBG	NTBGT	Steel	Free Cutting Steel	Electroless Nickel Plating
NTSBG	NTSBGT	Stainless Steel	EN 1.4305 Equiv.	-



⚠The base of thread contains an incomplete thread portion.

Part Number Type	L		B	d	a	G	M (Coarse)	Bearing	Unit Price			
	D	Standard Threaded Long Threaded							NTBG	NTSBG	NTBGT	NTSBGT
Standard Threaded NTBG NTSBG	6	4	6	2.5	3	1	M3	673ZZ				
	7	4	6	3	3			W683ZZ				
	8	5	8	2.5	5			675ZZ				
	9	5	8	4	4		M4	W684A×50ZZ				
	13	5	8	5	4			624ZZ				
	16	5	8	5	5			625ZZ				
Long Threaded NTBGT NTSBGT	19	8	12	6	6	2.5	M6	626ZZ				
	22	8	12	7	8			608ZZ				
	26	8	12	8	10			6000ZZ				
	30	8	12	9	10	2.5	M10	6200ZZ				
	32	12	20	9	15			6002ZZ				
	35	12	20	11	15			6202ZZ				
	37	12	20	9	20			6904ZZ				
	47	12	20	14	20			6204ZZ				
	52	12	20	15	25			6205ZZ				

⚠For bearing detailed dimensions, see P.989, 991.



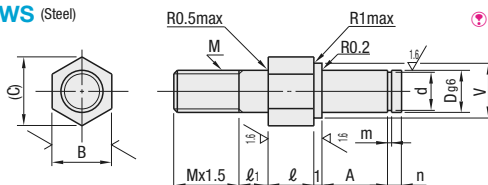
Part Number - L
NTBG16 - 5

■Urethane Molded Bearing Shafts



RoHS

UWS (Steel)



⚠Applicable to the products on P.1151, 1152.

M Material: EN 1.0038 Equiv.

S Surface Treatment: Black Oxide

A Accessory: Nut, Retaining Ring-C Type

⚠Retaining Ring-E Type for No. 312~830.)

Part Number		Dg6	A	ℓ	ℓ1	V	d		M	B	(C)	m		n	Applicable Urethane Molded		Unit Price
Type	No.						Tolerance					Dimension	Tolerance		Bearing		
UWS	312	3	3	5	-	4	2.05	+0.06	3	5	5.8	0.5	+0.05	2	UMBB	UMBBR	3-12
	413	4	4		1	5	3.05	0	4	7	8.1	0.7	0		UMBW	UMBWR	4-13
	416	4	5		1	6	3.05	0	4	7	8.1				UMBG	UMBGR	4-16
	516	5	5		2	6.9	4.05	+0.075	5	8	9.2				UMBGW	UMBGRW	5-16
	520	5	5	15	2	7.5	4.05	0	5	8	9.2	0.7	+0.1	UMBL	UMBLR	5-20	
	620	6	5		3	8	5.05	0	6	10	11.5			UMBLW	UMBLRW	6-20	
	628	6	6		3	9	5.05	0	6	10	11.5			UMBLW	UMBLRW	6-28	
	828	8	7		10	4	12	7.1	+0.09	8	14	16.2	0.9	+0.14	UMBD	UMBDR	8-28
	830	8	7	4		13	9.6	0	8	14	16.2	0.9	SUMBB		SUMBBR	8-30	
	1030	10	8			16	9.6	-0.09	10	19	21.9	1.15	UMBS		UMBSR	10-30	
	1040	10	9			16	9.6	-0.09	10	19	21.9	1.15	UMBSW	UMBSWR	10-40		
	1540	15	9	15	5	18	14.3	0	12	21	24	1.15	+0.14	UMSG	UMSGR	15-40	
	1545	15	11		5	19	14.3	-0.11	12	21	24			UMSGW	UMSGWR	15-45	
	2045	20	9		6	23	19	0	16	27	31.2			1.35	SUMSB	SUMSBR	20-45
2055	20	14	6		25	19	-0.21	16	27	31.2	1.35	SUMSB	SUMSBR	20-55			



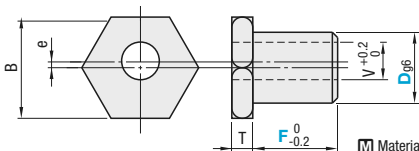
Ordering Example
Part Number
UWS312

■Eccentric Bushings

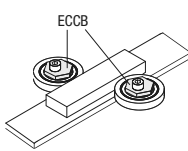


RoHS

ECCB



Example



M Material: EN 1.1191 Equiv.

Part Number Type	Dg6	F Selection	Applicable Bearing	V	B	T	e	Unit Price
ECCB	6	5	696ZZ	3	10	3	0.3	
		6	606ZZ, 626ZZ	4	12			
		7	698ZZ	5	14			
	8	6	608ZZ	4	12	3	0.5	
		7	608ZZ	5	14			
		8	628ZZ	6	17			
	10	6	6900ZZ	5	14	3	1	
		8	6000ZZ	6	17			
		9	6200ZZ	8	19			
	12	6	6901ZZ	6	17	3	1.2	
		8	6001ZZ	8	19			
		10	6201ZZ	10	21			
	15	7	6902ZZ	8	19	3	1.5	
		9	6002ZZ	10	21			
		11	6202ZZ	12	23			



Ordering Example
Part Number - F
ECCB10 - 8

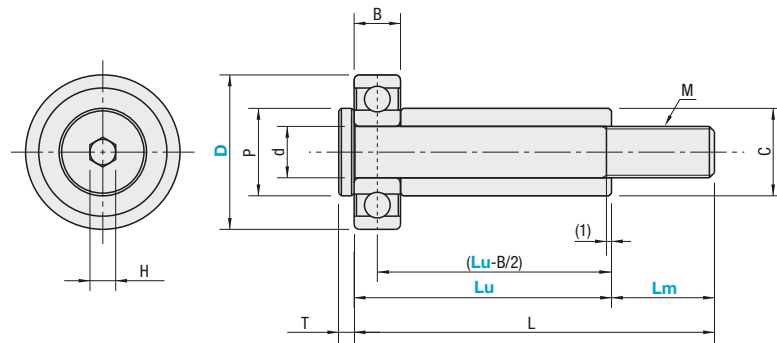
⚠For bearing detailed dimensions, see P.989.

■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	EN 1.3505 Equiv.	EN 1.1191 Equiv.	EN 1.0038 Equiv.	Black Oxide

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

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

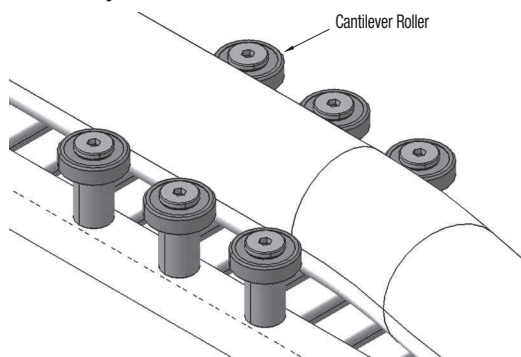


Ordering Example
Part Number - Lu - Lm
BWP11 - 17 - 10



Example

Cable Carry Guide



Guide Rollers

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

Guide Rollers

Flat, Double Flanged, Tapered

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



RoHS

Type		Body Material	Surface Treatment	Material		
60°: For Wire	90°: For Channel			Retaining Ring	Bearing	
VMRN	VMQN	EN 1.1191 Equiv.	-	Spring Steel	Steel	
VMRB	VMQB		-	Black Oxide		
VMRG	VMQG		-	Electroless Nickel Plating		
VMRA	-		Aluminum Alloy 5000 series	Clear Anodize		Stainless Steel
VMRP	-		Polyacetal	-		Spring Steel
VMRM	-	Conductive MC Nylon	-	Spring Steel		
-	-	MC Nylon	-	Spring Steel		

6.3 / (1.6 /)

For Wire 60°

For L Channel Track 90°

Sheave (for Wire Cable) 40°

For bearing detailed dimensions, see P989.

Part Number			Z Groove Depth		d	P	dh	T	S	B	r	Applicable Wire Cable Dia.	Bearing Used			
Type	D	60° Sheave	90°													
For Wire VMRN VMRB VMRG VMRA VMRP VMRM	For L Channel Track VMQN VMQB VMQG	Sheave (for Wire Cable) SMRN	(20)	4	3	3	10	8		3	4	-	-	623ZZ		
			(30)			5	16	13	10	2.5	5	-	-	625ZZ		
			40			6	19	16	12	3	6	-	-	626ZZ		
			30	5	-	6	19	16	12	3	6	-	-	626ZZ		
			40			8	24	21	14		8	-	-	628ZZ		
			(40)			8	24	21			14	3	8	-	-	628ZZ
			(50)	7	5	10	26	23		14	3	8	-	-	6000ZZ	
			*50			9	-	10	26	23	14	3	8	2.2	4	6000ZZ
			60					-	-							
			*60	10	10			26	23	16	4	8	3.3	6	6000ZZ	
			*60	10A	10	26	23	18	5	8	4.4	8				
			60	11	6	-	10	26	23	16	4	8	-	-		
			(60)			-	10	26	23	16	4	8	-	-		
			*60			-	12	28	25	20	6	8	5.5	10	6001ZZ	
			(100)	6	12	28	25	16	4	8	-	-				

 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) VMRB (x1.1) VMRG (x1.2)	VMRA	VMRP	VMRM	VMQN (x1.0) VMQB (x1.1) VMQG (x1.2)	SMRN	
20	4	3						-	
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.



RoHS

Type			Body Material	Surface Treatment	Material	
Flat	Double Flanged	Tapered			Retaining Ring	Bearing
FTMRN	HMNRN	TMRN	EN 1.1191 Equiv.	-	Spring Steel	Steel
FTMRB	-	-		Black Oxide		
FTMRG	-	-		Electroless Nickel Plating		
FTMRA	HMRA	-	Aluminum Alloy 5000 series	Clear Anodize	Stainless Steel	
FTMRP	HMRP	-	Polyacetal	-	Spring Steel	

6.3 / (1.6 /)

Flat

Double Flanged

Tapered

For bearing detailed dimensions, see P989.

Part Number			Double Flanged		Tapered		d	P	dh	T	S	B	Bearing Used
Type	D	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	2.5	4	623ZZ		
	20				4	13	11	10		5	624ZZ		
	30				5	16	13	10		6	625ZZ		
	(30)	-	-	0.5~3.0	6	19	16	12	3	6	626ZZ		
	*20	5	0.5~2.0		4	13	11	10	2.5	5	624ZZ		
	30				5	16	13	10		6	625ZZ		
	40			6	19	16	11	6		626ZZ			
	(40)	-	-	8	24	21	14	3	8	628ZZ			
	*30	6	0.5~2.0	0.5~3.0	5	16	13	10	2.5	5	625ZZ		
	40				6	19	16	11		6	626ZZ		
	50				8	24	21	14		3	8	628ZZ	
	(50)	-	-	10	26	23	14	3	8	6000ZZ			
	*40	8	0.5~2.0	0.5~3.0	6	19	16	11	2.5	6	626ZZ		
	*50				8	24	21	14		3	8	628ZZ	
	*60				10	26	23	14		8	6000ZZ		
	(100)	-	-	-	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

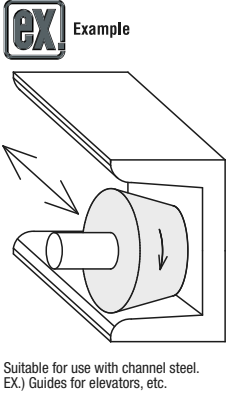
FTMRN40 - 4 - F0.5 - Z3.0

HMRA30 - 4 - F0.5 - Z3.0

TMRN20 - 4 - F0.5 - Z3.0

D	V Groove Width	Unit Price						
		Flat		Double Flanged			Tapered	
		FTMRN (x1.0) FTMRB (x1.1) FTMRG (x1.2)	FTMRA	FTMRP	HMNRN	HMRA	HMRP	TMRN
15	4	-	-	-				-
20		-	-	-				-
30		-	-	-				-
20	5	-	-	-				-
30		-	-	-				-
40		-	-	-				-
30	6	-	-	-				-
40		-	-	-				-
50		-	-	-				-
40	8	-	-	-				-
50		-	-	-				-
60		-	-	-				-
100					-	-	-	-

⚠ 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.

Conveyor Roller Shafts / Mini-Rollers for Conveyors

Roller Conveyors - Overview

Conveyor Roller Shafts

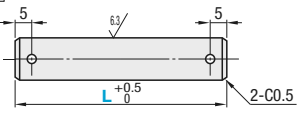


RoHS

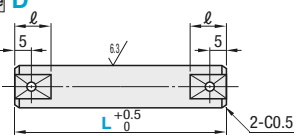
Type	Material	Surface Treatment
HRD	EN 1.1191 Equiv.	-
HRDB	EN 1.1191 Equiv.	Black Oxide
HRDM	EN 1.1191 Equiv.	Electroless Nickel Plating
HRDS	EN 1.4301 Equiv.	-

Applicable to Conveyor Rollers and Mini-Rollers on P.1163.

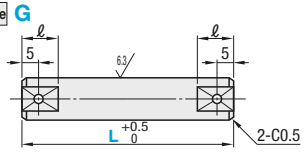
Shape A



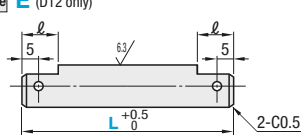
Shape D



Shape G



Shape E (D12 only)



Part Number			L	W	Q	d	ℓ
Type	Shape	D	1mm Increment	Selection			
HRD	A	6	60~550	4	4	2.5	11
HRDB	D	8		5.8	6	2.5	12
HRDM	G	12		10	8	3	13
HRDS	E	12					

Ordering Example

Part Number

Type

Shape

D

-

L

-

W

HRD

D

6

-

135

-

4.5

Unit Price = Body Price + Shape Charge

Part Number		Body Price			Config. Price (Body Price +)			
Type	D	60~200	201~400	401~550	A	D	E	G
HRD	6							
	8							
	12							
HRDB	6							
	8							
	12							
HRDM	6							
	8							
	12							
HRDS	6							
	8							
	12							

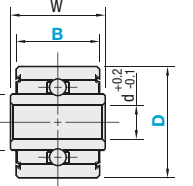
Mini-Rollers for Conveyors



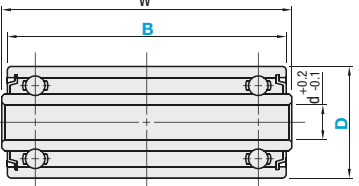
RoHS

Type	Material	Surface Treatment	Bearing
CNMR	Steel	Trivalent Chromate Plating	Machined Bearing
CNMRC	Steel	Hard Chrome Plating	Machined Bearing
CNMRS	Stainless Steel	-	Machined Bearing

B=15, 25



B=50, 100



Part Number		B	d	d ₁	W	Allowable Load (N)	Unit Price		
Type	D			CNMR, CNMRS	CNMRC		CNMR	CNMRC	CNMRS
CNMR CNMRC CNMRS	20	15	6.1	9.2	10	17	294		
		25	6.1	9.2	10	27	392		
		50	6.2		10	52	490	-	-
		100	6.2		10	102	490	-	-

Ordering Example

Part Number

-

B

CNMRC20

-

50

Selection Method of Roller Conveyors

- ① Selection of Roller Width
- Select a roller width according to outer size of conveyed objects.
- Optimum width selection is "Object Width + 50mm or more".
 - If the objects to be conveyed are on pallets, it is acceptable for the roller width to be narrower than the bottom surface width of the objects as long as the objects do not come into contact with the conveyor frame.
- ② Selection of roller pitch, material, and diameter
- Select a roller width according to the bottom surface of conveyed objects as shown below.

Bottom of Conveyed Object	Min. Pitch Required	Material, Diameter
When the conveyed objects have hard bottoms: (Steel, Plastic, etc.)	3 Pitches (4 Rollers)	Select material and outer diameter from Table 1 according to Condition Formula "Table 1 Strength x 4 ≥ Conveyed Object Weight"
When the conveyed objects have soft bottoms: (Cardboard, Rubber, etc.)	5 Pitches (6 Rollers)	Select material and outer diameter from Table 1 according to Condition Formula "Table 1 Strength x 6 ≥ Conveyed Object Weight"

When impact is generated while loading, impact load is 1.5~3 times larger than the usual load. Please select the conveyor with sufficient load capacity.

Table 1 : Strength per Roller

Roller Material	Roller Diameter	Roller Strength (N)				
		W113	W213	W313	W413	W513
Plastic	20mm	113	105	98	90	83
	30mm	162	154	147	139	132
	50mm	314	304	294	289	279
Steel	19.1mm	618	530	343	294	206
	28.6mm	1236	1059	687	588	412
	38.1mm	1342	1342	922	785	588

Conveyed Object Weight and Self Rolling Incline

See Table 2 for the movements of conveyed objects by own weight (self rolling incline) on inclined Conveyors.

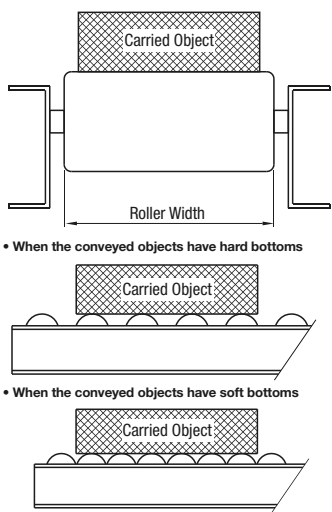
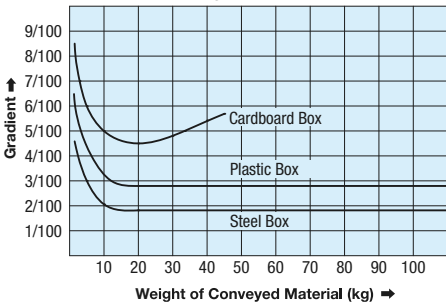
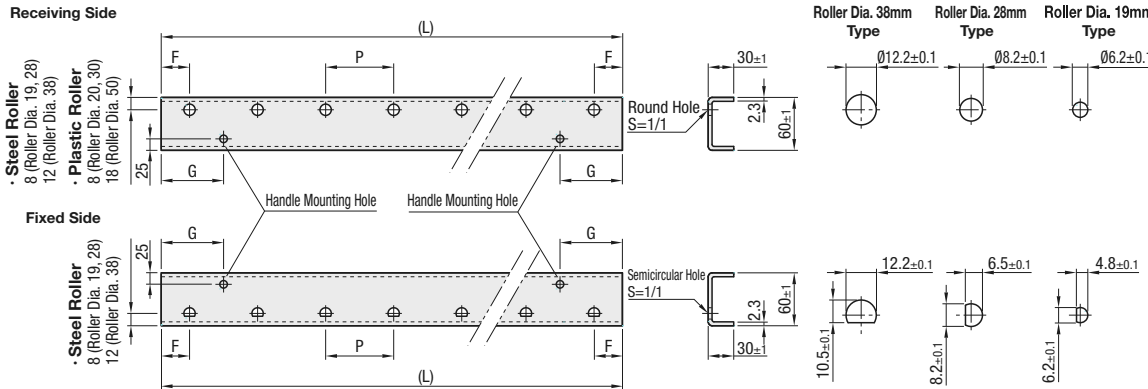


Table 2 : Self Rolling Incline



[Frame Side View]



Resin Roller Conveyor

For Resin Roller Conveyors, the receiving and fixed side holes are round.

Type	ROCOP					
Frame Size	Ø20xP25	Ø30xP40	Ø30xP50	Ø50xP75	Ø50xP100	
(L)	F	G	F	G	F	G
100~199	10	22	37	40	35	47.5
200~299						
300~399						
400~499						
500~599						
600~699						
700~799						
800~899						
900~1000						
1001~1100						
1101~1200		97	11.7	97.5	75	97
1201~1300						

Steel Roller Conveyor

Type	ROCO	ROCON	ROCOM	ROCOG	ROCOE ROCOJ	ROCOH
Frame Size	Ø19xP20	Ø19xP30	Ø28xP30	Ø28xP50	Ø38xP50 Ø38xP100*	Ø38xP75
(L)	F	G	F	G	F	G
100~199	10	20	35	70	100	150
200~299						
300~399						
400~499						
500~599						
600~699						
700~799						
800~899						
900~1000						
1001~1100		140	150	150	25	150
1101~1200						
1201~1300						

* Holes for Roller Shafts are provided at 50mm pitch on Ø38 x P100 flames.

Conveyor Wheels / Rubber and Urethane Lined Wheels for Conveyors

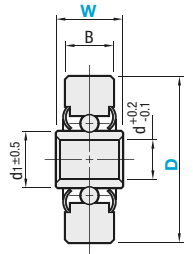
Miniature Roller Panels / Miniature Roller Chutes

Conveyor Wheels



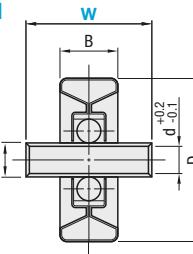
RoHS

Machined Wheels
HMH
HMHS



W
B
d₁±0.5
D
d₁+0.2
d₁-0.1

Pressed Wheels
HPH



W
B
d₁±0.5
D
d₁+0.2
d₁-0.1

Type	Material	Surface Treatment
HPH	Steel	Trivalent Chromate
HMH	Steel	Chromate
HMHS	Stainless Steel	-

Conveyor Wheels (Pressed Wheels)

Part Number		No.	W	D	d	d ₁	B	Allowable Load (N)	Unit Price	Volume Discount Rate
Type									1 ~ 4 pc(s).	5~30 pcs.
HPH	25	16	25.4	6.2	10	10	294			
	36	25	36	6.5	11	10	147			
	38	25	38	6.5	11	12	196			
	50	28	50	8.2	13	20	245			

Conveyor Wheels (Machined Wheels)

Part Number		D	W	d	d ₁	B	Allowable Load (N)	HMH Unit Price	HMH Volume Discount Rate	HMHS Unit Price	HMHS Volume Discount Rate
Type								1 ~ 4 pc(s).	5~30 pcs.	1 ~ 4 pc(s).	5~30 pcs.
HMH HMHS	*25	16	6.2	12	9	294					
	36	25	6.2	14	9	392				-	-
	50	20	8.2	19	14.5	784				-	-
	50	20A	10.2	19	14.5	980				-	-
	50	32	8.2	19	14.5	980				-	-

* HMHS applies only to D25. kgf=Nx0.101972 For orders larger than indicated quantity, please request a quotation.

Ordering Example

Part Number - W

HPH25 - 16

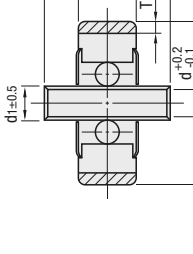
HMHS25 - 16

Rubber and Urethane Lined Wheels for Conveyors



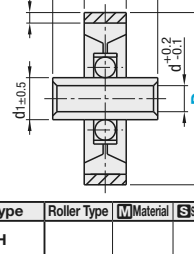
RoHS

Milled Rollers
HGH
HUH
HMHU
HMHSU



W
B
T
d₁±0.5
D
d₁+0.2
d₁-0.1

Press Formed Rollers
HPHU



W
B
2.5
d₁±0.5
D
d₁+0.2
d₁-0.1

Type	Roller Type	Material	Surface Treatment	Material of Roller Surface
HGH	Milled Roller	Steel	Trivalent Chromate	Nitrile Rubber (White) (Shore A60)
HUH	Milled Roller	Steel	Trivalent Chromate	Polyurethane (Blue) (Shore A90)
HMHU	Milled Roller	Stainless Steel	-	Polyurethane (Black) (Shore A90)
HMHSU	Milled Roller	Stainless Steel	-	Polyurethane (Black) (Shore A90)
HPHU	Press Formed Rollers	Steel	Trivalent Chromate	Polyurethane (Black) (Shore A90)

Part Number		W	d	d ₁	B	T	Allowable Load (N)		HGH Unit Price	HGH Volume Discount Rate	HUH Unit Price	HUH Volume Discount Rate	HMHU Unit Price	HMHU Volume Discount Rate	HMHSU Unit Price	HMHSU Volume Discount Rate	HPHU Unit Price	HPHU Volume Discount Rate
Type		D					HGH	HUH	1 ~ 4 pc(s).	5~30 pcs.	1 ~ 4 pc(s).	5~30 pcs.	1 ~ 4 pc(s).	5~30 pcs.	1 ~ 4 pc(s).	5~30 pcs.	1 ~ 4 pc(s).	5~30 pcs.
HGH HUH	40	25	6.2	14	9	4	196	294										
		14	8.2															
	60	20	12	19	13	5	490	490										
HMHU HMHSU HPHU	30	16	6.2	10	10	2.5	-	-	294	147								

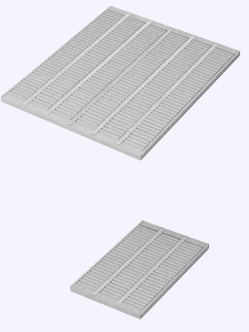
kgf=Nx0.101972 For orders larger than indicated quantity, please request a quotation.

Ordering Example

Part Number - W

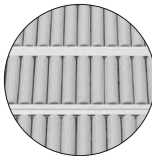
HGH40 - 25

Features: Use of small diameter and low friction rollers allows rolling of conveyed objects even on small incline.

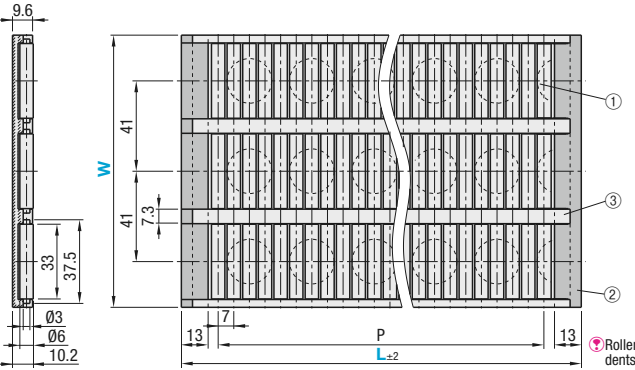


Miniature Roller Panels

Type	Material	① Roller	② Retainer	③ Frame
MICRO	ABS Plastic	ABS Plastic	Aluminum	Aluminum



Roller surface may have minor scratches or dents.



9.6
41
41
7.3
33
37.5
10.2
13
P
L±2
13

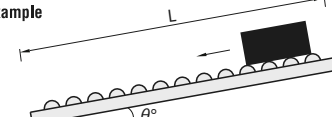
Part Number	W	L	P	Load	Unit Price
MICRO	122	200	160	3kg/100cm ²	
	244	300	267		

Ordering Example

Part Number - W - L

MICRO - 122 - 200

Example



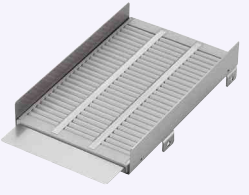
θ°

Inclined Transfer Test

Subjects	Weight (g)	Angle (θ)
Cardboard Box	1200	4°
PET Bottle	500	
Canned Goods	350	

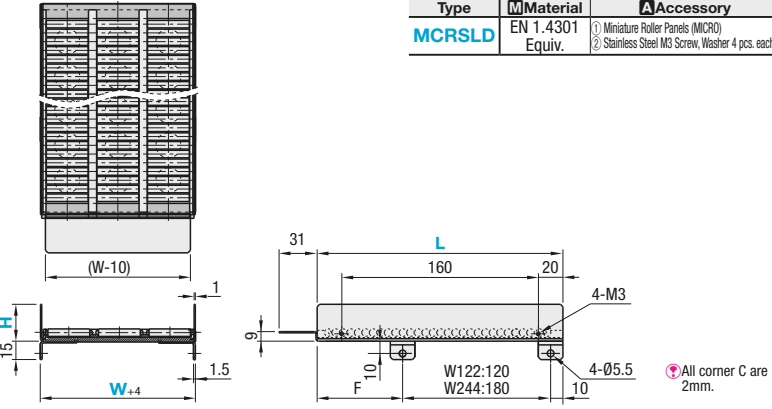
* The above values may vary depending on conveyed contents, and should be used as reference.

Miniature Roller Chutes



Miniature Roller Chutes

Type	Material	Accessory
MCRSLD	EN 1.4301 Equiv.	① Miniature Roller Panels (MICRO) ② Stainless Steel M3 Screw, Washer 4 pcs. each.



31
160
20
4-M3
15
H
W+4
1
1.5
F
10
W122:120
W244:180
4-Ø5.5
10

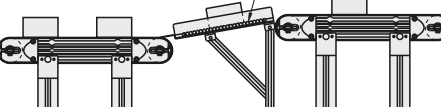
Part Number	W	H	L	F	Unit Price
MCRSLD	122	30	200	70	
	244	50	300	110	

Ordering Example

Part Number - H - L

MCRSLD122 - 30 - 200

Example



MCRSLD