

# Motor Rollers

ⓘ A motor and a decelerator are built in the conveyor roller.

**Motor Rollers**

**RoHS 10**

**MOR**

**Accessory For D38 / 42.7**

**For D57**

D38, 42.7: 12mm or more  
D57: 16mm or more

D38, 42.7: 19mm or more  
D57: 11mm or more

ⓘ Operating Temperature: 0~40°C (Humidity 15~85%)

ⓘ Dimension in ( ) is for D38, 42.7, 57.

Part Number	D	L	Nominal Speed
MOR	38	300	10
	42.7	400	15
	57	500	20

ⓘ For orders larger than indicated quantity, please request a quotation.

D	Velocity Nominal	Power Supply	Rated Current (A) (50Hz/60Hz)	d	G	W	F	Speed (m/min)		Tangential force (N)				Torque (N-cm)				Roller Strength (N)		
								50 Hz	60 Hz	50 Hz		60 Hz		50 Hz		60 Hz		L300	L400	L500
								Rating	Starting	Rating	Starting	Rating	Starting	Rating	Starting	Rating	Starting			
38	10	Three-Phase 200V 50/60Hz Input 16/12W	0.055 / 0.050	18	16	16	16	10.4	13.1	16.7	37.3	12.4	31.3	31.8	70.9	23.6	59.6	343	294	294
	15							14.2	16.1	12.3	39.6	9.2	30.9	23.3	75.3	17.5	58.7			
	20							22.2	25.2	7.8	25.3	5.8	19.7	14.9	48.0	11.1	37.4			
42.7	10	Three-Phase 200V 50/60Hz Input 15/14W	0.056 / 0.051	12	8	8	8	12.1	13.5	14.2	30.7	14.2	23.4	30.3	65.5	30.3	50.1	490	441	392
	15							17.9	19.9	9.6	20.8	9.6	15.9	20.5	44.4	20.5	33.9			
	20							24.4	27.2	7.0	15.2	7.0	11.6	15.0	32.5	15.0	24.8			
57	10	Three-Phase 200V 50/60Hz Input 33/27W	0.120 / 0.100	15	23	23	23	11.2	13.3	44.5	83.1	37.0	74.8	126.8	236.8	105.4	213.1	980	980	784
	15							12.4	14.8	40.2	75.1	33.5	67.6	114.5	214.0	95.4	192.6			
	20							17.0	20.2	29.4	55.0	24.5	49.5	83.7	156.7	69.8	141.0			

- ⓘ Voltage fluctuation is allowed up to ±3% for 50Hz. (Up to ±5% allowed for 60Hz)
- ⓘ In case 50Hz is applied at ±5% of voltage variation, torque value diminishes by 40% from the values shown in the table above.
- ⓘ Indicated speed applies for rated power. Also rotational velocity and torque change when load is light or excessive.
- ⓘ Roller strengths may vary depending on applied shock loads, load weights, materials. Be sure to provide ample margin. (Recommendations: 1/2 - 1/3 of the chart values)

**Part Number Example**

Part Number: MOR38 - L: 300 - Nominal Speed: 10

# Conveyor Rollers

## Pressed-In Bearing Type

ⓘ Refer to P.1182 for roller motor drivers, and P.1185 for dedicated shafts. See the right page for Shaft / Roller Set products.

**Conveyor Rollers – Pressed-In Bearing Type**

**RoHS 10**

Core-Only Type	Material		Surface Treatment	Bearing
	Core	Wheel		
HRO	Carbon Steel	Steel	Trivalent Chromate Plating	Pressed-in Bearings
HROC			Hard Chromate Plating	
HROB Silent Type			Trivalent Chromate Plating	
HROA	Aluminum Alloy	Steel	Clear Anodize	Pressed-in Bearings*
HROS	304 Stainless Steel	304 Stainless Steel	—	Pressed-in Bearings

ⓘ Machined Bearing for HROA28 only

**Urethane Lined Type**

\*1. HROB and HROBU are d-0.008

\*2. Collar part of HROB and HROBU is plastic (6 nylon).

Only for No.19 and No.28 of HROB and HROBU.

Part Number	Type	No.	L Selection	G Selection	D	a	d	(d)	t	* Roller Strength for Reference (N)						
										L113	L163	L213	L263	L313	L413	L513
HRO (Core-Only Type)		19	113	3	19.1	5	6.2	(9)	1.2	618	573	530	436	343	294	206
		*22			22.2	3.5	6.2	(10)	1.2	618	—	530	—	343	294	206
		28			28.6	3.5	8.2	(12)	1.2	1236	1148	1059	873	687	588	412
		38			38.1	5.5	12.2	(16)	1.2	1342	1342	1342	1132	922	785	588
		*42			42.7	5	12.2	(16)	1.4	1667	1628	1589	1310	1030	883	745
		*50			50.8	6.5	12.2	(18)	1.6	1716	1628	1648	1584	1520	1442	1147
HROC (Core-Only Type)		22	163	3	22.2	3.5	6.2	(10)	1.2	618	573	530	436	343	—	—
		28			28.6	3.5	8.2	(12)	1.2	1236	1148	1059	873	687	—	—
		38			38.1	5.5	12.2	(16)	1.2	1342	1342	1342	1132	922	—	—
		19			19.1	6	6	(8)	1.2	775	721	667	549	431	373	—
HROB (Core-Only Type)		28	263	4	28.6	6.5	8	(10)	1.2	1549	1436	1323	1093	863	745	520
		38			38.1	6.5	12	(18)	2.4	2206	2040	1875	1673	1471	1226	1040
		42			42.7	5	12	(18)	2.3	2942	2687	2432	2319	2206	1844	1451
		57			57.2	6.5	12	(18)	1.4	2942	2687	2432	2319	2206	1844	1451
		28			28.6	5.5	8.2	(12)	1.6	617	573	529	436	343	—	—
HROA (Core-Only Type)		38	313	5	38.1	5	8.1	(13)	1.6	705	705	705	583	460	—	—
		57			57.1	6.5	12.2	(16)	1.6	784	735	686	637	588	—	—
		19			19.0	5	6.2	(10)	1.2	432	403	373	309	245	196	147
HROS (Core-Only Type)		38	50	5	38.1	3.5	8.2	(16)	1.0	883	836	790	684	579	490	373
		50			50.8	6.5	12.2	(18)	1.5	1324	1250	1177	1142	1079	883	687

ⓘ HROB is excellent in quiet operation and durability as standard bearings are used. ⓘ For No.19 and No.28 of HROB, hubs are substituted with collars. ⓘ Sizes with \* (No.22, No.42, No.50) are available for HRO only.

Part Number	Type	No.	Available Types						
			L113	L163	L213	L263	L313	L413	L513
HRO		19	•	•	•	•	•	•	•
		22	•	•	•	•	•	•	•
		28	•	•	•	•	•	•	•
		38	•	•	•	•	•	•	•
		42	•	•	•	•	•	•	•
		50	•	•	•	•	•	•	•
HROC		22	•	•	•	•	•	•	
		28	•	•	•	•	•	•	
		38	•	•	•	•	•	•	
HROB		19	•	•	•	•	•	•	
		28	•	•	•	•	•	•	
		38	•	•	•	•	•	•	
		42	•	•	•	•	•	•	
		57	•	•	•	•	•	•	

**Part Number Example**

Part Number: HRO38 - L: 213 - G: 3

**Part Number Alterations**

Part Number: HROU38 - L: 213 - G: 3 - (UDC)

Alteration	Code	Spec.
Antistatic Urethane Change to Antistatic Urethane (Urethane Color: Gray)	UDC	Urethane Lined Shore A90 is changed to Antistatic Urethane. Ordering Code: UDC Specific Volume Resistivity 2.1 x 10 <sup>8</sup> Ωcm Surface Resistivity 4.0 x 10 <sup>9</sup> Ω (Temperature 30°C/Humidity 60%)

**Application Example**

Conveyor Roller Shafts Catch for Aluminum Frame HSCX (P.2908)

Snap Pin

Conveyor Rollers

Roller Shaft P.1185

Roller HRO

Shaft HRD (P.1185)

Aluminum Extrusions HFS (P.2690)