

IX-NNC2515[H]

Small SCARA robot, Cleanroom type
Arm length 250mm, Vertical axis 150mm
[High-power specification]



Model items	IX — NNC2515[H] —		T2
Series	Cleanroom type	Cable length	Applicable controller
	Arm length 250mm	5L : 5 m (standard)	T2: XSEL-PX/QX
	Vertical axis 150mm	10L: 10 m	

*For details on the model items, refer to page 8.

Model/Specifications

Model	Axis configuration		Arm length (mm)	Motor capacity (W)	Work envelope	Positioning Repeatability (mm) (Note 1)	PTP operation Maximum operating speed (Note 2)	Standard cycle time (sec) (Note 3)	Load capacity (kg) (Note 4)		Axis 3 (vertical axis) push force (N) (Note 5)		Axis 4 allowable load	
									Rated	Maximum	Maximum limit	Minimum limit	Allowable inertial moment (kg·m ²) (Note 6)	Allowable torque (N·m)
IX-NNC2515[H]--T2	Axis 1	Arm 1	125	200	±120°	±0.010 (XY)	3142mm/s [3191mm/s] (Composite speed)	0.49 [0.44]	1	3	90.9 [111.0]	47.5 [58.0]	0.015	1.9
	Axis 2	Arm 2	125	100	±130°									
	Axis 3	Vertical axis	-	100	150mm	±0.010	1106mm/s [1316mm/s]							
	Axis 4	Rotating axis	-	50	±360°	±0.005	1600°/s							

*In the model number above, specify the cable length in .

*SCARA robots cannot operate continuously at 100% speed and acceleration. For details on the operating conditions, refer to Reference Acceleration/Deceleration Settings on page 45.

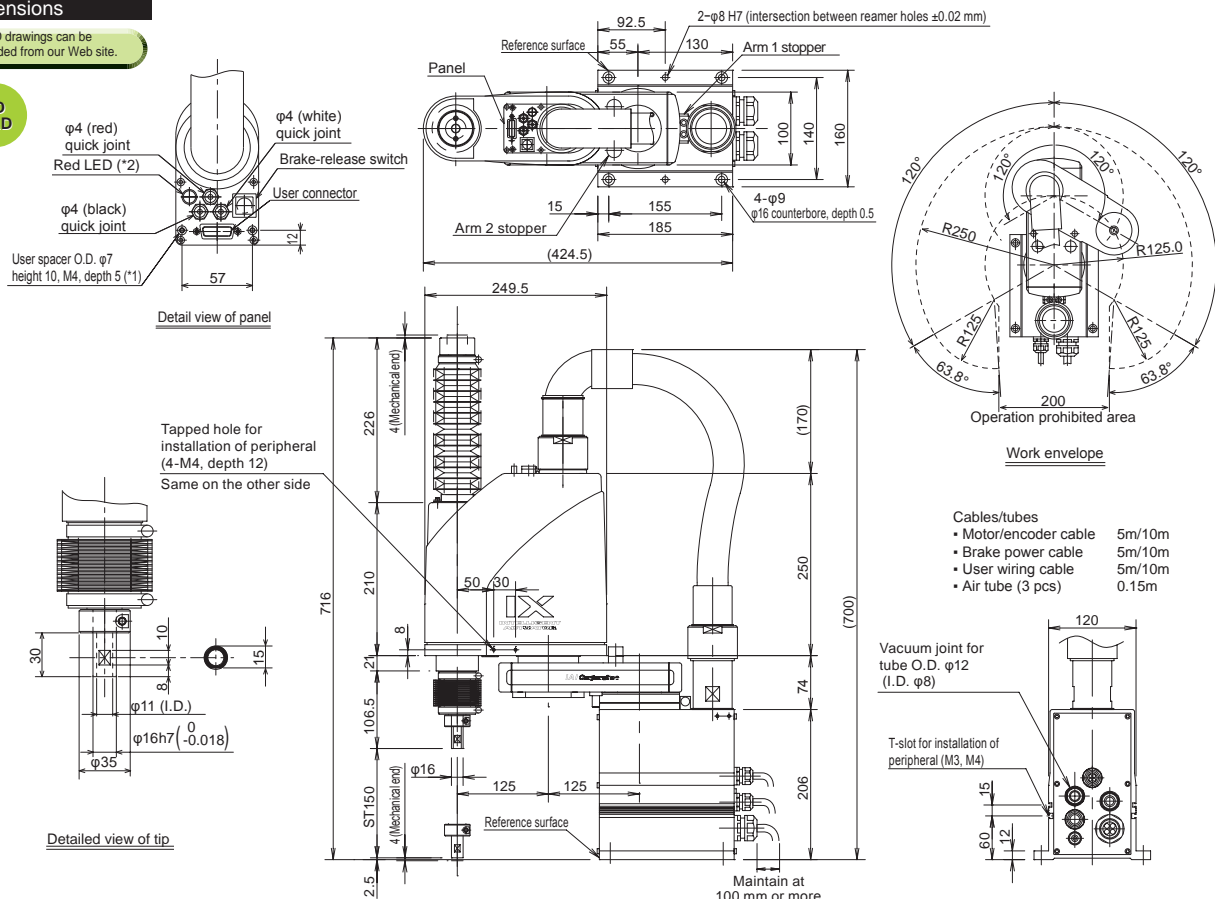
Common Specifications

Encoder type	Absolute	Vacuum joint	Applicable tube O.D. ϕ 12
User wiring	15-conductor AWG26 D-sub/15-pin connector with shield (socket)	Suction rate (Note 10)	60 N-liter/min
User tubing	Air tube (O.D. ϕ 4, I.D. ϕ 2.5) x 3 (Normal working pressure 0.8 MPa)	Cleanliness class	Conforming to ISO cleanliness class 4 (0.1 μ m)
Alarm indicator (Note 7)	Small red LED indicator x 1 (24 V DC must be supplied.)	Ambient temperature/humidity	Temperature: 0–40 °C, humidity: 20–85%RH or less (no condensation)
Brake-release switch (Note 8)	Allows remote release of Z-axis (24 VDC required)	Unit weight	19Kg
		Cable length (Note 9)	5L: 5 m (standard), 10L: 10 m (optional)

Dimensions

The CAD drawings can be downloaded from our Web site.

2D CAD



*1: The external force applied to a spacer must not exceed 30 N in the axial direction, or 2 N·m in the rotating direction. (for each spacer)

*2: In order to use the LED, the user must wire it so that it responds to the controller's I/O output signal by supplying 24 V DC to the applicable LED terminal in the user wiring.

Applicable Controller Specifications

Applicable Controller	Features	Maximum I/O points (inputs/outputs)	Power-supply voltage	Reference page
XSEL-PX-###-2[3]	Maximum 6 axes, 1600 [2400] W supported	192/192 points	Single-Phase [Three-phase] 230 VAC	p. 37
XSEL-QX-###-2[3]	Safety Category 4 supported			

*The SCARA model with high-power specification [H] needs a 2.4 kW three-phase type controller XSEL-PX/QX-###-3.



Caution

For explanations of (Note 1) through (Note 9), refer to page 6.
(Note 10) In order to use the cleanroom type in an environment with ISO cleanliness class 4, the air inside the robot must be vacuumed from the air suction outlet located at the side (or back) of the robot base.
The suction rate listed in the above table is a general estimate. Increase the suction rate according to the actual operating conditions.

IX-NNC3515[H]

Small SCARA robot, Cleanroom type
Arm length 350mm, Vertical axis 150mm
[High-power specification]



Model items	IX	—	NNC3515[H]	—		—	T2
Series	Cleanroom type	Type	Arm length 350mm	Cable length	5L : 5 m (standard)	Applicable controller	T2: XSEL-PX/QX
	Vertical axis 150mm				10L: 10 m		

*For details on the model items, refer to page 8.

Model/Specifications

Model	Axis configuration		Arm length (mm)	Motor capacity (W)	Work envelope	Positioning Repeatability (mm) (Note 1)	PTP operation Maximum operating speed (Note 2)	Standard cycle time (sec) (Note 3)	Load capacity (kg) (Note 4)		Axis 3 (vertical axis) push force (N) (Note 5)		Axis 4 allowable load	
									Rated	Maximum	Maximum limit	Minimum limit	Allowable inertial moment (kg·m ²) (Note 6)	Allowable torque (N·m)
IX-NNC3515[H]--T2	Axis 1	Arm 1	225	200	±120°	±0.010 (XY)	3979mm/s [4042mm/s] (Composite speed)	0.58 [0.46]	1	3	90.9 [111.0]	47.5 [58.0]	0.015	1.9
	Axis 2	Arm 2	125	100	±135°									
	Axis 3	Vertical axis	-	100	150mm	±0.010	1106mm/s [1316mm/s]							
	Axis 4	Rotating axis	-	50	±360°	±0.005	1600°/s							

*In the model number above, specify the cable length in .

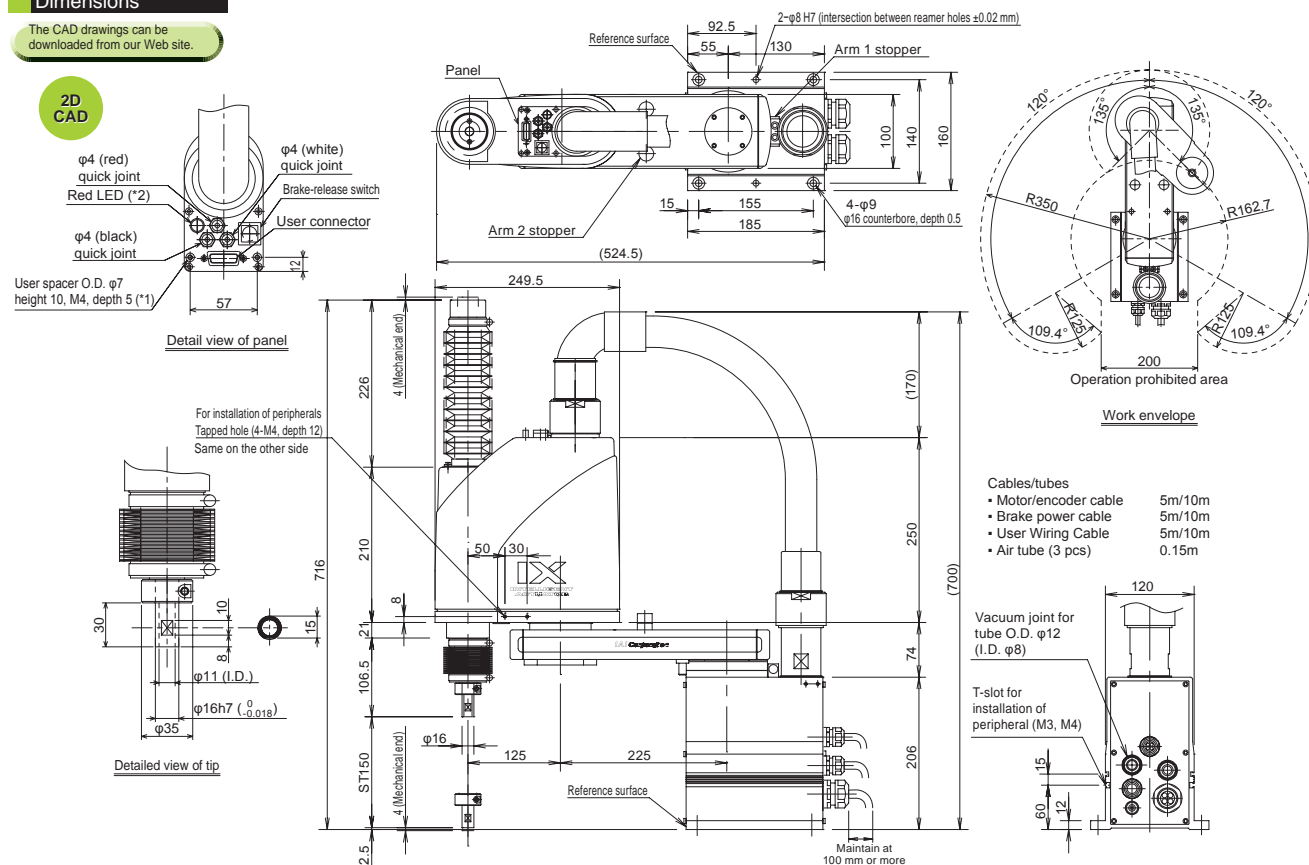
*SCARA robots cannot operate continuously at 100% speed and acceleration. For details on the operating conditions, refer to Reference Acceleration/Deceleration Settings on page 45.

Common Specifications

Encoder type	Absolute	Vacuum joint	Applicable tube O.D. ϕ 12
User wiring	15-conductor AWG26 D-sub/15-pin connector with shield (socket)	Suction rate (Note 10)	60 N-liter/min
User tubing	Air tube (O.D. ϕ 4, I.D. ϕ 2.5) x 3 (Normal working pressure 0.8 MPa)	Cleanliness class	Conforming to ISO cleanliness class 4 (0.1 μ m)
Alarm indicator (Note 7)	Small red LED indicator x 1 (24 V DC must be supplied.)	Ambient temperature/humidity	Temperature: 0–40 °C, humidity: 20–85%RH or less (no condensation)
Brake-release switch (Note 8)	Allows remote release of Z-axis (24 VDC required)	Unit weight	20Kg
		Cable length (Note 9)	5L: 5 m (standard), 10L: 10 m (optional)

Dimensions

The CAD drawings can be downloaded from our Web site.



*1: The external force applied to a spacer must not exceed 30 N in the axial direction, or 2 N·m in the rotating direction. (for each spacer)

*2: In order to use the LED, the user must wire it so that it responds to the controller's I/O output signal by supplying 24 V DC to the applicable LED terminal in the user wiring.

Applicable Controller Specifications

Applicable Controller	Features	Maximum I/O points (inputs/outputs)	Power-supply voltage	Reference page
XSEL-PX-###-2[3]	Maximum 6 axes, 1600 [2400] W supported	192/192 points	Single-Phase [Three-phase] 230 VAC	p. 37
XSEL-QX-###-2[3]	Safety Category 4 supported			

*The SCARA model with high-power specification [H] needs a 2.4 kW three-phase type controller XSEL-PX/QX-###-3.



For explanations of (Note 1) through (Note 9), refer to page 6.
(Note 10) In order to use the cleanroom type in an environment with ISO cleanliness class 4, the air inside the robot must be vacuumed from the air suction outlet located at the side (or back) of the robot base.
The suction rate listed in the above table is a general estimate. Increase the suction rate according to the actual operating conditions.

Medium SCARA robot, Cleanroom type
Arm length 500mm, Vertical axis 200mm
(300mm) [High-power specification]





■Model items **IX — NNC50□□[H] — □ — T2**

Series	Type	Cable length	Applicable controller
NNC5020[H]: Arm length 500mm, Vertical axis 200mm		5L : 5 m (standard) 10L: 10 m	T2: XSEL-PX/QX
NNC5030[H]: Arm length 500mm, Vertical axis 300mm			

*For details on the model items, refer to page 8.

Model/Specifications

Model	Axis configuration		Arm length (mm)	Motor capacity (W)	Work envelope	Positioning Repeatability (mm) (Note 1)	PTP operation Maximum operating speed (Note 2)	Standard cycle time (sec) (Note 3)	Load capacity (kg) (Note 4)		Axis 3 (vertical axis) push force (N) (Note 5)		Axis 4 allowable load	
									Rated	Maximum	Maximum limit	Minimum limit	Allowable inertial moment (kg·m ²) (Note 6)	Allowable torque (N · m)
IX-NNC5020[H]-  -T2 (IX-NNC5030[H]-  -T2)	Axis 1	Arm 1	250	400	±120°	±0.010 (XY)	6283mm/s [6381mm/s] (Composite speed)	0.47 [0.41]	2	10	152 [181]	78 [93]	0.06	3.3 [3.7]
	Axis 2	Arm 2	250	200	±145°		1393mm/s [1473mm/s]							
	Axis 3	Vertical axis	-	200	200mm (300mm)	±0.010	1200°/s [1857°/s]							
	Axis 4	Rotating axis	-	100	±360°	±0.005								

*In the model number above, specify the cable length in .

* () indicates vertical axis 300mm specifications. All other specifications are common to both the vertical axis 200mm and 300mm.

*SCARA robots cannot operate continuously at 100% speed and acceleration.
For details on the operating conditions, refer to Reference Acceleration/
Deceleration Settings on page 45.

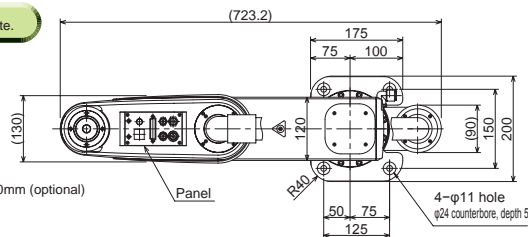
Common Specifications

Encoder type	Absolute	Vacuum joint	Quick joint, Applicable tube O.D. ø12
User wiring	25-conductor AWG26 D-sub/25-pin connector with shield (socket)	Suction rate (Note 10)	60 N-liter/min
User tubing	Air tube (O.D. ø6, I.D. ø4) x 2 (Normal working pressure 0.8 MPa)	Cleanliness class	Conforming to ISO cleanliness class 4 (0.1 µm)
	Air tube (O.D. ø4, I.D. ø2.5) x 2 (Normal working pressure 0.8 MPa)	Ambient temperature/humidity	Temperature: 0–40 °C, humidity: 20–85%RH or less (no condensation)
Alarm indicator (Note 7)	Small red LED indicator x 1 (24 V DC must be supplied.)	Unit weight	31.5Kg
Brake-release switch (Note 8)	Allows remote release of Z-axis (24 VDC required)	Cable length (Note 9)	5L: 5 m (standard), 10L: 10 m (optional)

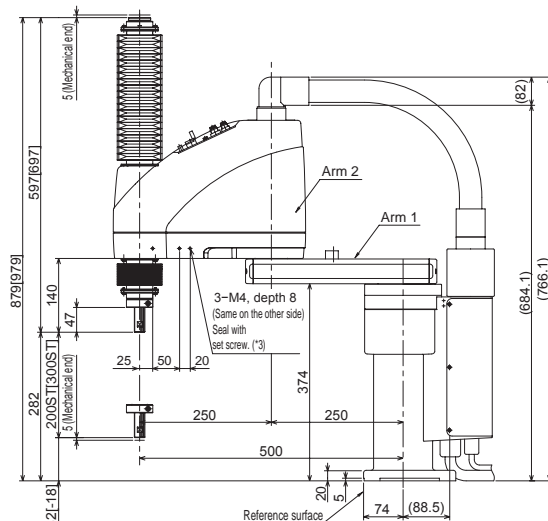
Dimensions

The CAD drawings can be downloaded from our Web site.

2D CAD

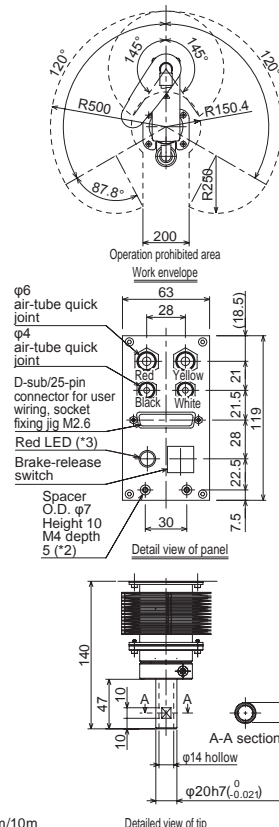
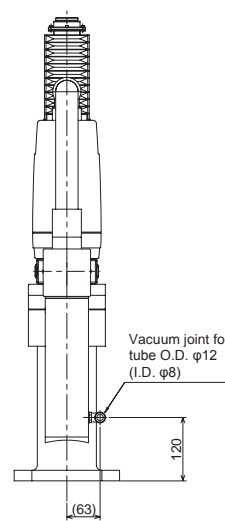


*() indicates vertical axis 300mm (optional) specifications.



The values within [] indicate the specifications for axis 3 (vertical axis) 300 mm.

- *1: The external force applied to a spacer must not exceed 30 N in the axial direction, or 2 N·m in the rotating direction. (for each spacer)
 *2: In order to use the LED, the user must wire it so that it responds to the controller's I/O output signal by supplying 24 V DC to the applicable LED terminal in the user wiring.
 *3: The prepared hole 3~M4, depth 8 passes through the side panel of the arm. If the mounting screw is long, make sure it does not contact internal components. In addition, be sure to seal screws with tape.



- | | |
|-----------------------|--------|
| Cables/tubes | |
| ▪ Motor/encoder cable | 5m/10m |
| ▪ Brake power cable | 5m/10m |
| ▪ User Wiring Cable | 5m/10m |
| ▪ Air tube (4 pcs) | 0.15m |

Applicable Controller Specifications

Applicable Controller	Features	Maximum I/O points (inputs/outputs)	Power-supply voltage	Reference page
XSEL-PX-###-2[3]	Maximum 6 axes, 1600 [2400] W supported	192/192 points	Single-Phase [Three-Phase] 230 VAC	p. 37
XSEL-QX-###-2[3]	Safety Category 4 supported			

*The SCARA model with high-power specification [H] needs a 2.4 kW three-phase type controller XSEL-PX/QX-###-3.



For explanations of (Note 1) through (Note 9), refer to page 6.
(Note 10) In order to use the cleanroom type in an environment with ISO cleanliness class 4, the air inside the robot must be vacuumed from the air suction outlet located at the side (or back) of the robot base.
The suction rate listed in the above table is a general estimate. Increase the suction rate according to the actual operating conditions.

IX-NNC60□□[H]

Medium SCARA robot, Cleanroom type
Arm length 600mm, Vertical axis 200mm (300mm) [High-power specification]

Model items IX — NNC60□□[H] — □ — T2

Series	Type	Cable length	Applicable controller
NNC6020[H]: Arm length 600mm, Vertical axis 200mm		5L : 5 m (standard)	T2: XSEL-PX/QX
NNC6030[H]: Arm length 600mm, Vertical axis 300mm		10L: 10 m	



*For details on the model items, refer to page 8.

Model/Specifications

Model	Axis configuration		Arm length (mm)	Motor capacity (W)	Work envelope	Positioning Repeatability (mm) (Note 1)	PTP operation Maximum operating speed (Note 2)	Standard cycle time (sec) (Note 3)	Load capacity (kg) (Note 4)		Axis 3 (vertical axis) push force (N) (Note 5)		Axis 4 allowable load	
									Rated	Maximum	Maximum limit	Minimum limit	Allowable inertial moment (kg·m ²) (Note 6)	Allowable torque (N·m)
IX-NNC6020[H]-□-T2 (IX-NNC6030[H]-□-T2)	Axis 1	Arm 1	350	400	±120°	±0.010 (XY)	7121mm/s [7232mm/s] (Composite speed)	0.54 [0.45]	2	10	152 [181]	78 [93]	0.06	3.3 [3.7]
	Axis 2	Arm 2	250	200	±145°									
	Axis 3	Vertical axis	-	200	200mm (300mm)	±0.010	1393mm/s [1473mm/s]							
	Axis 4	Rotating axis	-	100	±360°	±0.005	1200°/s [1857°/s]							

*In the model number above, specify the cable length in □.

*() indicates vertical axis 300mm specifications. All other specifications are common to both the vertical axis 200mm and 300mm.

*SCARA robots cannot operate continuously at 100% speed and acceleration.

For details on the operating conditions, refer to Reference Acceleration/Deceleration Settings on page 45.

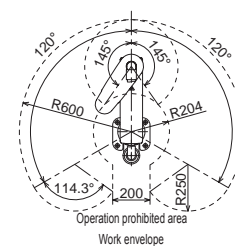
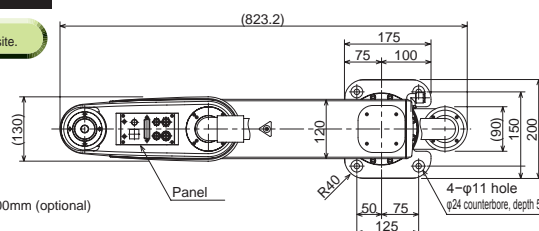
Common Specifications

Encoder type	Absolute	Vacuum joint	Quick joint, Applicable tube O.D. ϕ 12
User wiring	25-conductor AWG26 D-sub/25-pin connector with shield (socket)	Suction rate (Note 10)	60 N-liter/min
User tubing	Air tube (O.D. ϕ 6, I.D. ϕ 4) x 2 (Normal working pressure 0.8 MPa) Air tube (O.D. ϕ 4, I.D. ϕ 2.5) x 2 (Normal working pressure 0.8 MPa)	Cleanliness class	Conforming to ISO cleanliness class 4 (0.1 μ m)
Alarm indicator (Note 7)	Small red LED indicator x 1 (24 V DC must be supplied.)	Ambient temperature/humidity	Temperature: 0–40 °C, humidity: 20–85%RH or less (no condensation)
Brake-release switch (Note 8)	Allows remote release of Z-axis (24 VDC required)	Unit weight	32.5Kg
		Cable length (Note 9)	5L: 5 m (standard), 10L: 10 m (optional)

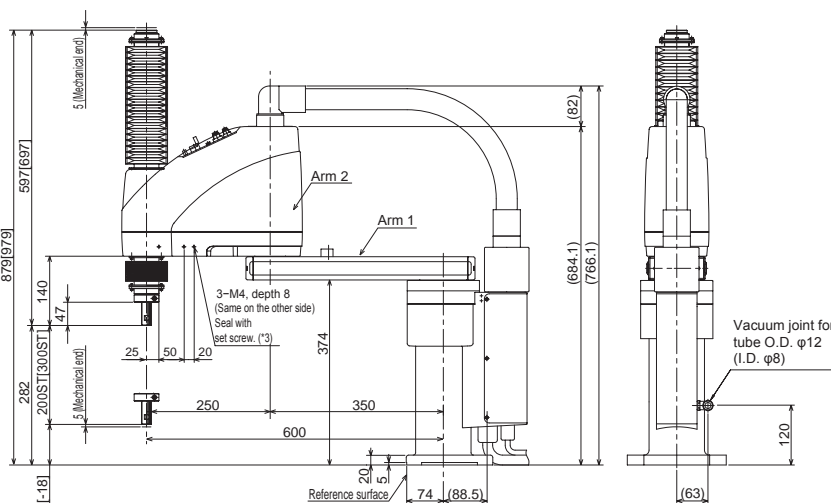
Dimensions

The CAD drawings can be downloaded from our Web site.

2D CAD



*() indicates vertical axis 300mm (optional) specifications.



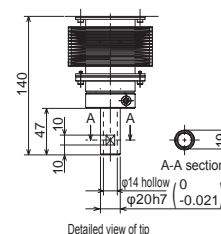
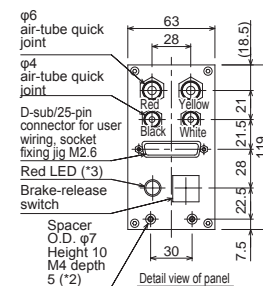
The values within [] indicate the specifications for axis 3 (vertical axis) 300 mm.

*1: The external force applied to a spacer must not exceed 30 N in the axial direction, or 2 N·m in the rotating direction, (for each spacer)

*2: In order to use the LED, the user must wire it so that it responds to the controller's I/O output signal by supplying 24 V DC to the applicable LED terminal in the user wiring.

*3: The prepared hole 3-M4, depth 8 passes through the side panel of the arm. If the mounting screw is long, make sure it does not contact internal components. In addition, be sure to seal screws with tape.

- Cables/tubes
- Motor/encoder cable 5m/10m
 - Brake power cable 5m/10m
 - User Wiring Cable 5m/10m
 - Air tube (4 pcs) 0.15m



Applicable Controller Specifications

Applicable Controller	Features	Maximum I/O points (inputs/outputs)	Power-supply voltage	Reference page
XSEL-PX-###-2[3]	Maximum 6 axes, 1600 [2400] W supported	192/192 points	Single-Phase [Three-phase] 230 VAC	p. 37
XSEL-QX-###-2[3]	Safety Category 4 supported			

*The SCARA model with high-power specification [H] needs a 2.4 kW three-phase type controller XSEL-PX/QX-###-3.



Caution

For explanations of (Note 1) through (Note 9), refer to page 6.

(Note 10) In order to use the cleanroom type in an environment with ISO cleanliness class 4, the air inside the robot must be vacuumed from the air suction outlet located at the side (or back) of the robot base.

The suction rate listed in the above table is a general estimate. Increase the suction rate according to the actual operating conditions.

IX-NNC70□□[H]

Large SCARA robot, Cleanroom type
Arm length 700mm, Vertical axis 200mm
(400mm) [High-power specification]



Model items IX — NNC70□□[H] — □ — T2

Series	Type	Cable length	Applicable controller
NNC7020[H]: Arm length 700mm, Vertical axis 200mm		5L : 5 m (standard)	T2: XSEL-PX/QX
NNC7040[H]: Arm length 700mm, Vertical axis 400mm		10L: 10 m	

*For details on the model items, refer to page 8.

Model/Specifications

Model	Axis configuration	Arm length (mm)	Motor capacity (W)	Work envelope	Positioning Repeatability (mm) (Note 1)	PTP operation Maximum operating speed (Note 2)	Standard cycle time (sec) (Note 3)	Load capacity (kg) (Note 4)		Axis 3 (vertical axis) push force (N) (Note 5)		Axis 4 allowable load	
								Rated	Maximum	Maximum limit	Minimum limit	Allowable inertial moment (kg·m ²) (Note 6)	Allowable torque (N·m)
IX-NNC7020[H]-□-T2 (IX-NNC7040[H]-□-T2)	Axis 1	Arm 1	350	750	±125°	6597mm/s [7010mm/s] (Composite speed)	0.52 [0.45]	5	20	265 [304]	127.3 [146.0]	0.1	6.7 [11.7]
	Axis 2	Arm 2	350	400	±145°								
	Axis 3	Vertical axis	-	400	200mm (400mm)	±0.010							
	Axis 4	Rotating axis	-	200	±360°	±0.005							

*In the model number above, specify the cable length in □.

*SCARA robots cannot operate continuously at 100% speed and acceleration.
For details on the operating conditions, refer to Reference Acceleration/
Deceleration Settings on page 45.

Common Specifications

Encoder type	Absolute
User wiring	25-conductor AW26 D-sub/25-pin connector with shield (socket)
User tubing	Air tube (O.D. ø6, I.D. ø4) x 2 (Normal working pressure 0.8 MPa) Air tube (O.D. ø4, I.D. ø2.5) x 2 (Normal working pressure 0.8 MPa)
Alarm indicator (Note 7)	Small red LED indicator x 1 (24 V DC must be supplied.)
Brake-release switch (Note 8)	Allows remote release of Z-axis (24 VDC required)

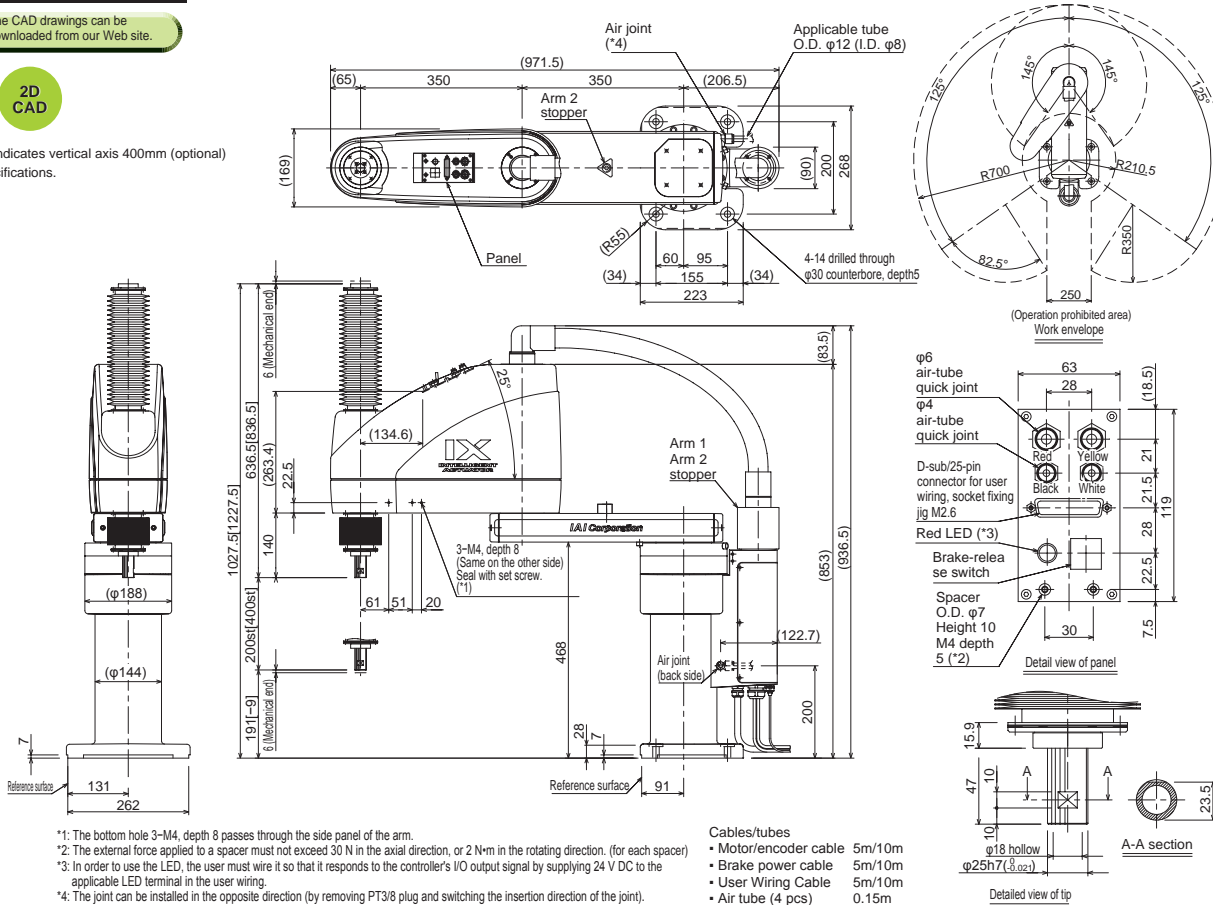
Vacuum joint	Quick joint, Applicable tube O.D. ø12
Suction rate (Note 10)	80 N-liter/min
Cleanliness class	Conforming to ISO cleanliness class 4 (0.1 µm)
Ambient temperature/humidity	Temperature: 0–40 °C, humidity: 20–85%RH or less (no condensation)
Unit weight	60Kg
Cable length (Note 9)	5L: 5 m (standard), 10L: 10 m (optional)

Dimensions

The CAD drawings can be downloaded from our Web site.

2D CAD

*() indicates vertical axis 400mm (optional) specifications.



Applicable Controller Specifications

Applicable Controller	Features	Maximum I/O points (inputs/outputs)	Power-supply voltage	Reference page
XSEL-PX-###-2[3]	Maximum 6 axes, 1600 [2400] W supported	192/192 points	Single-Phase [Three-phase] 230 VAC	p. 37
XSEL-QX-###-2[3]	Safety Category 4 supported			

*The SCARA model with high-power specification [H] needs a 2.4 kW three-phase type controller XSEL-PX/QX-###-3.



Caution

For explanations of (Note 1) through (Note 9), refer to page 6.
(Note 10) In order to use the cleanroom type in an environment with ISO cleanliness class 4, the air inside the robot must be vacuumed from the air suction outlet located at the side (or back) of the robot base.
The suction rate listed in the above table is a general estimate. Increase the suction rate according to the actual operating conditions.

IX-NNC80□□[H]

Large SCARA robot, Cleanroom type
Arm length 800mm, Vertical axis 200mm
(400mm) [High-power specification]



■Model items				IX — NNC80□□[H] — □ — T2	
Series		Type	Cable length	Applicable controller	
NNC8020[H]: Arm length 800mm, Vertical axis 200mm		□	5L : 5 m (standard)	T2: XSEL-PX/QX	
NNC8040[H]: Arm length 800mm, Vertical axis 400mm			10L: 10 m		

*For details on the model items, refer to page 8.

Model/Specifications

Model	Axis configuration		Arm length (mm)	Motor capacity (W)	Work envelope	Positioning Repeatability (mm) (Note 1)	PTP operation Maximum operating speed (Note 2)	Standard cycle time (sec) (Note 3)	Load capacity (kg) (Note 4)		Axis 3 (vertical axis) push force (N) (Note 5)		Axis 4 allowable load	
									Rated	Maximum	Maximum limit	Minimum limit	Allowable inertial moment (kg·m ²) (Note 6)	Allowable torque (N·m)
IX-NNC8020[H]-□-T2 (IX-NNC8040[H]-□-T2)	Axis 1	Arm 1	450	750	±125°	±0.010 (XY)	7121mm/s [7586mm/s] (Composite speed)	0.52 [0.46]	5	20	265 [304]	127.3 [146.0]	0.1	6.7 [11.7]
	Axis 2	Arm 2	350	400	±145°	±0.010	1583mm/s [1614mm/s]							
	Axis 3	Vertical axis	-	400	200mm (400mm)	±0.010	1200°/s [1266°/s]							
	Axis 4	Rotating axis	-	200	±360°	±0.005								

*In the model number above, specify the cable length in □.

*SCARA robots cannot operate continuously at 100% speed and acceleration. For details on the operating conditions, refer to Reference Acceleration/Deceleration Settings on page 45.

Common Specifications

Encoder type	Absolute
User wiring	25-conductor AW26 D-sub/25-pin connector with shield (socket)
User tubing	Air tube (O.D. ø6, I.D. ø4) x 2 (Normal working pressure 0.8 MPa) Air tube (O.D. ø4, I.D. ø2.5) x 2 (Normal working pressure 0.8 MPa)
Alarm indicator (Note 7)	Small red LED indicator x 1 (24 V DC must be supplied.)
Brake-release switch (Note 8)	Allows remote release of Z-axis (24 VDC required)

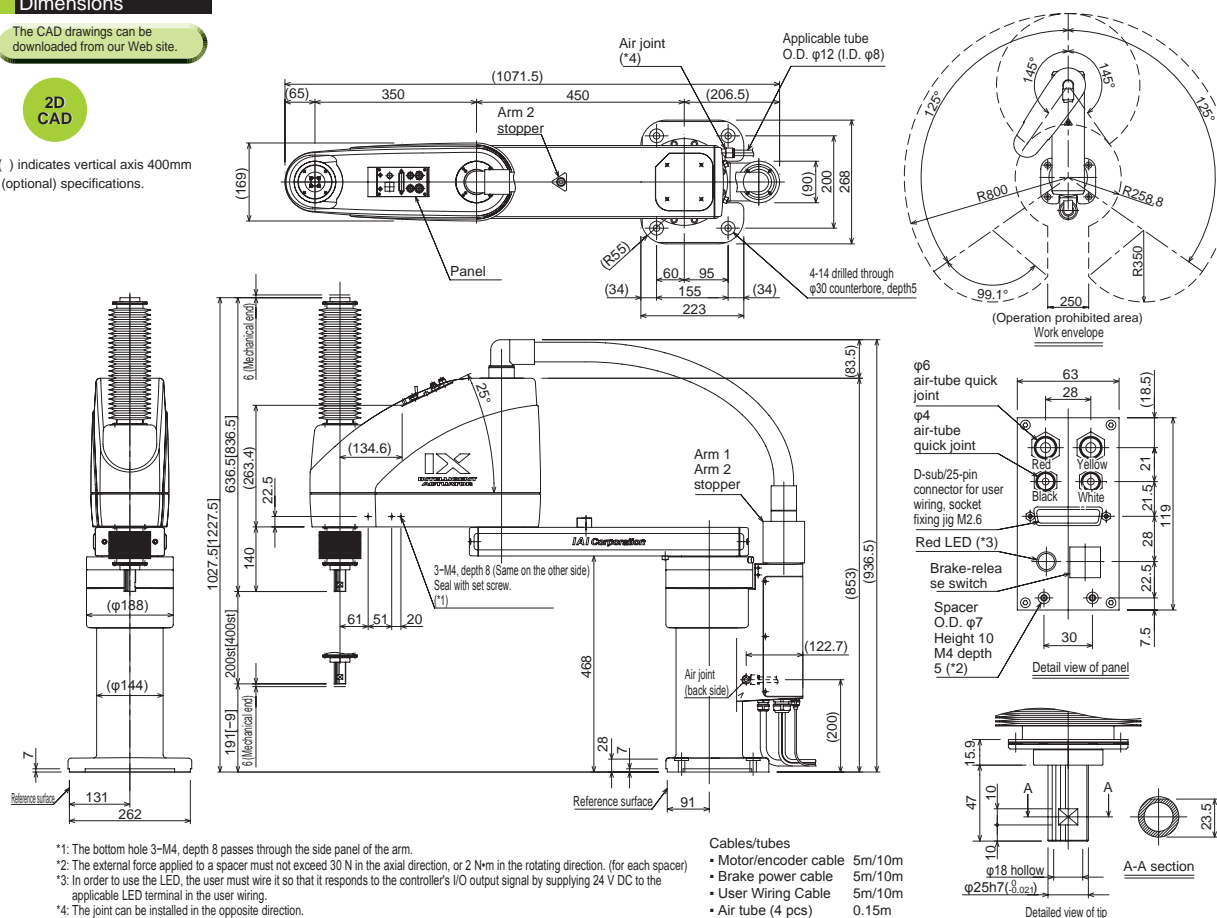
Vacuum joint	Quick joint, Applicable tube O.D. ø12
Suction rate (Note 10)	80 N-liter/min
Cleanliness class	Conforming to ISO cleanliness class 4 (0.1 µm)
Ambient temperature/humidity	Temperature: 0–40 °C, humidity: 20–85%RH or less (no condensation)
Unit weight	62Kg
Cable length (Note 9)	5L: 5 m (standard), 10L: 10 m (optional)

Dimensions

The CAD drawings can be downloaded from our Web site.

2D CAD

() indicates vertical axis 400mm (optional) specifications.



Applicable Controller Specifications

Applicable Controller	Features	Maximum I/O points (inputs/outputs)	Power-supply voltage	Reference page
XSEL-PX-###-2[3]	Maximum 6 axes, 1600 [2400] W supported	192/192 points	Single-Phase [Three-phase] 230 VAC	p. 37
XSEL-QX-###-2[3]	Safety Category 4 supported			

*The SCARA model with high-power specification [H] needs a 2.4 kW three-phase type controller XSEL-PX/QX-###-3.



Caution

For explanations of (Note 1) through (Note 9), refer to page 6.
 (Note 10) In order to use the cleanroom type in an environment with ISO cleanliness class 4, the air inside the robot must be vacuumed from the air suction outlet located at the side (or back) of the robot base.
 The suction rate listed in the above table is a general estimate. Increase the suction rate according to the actual operating conditions.