

HM SERIES 600–1000 MM

The DENSO HM-Series robots offer a longer reach and higher payload capacity than the HS-Series models. Their outstanding features include:

- Exceptional repeatability of ± 0.02 to ± 0.025 mm
- Fast cycle times from 0.31 to 0.29 sec.
- Large payloads up to 20 kg
- Long reaches from 600 to 1,000 mm
- High maximum allowable moment of inertia
- Compact design saves floor space, facilitates integration
- Floor- or ceiling-mount, with no special hardware needed
- Operation in dusty and wet environments (optional IP65 configuration)
- ANSI and CE compliance allows global deployment
- UL models available for the US and Canada



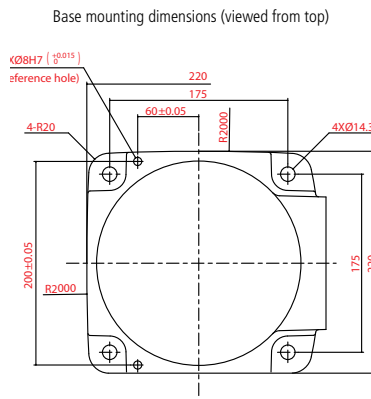
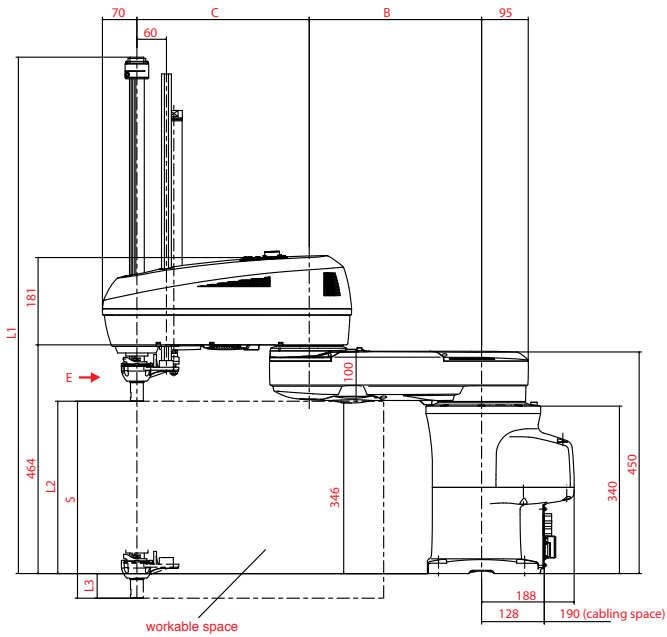
		HM-4060*G	HM-4A60*G	HM-4070*G	HM-4A70*G	HM-4085*G	HM-4A85*G	HM-40A0*G	HM-4AA0*G
Number of axes		4							
Maximum arm reach (mm)		600		700		850		1000	
First-arm reach (mm)		250		350		350		500	
Second-arm reach (mm)		350		350		500		500	
Range of motion (°)	J1	±165							
	J2	±143		±147					
	Z (mm)	200, 300, 400							
	T	±360							
Position detection		Absolute encoder							
Minimum motion area (mm)		213		199		281		284	
Maximum payload (kg)		10	20	10	20	10	20	10	20
Weight, approx. (kg)		53							
Footprint (mm)		220 × 220							
Cycle time (sec.)		0.29 (with 2-kg weight)				0.31 (with 2-kg weight)			
Maximum composite speed (mm/sec.)		8,780		9,570		11,480		11,390	
Maximum joint speed	J1 (°/sec.)	450							
	J2 (°/sec.)	667							
	Z (mm/sec.)	2,780							
	T (°/sec.)	2,220 for 10-kg models or 1,540 for 20-kg models							
Repeatability ¹	J1+J2 (mm)	±0.02				±0.025			
	Z (mm)	±0.01							
	T (°)	±0.005							
Maximum force fit (1 sec. or less, N)		98							
Maximum allowable moment of inertia (kgm ²)		0.25 (with 10-kg weight)	0.45 (with 20-kg weight)	0.25 (with 10-kg weight)	0.45 (with 20-kg weight)	0.25 (with 10-kg weight)	0.45 (with 20-kg weight)	0.25 (with 10-kg weight)	0.45 (with 20-kg weight)
Wiring (in-arm integrated)		24 lines (max. 1 A per line)							
Air piping (in-arm integrated)		4 systems (ø6)							
Protection class		Standard: IP40; option: IP65 (dust- and mistproof)							
Ceiling-mount		-	-	✓	✓	✓	✓	-	-
UL specifications ²		✓							



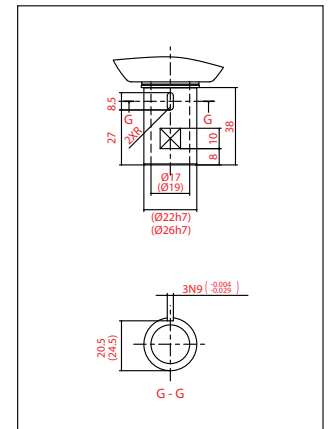
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* Placeholder for Z-stroke value. 1. At constant ambient temperature. 2. Floor-mount only.

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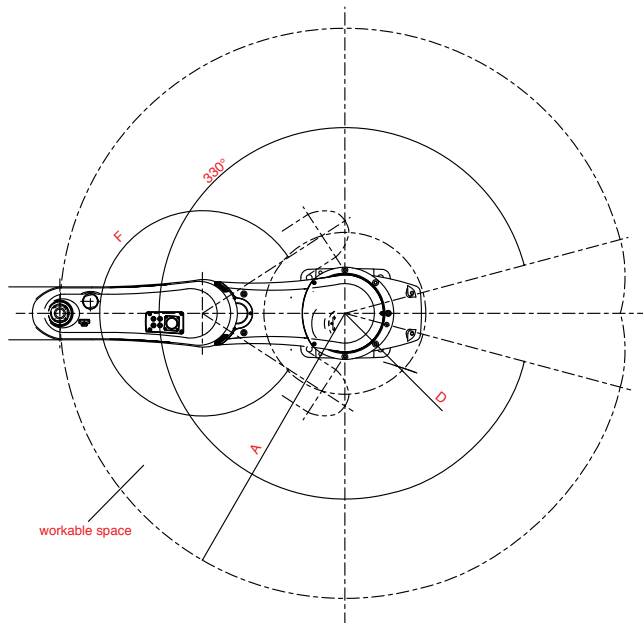
Detailed drawing of hand mounting face (viewed from E)



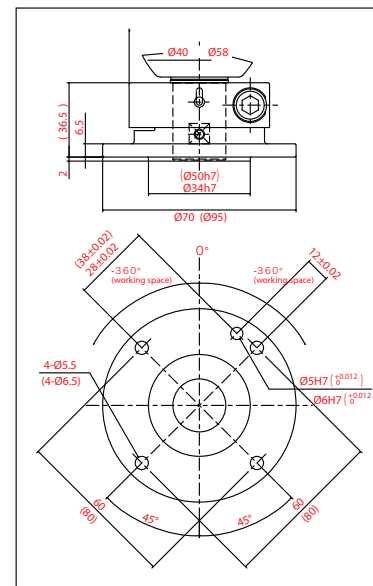
S	L1	L2	L3
Z-axis stroke	10 kg	20 kg	
100	755	749	350
150	805	799	350
200	855	849	350
300	955	949	350
400 ¹	1055	1049	350

Type	A	B	C	D	F
HM-4060*G, HM-4A60*G	600	250	350	213	286°
HM-4070*G, HM-4A70*G	700	350	350	199	294°
HM-4085*G, HM-4A85*G	850	350	500	281	294°
HM-40A0*G, HM-4AA0*G	1000	500	500	284	294°

1. With Z-axis stroke of 400 mm, bottom of Z axis may reach below base mounting face.



Flange (option) mounting face²



2. Values denote dimensions for 10-kg payload models (HM 40**G); values in parentheses denote dimensions for 20-kg payload models (HM-4A**G).

DENSO ROBOTICS

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