

DENSO

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The QR-Code's inventor



HM Series

The DENSO HM Series of robots offers a higher payload and higher speed than the HS model range and also features a longer arm reach.

	PAYLOAD (KG)	ARM REACH (MM)
HM-4A60*G	20	600
HM-4A70*G	20	700
HM-4A85*G	20	850
HM-4AA0*G	20	1000

- **PRECISE:** from ± 0.02 mm
- **THE FASTEST OF ALL OUR ROBOTS:** speed of up to 11,500 mm/s.
Fastest possible cycle time: 0.29 s
- **OPTIONAL SPECIFICATIONS:** Dust & splash proof (IP65/54) & UL specifications (for the USA and Canada)

HM SERIES

	PAYLOAD	ARM REACH
HM-4A60*G	20 kg	600 mm
HM-4A70*G	20 kg	700 mm
HM-4A85*G	20 kg	850 mm
HM-4AA0*G	20 kg	1000 mm

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°

Note 1: Values denote dimensions for the 10 kg payload type (HM-40**G), and values enclosed in () denote dimensions for the 20 kg payload type (HM-4A**G).

HM-4A60*G



HM-4A70*G



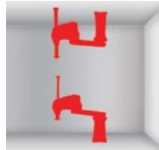
HM-4A85*G



HM-4AA0*G

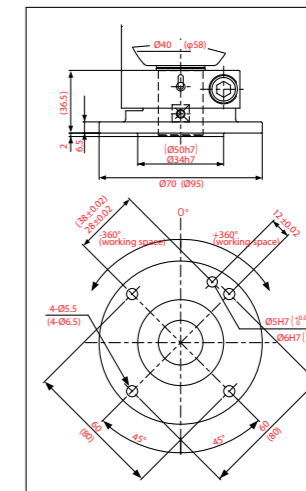
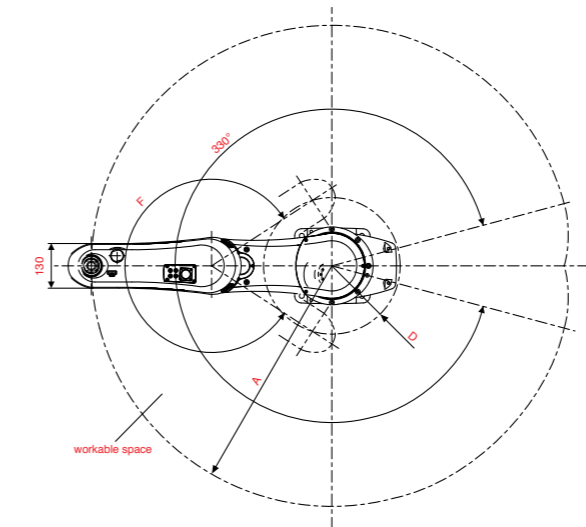
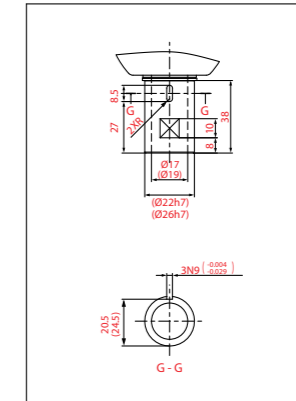
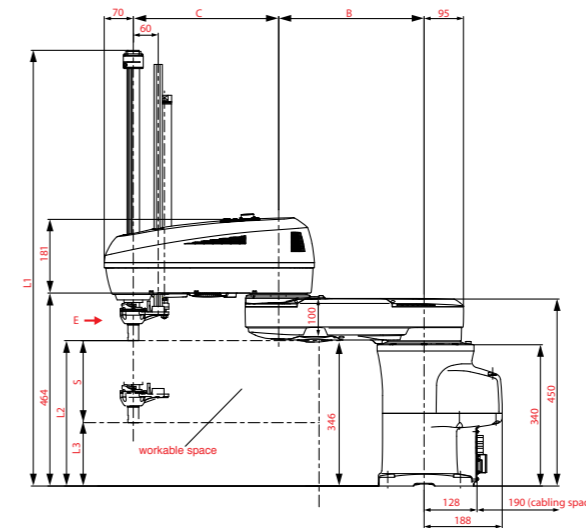


Mounting Options

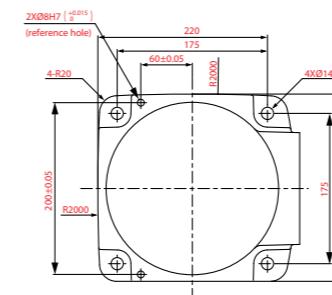


Unit		HM-4060*G	HM-4A60*G	HM-4070*G	HM-4A70*G	HM-4085*G	HM-4A85*G	HM-40A0*G	HM-4AA0*G
Number of axis		4	4	4	4	4	4	4	4
Maximum arm reach (Point P: wrist center)	mm	600	600	700	850	850	1000	1000	1000
Payload	kg	10	20	10	20	10	20	10	20
Maximum composite speed	At the center of the hand mounting flange	mm/s	8780	8780	9570	9570	11,450	11,450	11,390
	Z	mm/s	2760	2760	2760	2760	2760	2760	2760
	T	deg/s	2220	1540	2220	1540	2220	1540	2220
Cycle time	s	0.29 (with 2 kg weight)	0.29 (with 2 kg weight)	0.29 (with 2 kg weight)	0.29 (with 2 kg weight)	0.31 (with 2 kg weight)	0.31 (with 2 kg weight)	0.31 (with 2 kg weight)	0.31 (with 2 kg weight)
Position repeatability (1)	J1+J2	mm	±0.02	±0.02	±0.02	±0.02	±0.025	±0.025	±0.025
	Z	mm	±0.01	±0.01	±0.01	±0.01	±0.01	±0.01	±0.01
	T	deg	±0.05	±0.05	±0.05	±0.05	±0.05	±0.05	±0.05
Environment resistance	Protection class	IP40, IP65							
	Cleanroom class	-	-	-	-	-	-	-	-
UL specification (2)		✓	✓	✓	✓	✓	✓	✓	✓
Motion range	J1	deg	±165	±165	±165	±165	±165	±165	±165
	J2	deg	±143 (Dust & Splash-proof type ±140)		±147 (Ceiling ±145, Dust & Splash-proof type ±146, Ceiling Dust & Splash-proof type ±142)		±147 (Ceiling ±142)		±147
	Z	mm	100, 200, 300, 400 (3)	100, 200, 300, 400 (3)	100, 200, 300, 400 (3)	100, 200, 300, 400 (3)	100, 200, 300, 400 (3)	100, 200, 300, 400 (3)	100, 200, 300, 400 (3)
	T	deg	±360	±360	±360	±360	±360	±360	±360
maximum allowable inertia	kgm ²	0.25 (with 10 kg)	0.45 (with 20 kg)	0.25 (with 10 kg)	0.45 (with 20 kg)	0.25 (with 10 kg)	0.45 (with 20 kg)	0.25 (with 10 kg)	0.45 (with 20 kg)
Signal lines & air piping	Signal lines	24 (for proximity sensor signals, etc.)							
	Air piping	4 systems φ6							
Brakes		Brake for Z axis (3rd axis)							
Mounting configuration		Floor	Floor	Floor, Ceiling	Floor, Ceiling	Floor, Ceiling	Floor, Ceiling	Floor	Floor
Arm weight	kg	Standard: 53, Ceiling: 54, Dust & Splash-proof: 56							

1. Position repeatability is the value at constant ambient temperature. 2. Only for floor-mounted. 3. Z-axis stroke 100 mm is available only for HM (floor-mounted). For details, please contact our sales.



Unit: mm



S (z axis stroke)	L1		L2		L3	
	10 kg	20 kg				
100	755	749	350		250	
150	805	799	350		200	
200	855	849	350		150	
300	955	949	350		50	
400 (Note 2)	1055	1049	350		-50	

Note 2: In the case of the Z axis 400 mm stroke type, the lowermost end of the Z axis may reach a lower position than the base mounting face.

Legend

HM □ - **4** □ □ □ □ - □

- Mid-sized 4-axis robot
- Robot type: None: Floor, S: Ceiling
- Axes: 4: 4-axis
- Maximum payload: 0: 10 kg, A: 20 kg
- Total arm length: 60: 600 mm, 70: 700 mm, 85: 850 mm, A0: 1000 mm
- Vertical stroke: 2: 200 mm, 3: 300 mm, 4: 400 mm
- Options: None: Standard type, W: Dust & splash proof type (IP65), UL: UL specifications