

DENSO

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The QR-Code's inventor



The New VS 050/060

The most compact robots of the new VS Series. Perfect for installations where operational space is limited

	PAYLOAD (KG)	ARM REACH (MM)
VS-050	4	505
VS-060	4	605

- **COMPACT:** slim and compact design allows you to save on installation space
- **FAST:** up to 9000 mm/s
- **PRECISE:** from ± 0.02 mm
- **OPTIONAL SPECIFICATIONS:** robots are available as Standard (IP40), Dust & splash proof (IP65/54), Protected (IP67), Cleanroom classes ISO 3 and 5, and H₂O₂ + UV resistant (only VS-050*)
- **BOTTOM-SIDE CABLE CONNECTION:** this optional feature facilitates robot cleaning and saves space

* For more information about this robot see page 47

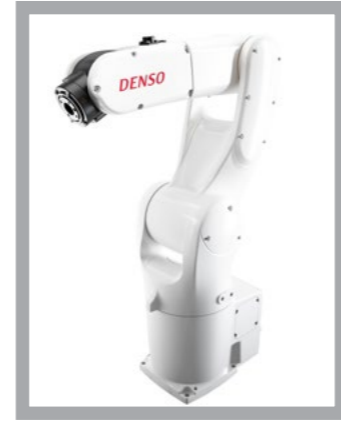
NEW VS SERIES

PAYLOAD ARM REACH
 NEW VS-050 | 4 kg 505 mm
 NEW VS-060 | 4 kg 605 mm

VS-050



VS-060

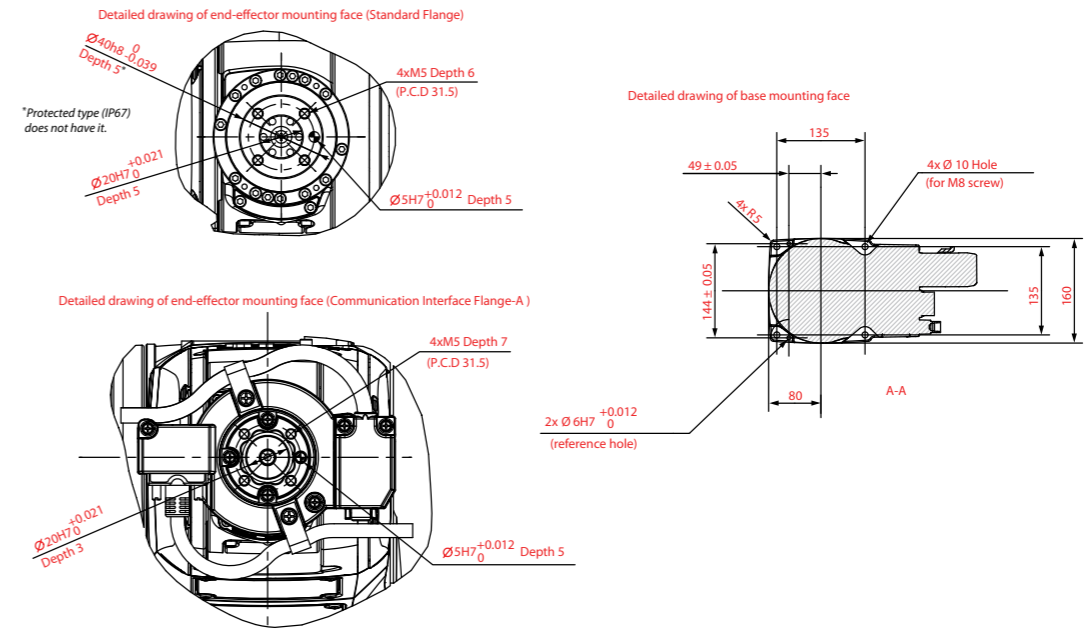


Mounting Options



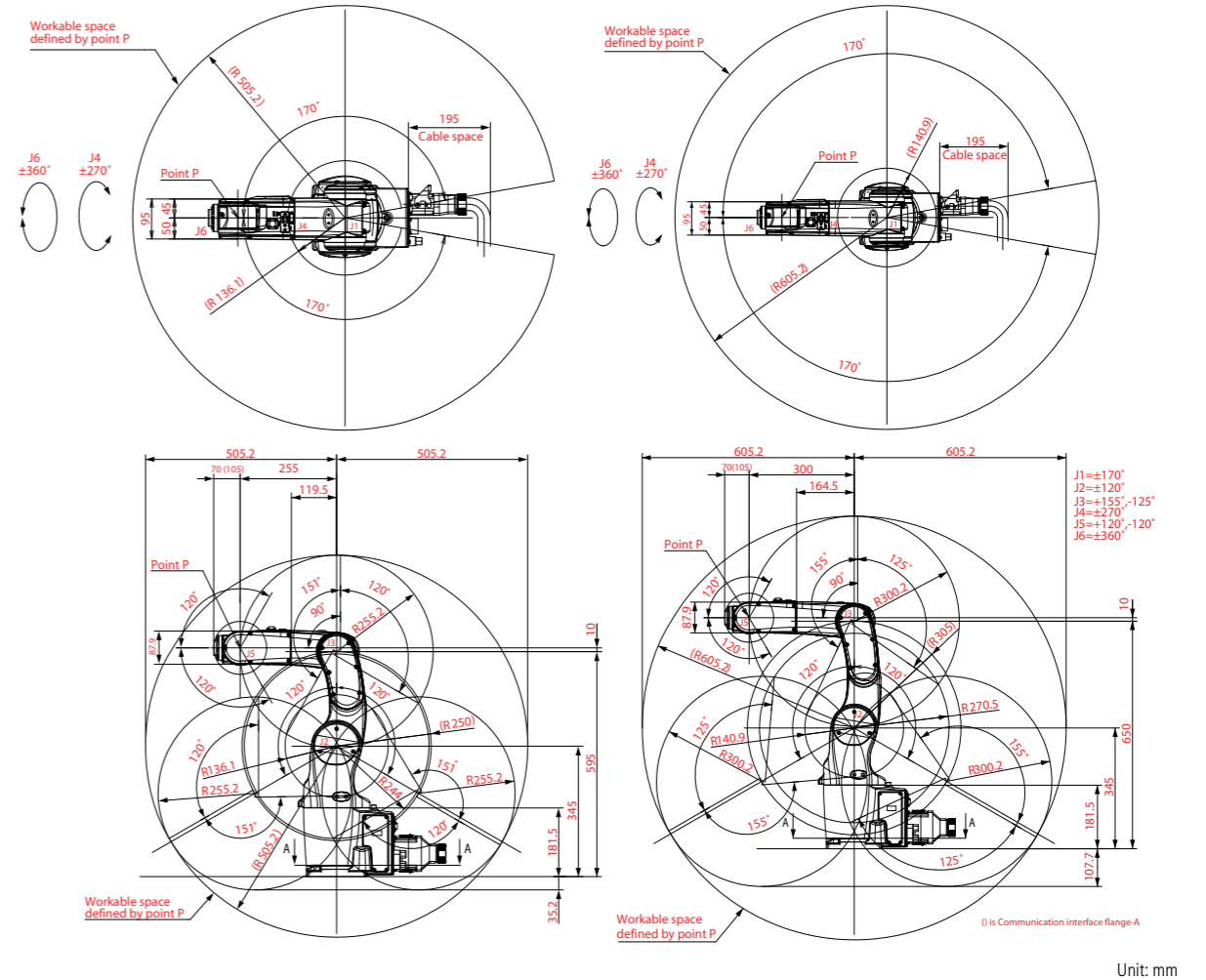
		Unit	VS-050	VS-060
Number of axis			6	6
Maximum arm area (Point P: Wrist center)		mm	505	605
Payload		kg	4	4
Maximum composite speed		mm/s	9000	9000
Cycle time		s	0.37 (with 1 kg weight)	0.37 (with 1 kg weight)
Position repeatability (1)		mm	±0.02 (2)	±0.02 (2)
Communication Interface Flange-A [Option]			17 line power wire for cameras, etc. (3) LAN (1000BASE-T) x 1 (4)	
Environment resistance	Protection class		IP40, IP65/54 (IP65 only in J4, J5 and J6), IP67 (5)	
	Cleanroom class		Class ISO 5 and 3	
UL specification			-	-
Motion range	J1	deg	±170 (6)	±170 (6)
	J2		±120	±120
	J3		+151, -120	+155, -125
	J4		±270	±270
	J5		±120 (installed Communication Interface Flange-A [Option] +120 -110)	
	J6		±360	±360
Maximum allowable inertia	J4	kgm ²	0.200	0.200
	J5		0.200	0.200
	J6		0.050	0.050
Maximum allowable moment	J4	N·m	6.66	6.66
	J5		6.66	6.66
	J6		3.13	3.13
Signal lines & air piping	Signal lines		10 line (for proximity sensor signals, etc.) (3), (7)	
	Air piping		5 systems (φ4x4, φ4x1) -2 x solenoid valves (2 position, double solenoid)	
Brakes			Brakes for all joints	
Mounting configuration			Floor, Ceiling, Wall	Floor, Ceiling, Wall
Arm weight		kg	29	30

1. Position repeatability is the value at constant ambient temperature. 2. In every direction. 3. Allowable current is limited. 4. LAN cable connected with robot must be shorter than 20 m. 5. Do not operate the robot in water. 6. Limited motion when wall mounted. 7. 4 lines when Communication Interface Flange-A [Option] is installed.



VS-050

VS-060



Unit: mm

Legend

Robot name: VS □□□□ - A V6 - □□□□ N □□□□ NNN

VS: DENSO 5- and 6-axis robots

Mounting orientation: A: All directions

Protected: NN: Standard type
W7: Protected type (IP67)
W4: Dust & splash proof type (wrist: IP65, unit: IP54)
C3: Cleanroom type (ISO class 3)
C5: Cleanroom type (ISO class 5)

Flange: N: Standard flange
A: Communication interface flange-A (*1)

Connector panel: N: Rear connector panel
A: Bottom connector panel

Paint / Surface finish: N: DENSO standard colors (*2)
A: Unpainted (*3)

Signal lines / Air pipe solenoid valve: A: 2 x solenoid valves (2 position, double solenoid)
N: Specification without signal lines / air pipe solenoid valve

Total arm length:
050 A1: 505 mm RC7M supported
060 A1: 605 mm RC7M supported
050 A3: 505 mm RC8 supported
060 A3: 605 mm RC8 supported

*1: Standard flange specification only when protected type (IP67) is selected *2: When standard type is selected *3: When protected type (IP67) is selected (DENSO standard colors are a special specification (option).) For details, please contact our sales representative.