

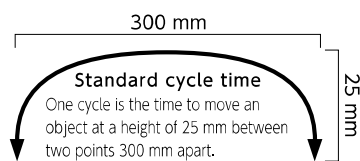
HM Series

RC8A ▶P.42

HM-4060 / 4A60 / 4070 / 4A70 / 4085 / 4A85 / 40A0 / 4AA0

The HM series consists of a rich line-up of models with the maximum arm length and payload among DENSO 4-axis robots to meet specific needs.

Maximum arm reach	600 to 1,000 mm
Maximum payload	10 / 20 kg
Standard cycle time	0.29 / 0.31 sec
Position repeatability	±0.02 / 0.025 mm

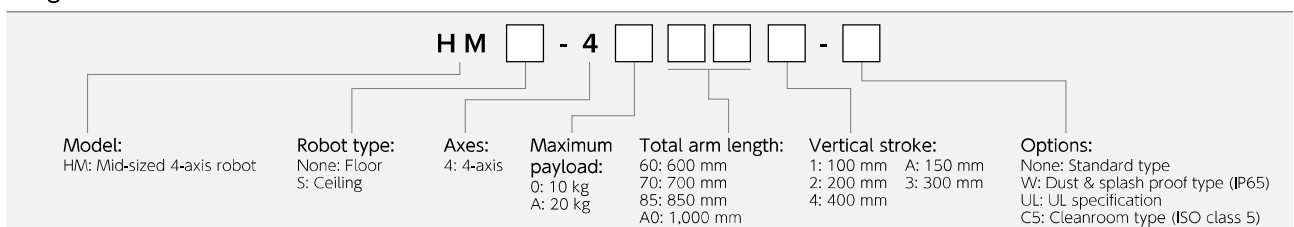


Specifications

Item	Specifications								
Model ^{*1}	HM-4060*	HM-4A60*	HM-4070*	HM-4A70*	HM-4085*	HM-4A85*	HM-40A0*	HM-4AA0*	
Axes	4								
Position detection method	Absolute encoder								
Drive motor / brake	All-axis AC servo motor / Z-axis gravity balance air cylinder / Z-axis motor brake								
Total arm length (No. 1 arm + No. 2 arm)	600 (250 + 350) mm		700 (350 + 350) mm		850 (350 + 500) mm		1,000 (500 + 500) mm		
Motion range and stroke	J1 (No. 1 axis)	±165°							
	J2 (No. 2 axis)	±143°			±147°				
	Z (No. 3 axis)	* = 1: 100 mm, * = A: 150 mm, * = 2: 200 mm, * = 3: 300 mm, * = 4: 400 mm							
	T (No. 4 axis)	±360°							
Maximum payload	10 kg	20 kg	10 kg	20 kg	10 kg	20 kg	10 kg	20 kg	
Maximum joint speed	J1	449.74 deg/sec			412.26 deg/sec		374.78 deg/sec		
	J2	667.5 deg/sec			611.87 deg/sec				
	Z	2,764.88 mm/sec				2,764.88 mm/sec			
	T	2,229.93 deg/sec	1,544.51 deg/sec	2,229.93 deg/sec	1,544.51 deg/sec	2,229.93 deg/sec	1,544.51 deg/sec	2,229.93 deg/sec	1,544.51 deg/sec
Standard cycle time ^{*2}	0.29 sec				0.31 sec				
Position repeatability (center of end-effector mounting face) ^{*3}	J1 + J2	±0.02 mm			±0.025 mm				
	Z	±0.01 mm							
	T	±0.005°							
Maximum pressure input (downward, for up to 1 sec)	98 N								
Maximum allowable moment of inertia	0.25 kgm ²	0.45 kgm ²	0.25 kgm ²	0.45 kgm ²	0.25 kgm ²	0.45 kgm ²	0.25 kgm ²	0.45 kgm ²	
User air pipe(s)	4 systems (ø6)								
User signal line(s)	24 (for proximity sensor signals, etc.)								
Air source	Normal pressure				0.05 to 0.35 MPa				
	Maximum allowable pressure				0.59 MPa				
Airborne noise (equivalent continuous A-weighted sound pressure level)	80 dB or less								
Protection grade	Dust & splash proof type: IP65 (option) Cleanroom type: ISO class 5 (option)								
Weight ^{*3}	Approx. 53 to 56 kg								

1: An asterisk [] in a model name indicates Z-axis stroke. *2: Time required for a robot to move a 2 kg payload between two points 300 mm apart at a height of 25 mm. *3: Position repeatability is the precision at constant ambient temperature.

Legend



The data listed on this page is for the standard type. For other options, see our website.

4-axis Robot Operating Range

HSR[®] Series



HSR[®]055

HM Series



HM-40702

HS-A1 Series

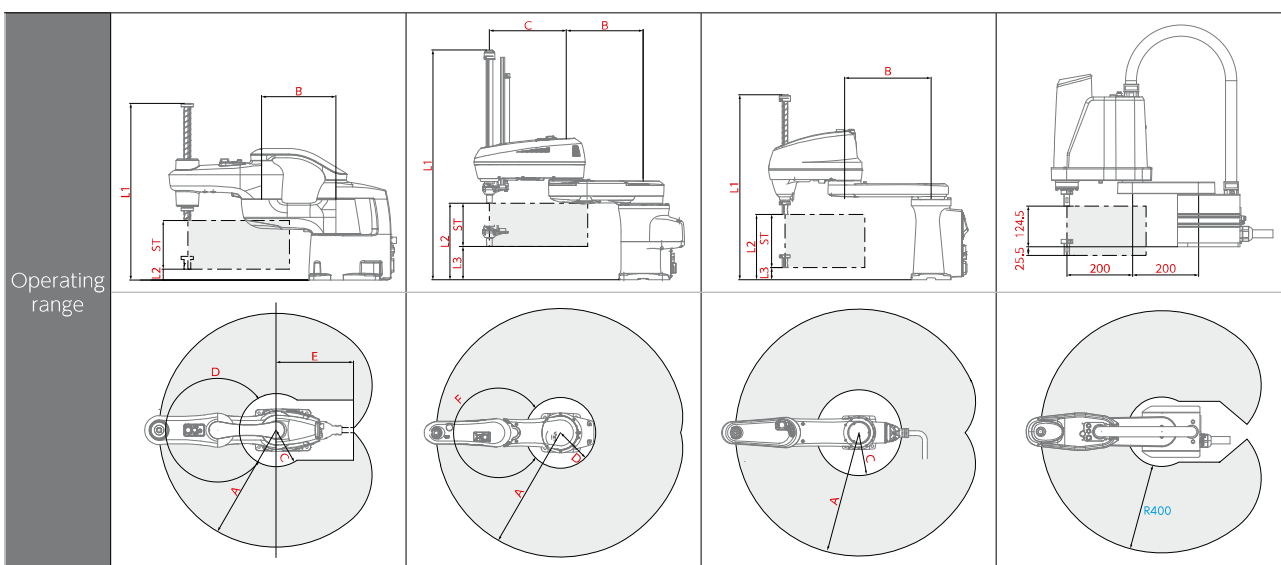


HS045A1

LPH



LPH-040



*Gray range indicates the operating range.

For dimensions and other detailed information, see our website. Scan the QR Code to view the information.

HSR Series

Model	A	B	C	D	E
HSR [®] 048A1-N*	480	205	164.4	287*	406.53
HSR [®] 055A1-N*	550	275	142.4	300*	364.32
HSR [®] 065A1-N*	650	375	194.0	300*	287.62

Z-axis stroke: ST (mm)	L1	L2
* = 10: 100	555.2	120
* = 20: 200	655.2	20
* = 32: 320	775.2	-100 *1
* = 51: 510	965.2	-290 *1

Z-axis stroke correspondence table

Z-axis stroke: ST (mm)	Standard type	Dust & splash proof type	Cleanroom type	Bellows type
100	✓	—	—	—
170	—	✓	—	—
200	✓	—	—	—
290	—	✓	—	—
320	✓	—	—	—
450	—	✓	—	—
510	✓	—	—	—

*1: If the Z-axis stroke is 320 mm or 510 mm, exercise caution concerning interference with peripheral equipment as when fully lowered, the Z-axis will reach a position lower than the base mounting face.

HM Series

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

*1: If the Z-stroke is 400 mm, the lowest point of the Z-axis will achieve a position lower than the base mounting surface.

(Z-axis stroke)	S	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 *1	1055	1049	350	-50

HS-A1 Series

Model	A	B	C
HS035*	350	125	143
HS045*	450	225	136
HS055*	550	325	191

Z-axis stroke: ST(mm)	L1	L2	L3
* = 10: 100	597	246	146
* = 15: 150	647	246	96
* = 20: 200	697	246	46
* = 32: 320	817	246	-74 *1

*1: If the Z-axis stroke is 320 mm, exercise caution concerning interference with peripheral equipment as when fully lowered, the Z-axis will reach a position lower than the base mounting face.

The data listed on this page is for the standard type.