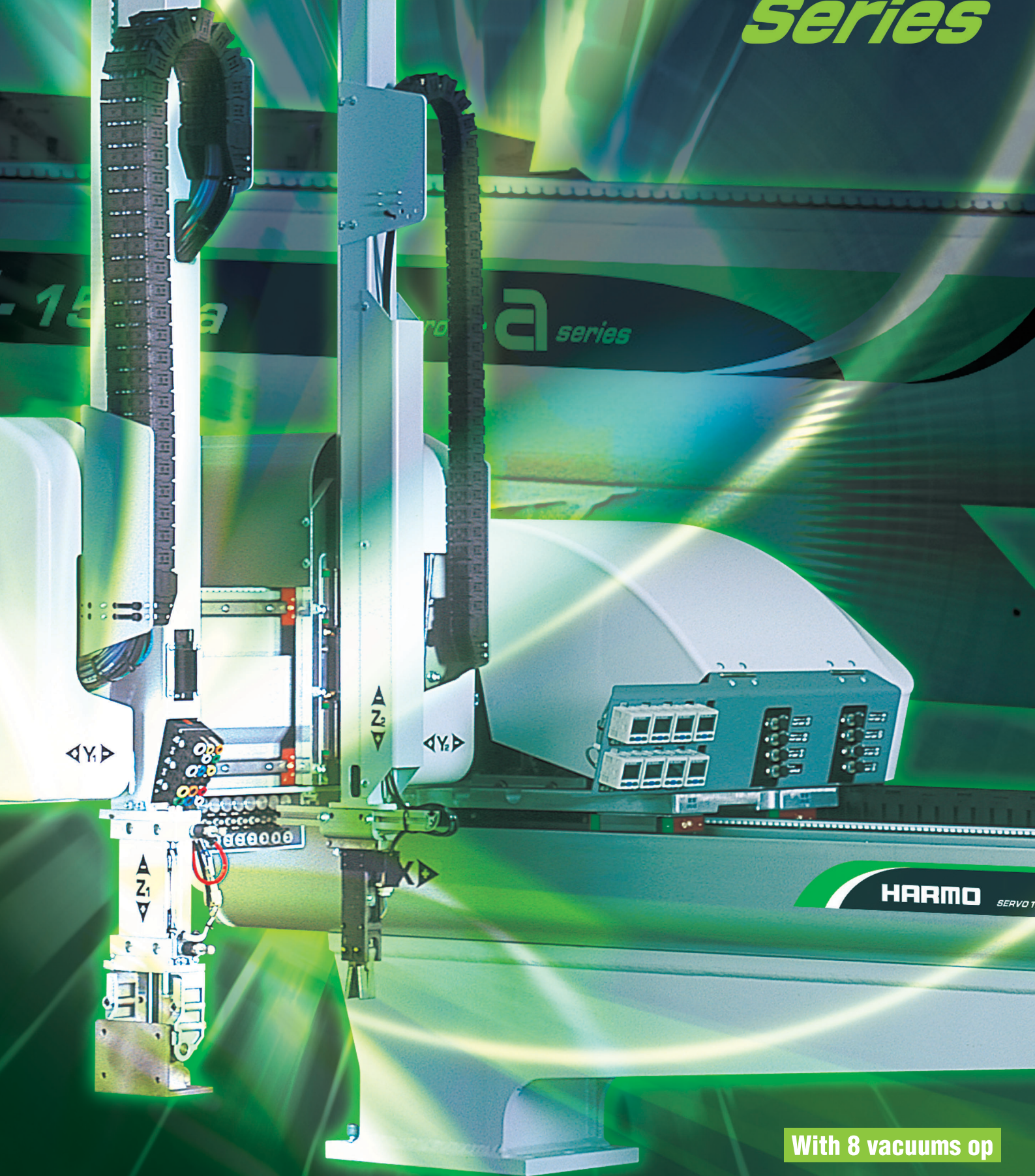


HARMO

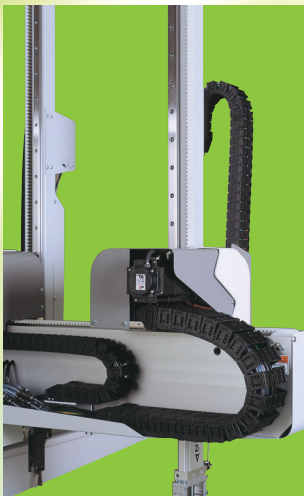
HRXIII-a Series



With 8 vacuums op

Pick -series robots for low cost and rich functions

Wide cable tracks



- Wide cable tracks are used for all axes. They make it easier to run cables and tubes for extra valves and special applications.

Colored caps



- Unified cabling and tubing layout for the attachment. Colored caps make it easier to change attachments.

Up to 8 vacuums



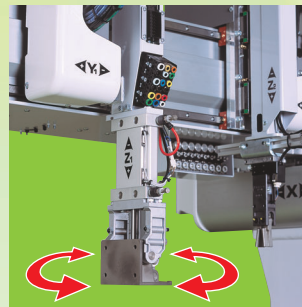
100/150/200 type



30/50 type

- More user-friendly vacuum pressure meters
- Eight vacuums and eight grips available for most applications
- A standard small regulator that adjusts grip force.

Wrist unit



- Grip angle adjuster ($\pm 3^\circ$ around)

Frames



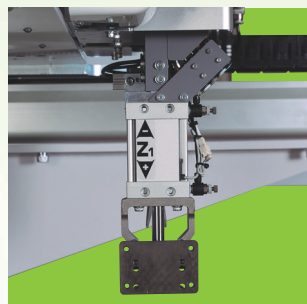
- A wider traverse frame provides more rigidity. As high as 40% more rigid overall in 150GW model.
- Lightweight stylish aluminum body. The traverse frame can be slide according to your factory's layout.



- Standard grease catching design for traverse and kick linear guides.

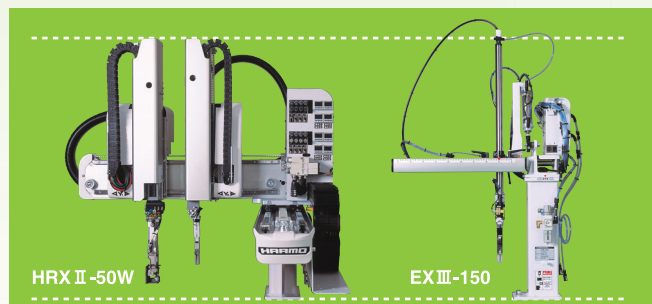


Attachment



- A wide variety of attachments are available with more mount threads.

Smallest in the class



HAX II-50W

EX III-150

- 50GW model for 50t class presses is telescopic the first in the industry and the smallest in the class. Nozzle projection and overall height are smaller than our sprue picker EX III-150.

Lightweight compact, but feature packed

HRS-1100 controller

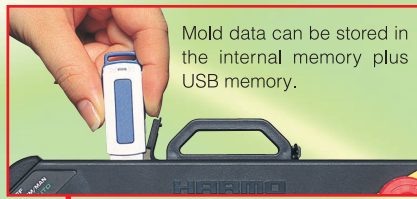


One-hand-held, lightweight, and compact!

Key selector switches (OFF/ MANUAL/ AUTO) offers easy data protection.



One Kg of pendant
40mm slim body



Mold data can be stored in the internal memory plus USB memory.



Fall preventing strap



Three-position safety switch ensures easy operation and safety.

Membrane manual operation switches as RCA series controllers.

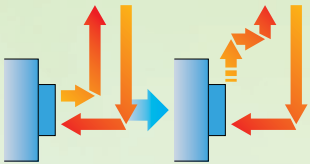


Corner protectors (shown by a star)
Corner protectors protect the pendant from possible falling accident.

5.7 inch touch panel with quick response!

Quick program

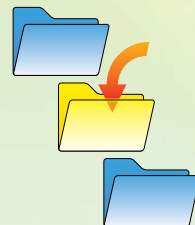
- Users can modify programs easily on site.
- Programs can be created through operating the robot.



※Offline program will be available (under development)

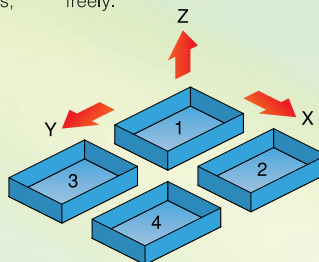
Group management

- Increasing mold data can be grouped into customers, products, and so on.



Free palletizing

- 256 release points can be set freely.



Home Positions

- 1st entry, outside mold, horizontal above mold, and backward (all standard)



Language Selection

- Standard five languages (Japanese, English, Chinese, Korean, and Thai)
- Other European languages are replaceable.

Production Management

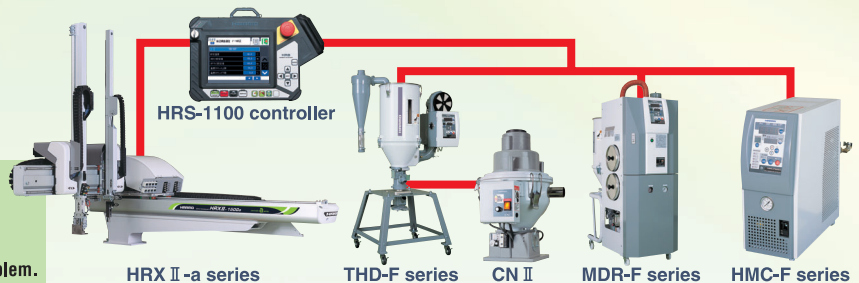
- Production monitor and production preference provide different useful settings such as "automatic operation off at production end."

- The most I/Os in the class (56 each)
- Points can be taught in 0.01mm.
- Maintenance messages gives users the best time for maintenance.
- Error logs make users know the possible causes of a problem.

HAL-NET (HARMO ALL-AROUND LINK-NET) (Option)

Harmo only

- Communication with Harmo's F series peripheral equipment.
- You can operate peripheral equipment on the robot pendant.



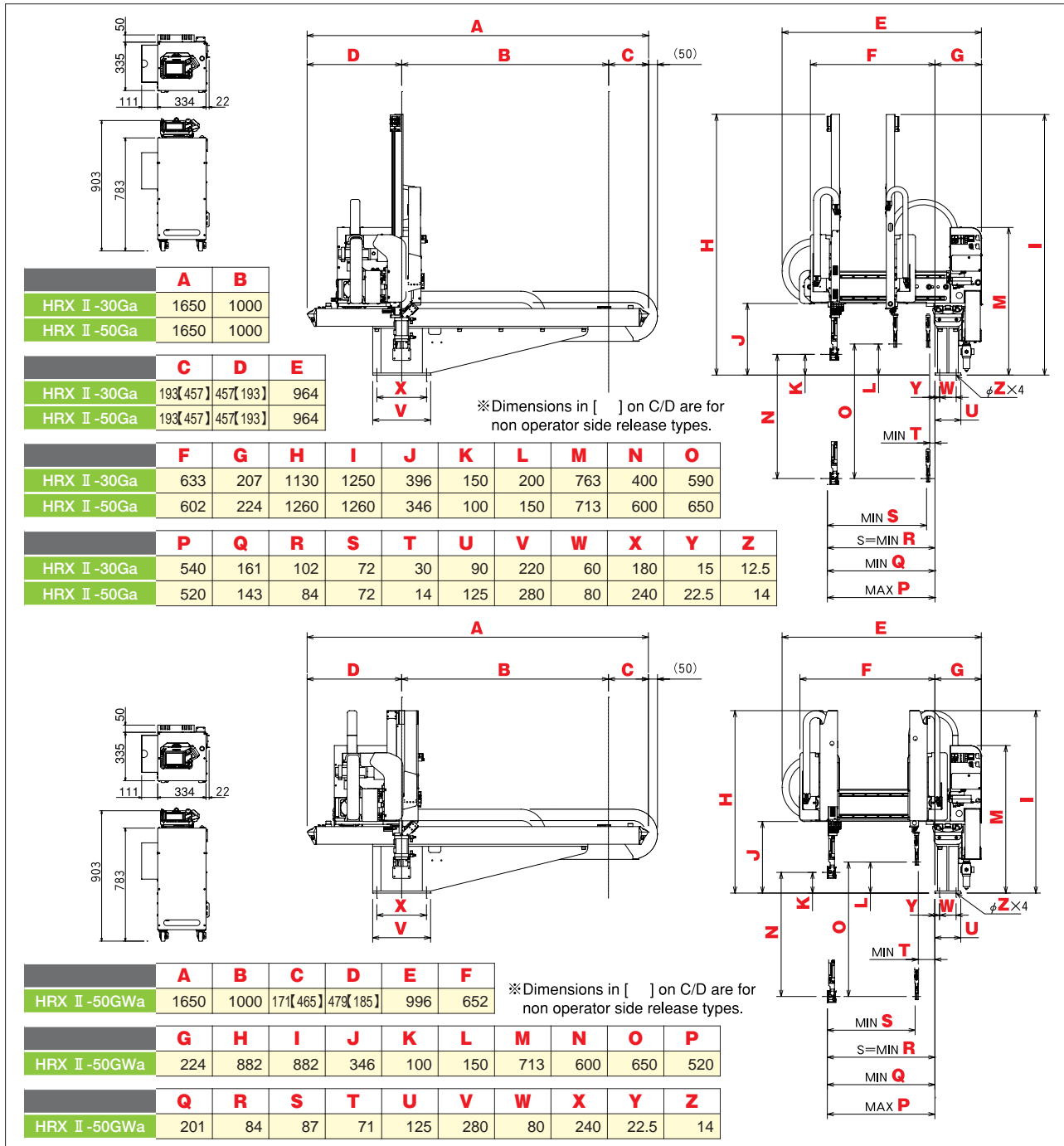
Standard specification

- Part grip circuit
- Vacuum circuit
- Main sprue grip
- Fine adjust in auto
- Mold memory (500 molds)
- Language select (Max. five)
- Wrist hor. above mold
- Wrist flip en-route
- H.P. outside mold
- H.P. 1st entry
- Reject release
- Initial reject counter
- In-mold release
- Runner mid release
- Fixed mold takeout
- Equal pitch palletize
- Diff. pitch palletize
- Multi-row place (4P)
- H.P. hor. above mold
- H.P. backward
- Quick operation keys (Timer, speed, IO)
- IO graph
- Servo monitor
- STEP operation
- E.O.A.T change point
- Password setting
- Logs (Maintenance, Error)
- Sampling
- Sampling counter
- Pass motion
- Quick program (64 points)
- Free palletize (256P)
- Sub arm control
- Auto off at run end

Option

- Part grip 2 circuits
- Part grip 4 circuits
- Part grip 8 circuits
- Vacuum 2 circuits
- Vacuum 4 circuits
- Vacuum&Blow circuit
- Vacuum&Blow 2 circuits
- Vacuum&Blow 4 circuits
- Vacuum&Blow 8 circuits
- TA nipper handleless
- Wait nipper valve
- Signal tower (a color/three color)
- Traverse stanchion
- Pressure monitor
- Custom color
- Air blow
- Conveyor signal
- Stocker signal
- EOAT nipper
- Valve extension
- Wrist rotation
- HAL-NET (HARMO ALL-AROUND LINK - NET)

Dimensions (mm)

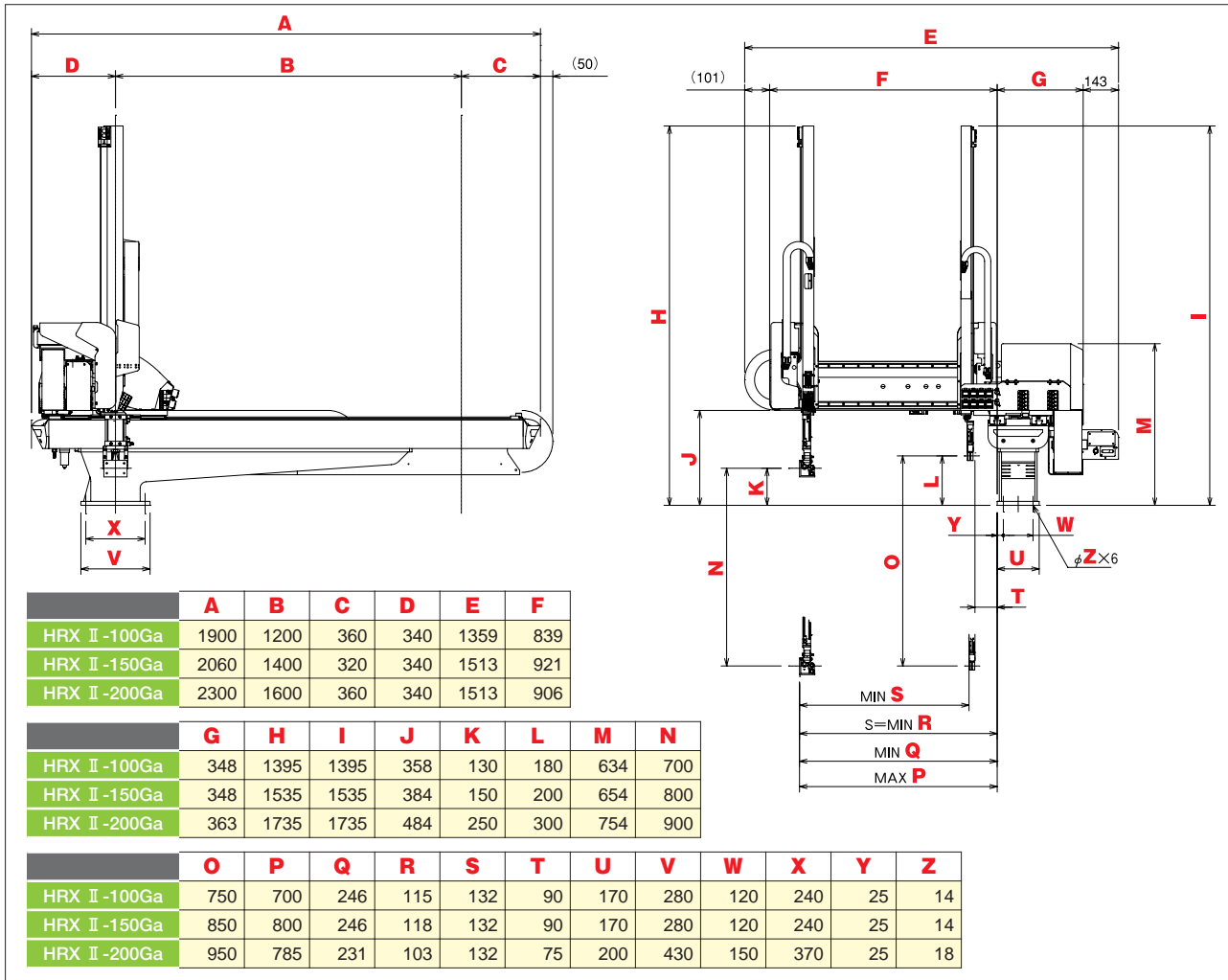


Specifications

MODEL	HRX II -30Sa	HRX II -30Ga	HRX II -50Sa	HRX II -50Ga	HRX II -50SWa	HRX II -50GWa
IMM size (ton)	15 ~ 40		40 ~ 70		40 ~ 70	
Main arm stroke (mm)	400 [500]		600 [700]		600 [700]	
Sub arm stroke (mm)	-	590 [650]	-	650 [750]	-	650 [750]
Main kick stroke (mm)	438 (102 ~ 540)	379 (161 ~ 540)	436 (84 ~ 520)	377 (143 ~ 520)	436 (84 ~ 520)	319 (201 ~ 520)
Sub kick stroke (mm)	-	377 (43 ~ 420)	-	374 (26 ~ 400)	-	319 (81 ~ 400)
Traverse stroke (mm)	1000 [1200] [1400]		1000 [1200] [1400]		1000 [1200] [1400]	
Grip height (mm)	150			100		
Max. main arm reach (mm)	540			520		
Min. sub arm reach (mm)	-	72	-	87	-	87
Wrist unit (°)	90					
Max. payload (kg)	3 (including EOAT)					
Weight (kg)	102	119	103	120	103	120
Overall HxWxD (mm)	1249 x 1650 x 964		1260 x 1650 x 964		882 x 1650 x 964	
Working air pressure (MPa)	0.5					
Air consumption 1 (#/cyd[ANR])	0.62	0.64	0.62	0.64	0.62	0.64
Control method	Digital AC servo motor(3/5 axes)					
Power supply (V)	3-phase AC200V ± 10% (50Hz/60Hz)					
Power consumption (W)	1350	1950	1350	1950	1350	1950

1 When vacuum ejectors are used, another 46 ℓ/min [ANR] is consumed for each. [] =Option

Dimensions (mm)

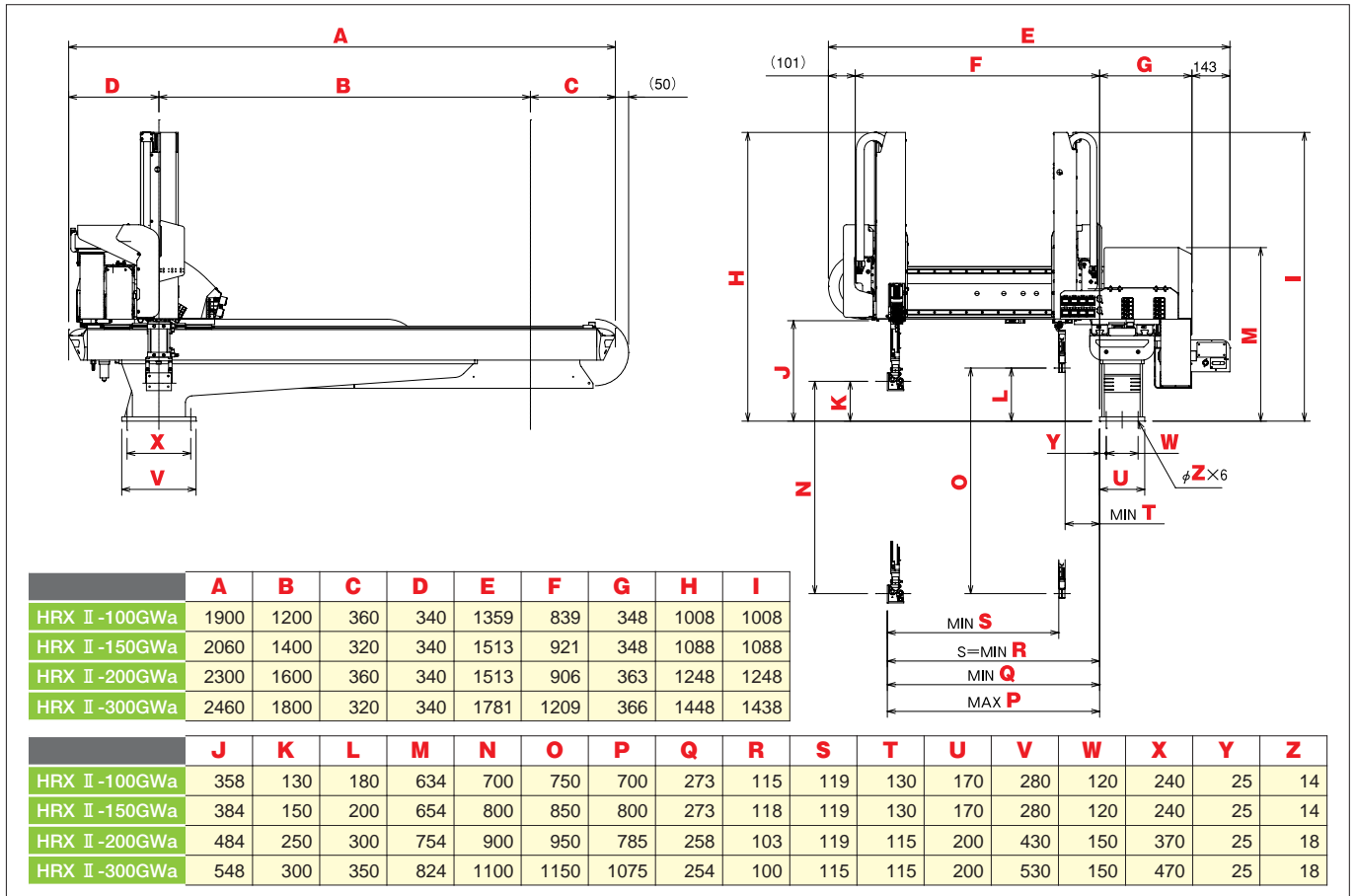


Specifications

MODEL	HRX II -100Sa	HRX II -100Ga	HRX II -150Sa	HRX II -150Ga	HRX II -200Sa	HRX II -200Ga
IMM size (ton)	75 ~ 120		120 ~ 220		150 ~ 350	
Main arm stroke (mm)	700 【800】 【900】		800 【900】 【1000】		900 【1000】	
Sub arm stroke (mm)	-	750 【850】 【950】	-	850 【950】 【1050】	-	950 【1050】
Main kick stroke (mm)	585 (115 ~ 700)	454 (246 ~ 700)	682 (118 ~ 800)	554 (246 ~ 800)	682 (103 ~ 785)	554 (231 ~ 785)
Sub kick stroke (mm)	-	454 (90 ~ 544)	-	554 (90 ~ 644)	-	554 (75 ~ 629)
Traverse stroke (mm)	1200 【1400】 【1600】		1400 【1600】 【1800】 【2000】		1600 【1800】 【2000】	
Grip height (mm)	130		150		250	
Max. main arm reach (mm)	700		800		785	
Min. sub arm reach (mm)	-	90	-	90	-	75
Wrist unit (°)	90					
Max. payload (kg)	5 (including EOAT)					
Weight (kg)	210	228	239	257	299	313
Overall HxWxD (mm)	1395 x 1900 x 1359		1535 x 2060 x 1513		1735 x 2300 x 1513	
Working air pressure (MPa)	0.5					
Air consumption 1 (ℓ/rev【ANR】)	1.07	1.09	1.07	1.09	1.07	1.09
Control method	Digital AC servo motor(3/5 axes)					
Power supply (V)	3-phase AC200V ± 10% (50Hz/60Hz)					
Power consumption (W)	1700	2300	1700	2300	1700	2300

1 When vacuum ejectors are used, another 46 ℓ /min [ANR] is consumed for each. 【 】 =Option

Dimensions (mm)



Specifications

MODEL	HRX II -100SWa	HRX II -100GWa	HRX II -150SWa	HRX II -150GWa	HRX II -200SWa	HRX II -200GWa	HRX II -300SWa	HRX II -300GWa
IMM size (ton)	75 ~ 120		120 ~ 220		150 ~ 350		260 ~ 450	
Main arm stroke (mm)	700 【800】 【900】		800 【900】 【1000】		900 【1000】		1100 【1200】 【1400】	
Sub arm stroke (mm)	-	750 【850】 【950】	-	850 【950】 【1050】	-	950 【1050】	-	1150 【1250】 【1450】
Main kick stroke (mm)	585 (115 ~ 700)	427 (273 ~ 700)	682 (118 ~ 800)	527 (273 ~ 800)	682 (103 ~ 785)	527 (258 ~ 785)	975 (100 ~ 1075)	821 (254 ~ 1075)
Sub kick stroke (mm)	-	427 (130 ~ 557)	-	527 (130 ~ 657)	-	527 (115 ~ 642)	-	821 (115 ~ 936)
Traverse stroke (mm)	1200 【1400】 【1600】		1400 【1600】 【1800】 【2000】		1600 【1800】 【2000】		1800 【2000】	
Grip height (mm)	130		150		250		300	
Max. main arm reach (mm)	700		800		785		1075	
Min. sub arm reach (mm)	-	130	-	130	-	115	-	115
Wrist unit (°)	90							
Max. payload (kg)	5 (including EOAT)						10 (including EOAT)	
Weight (kg)	211	231	243	264	303	325	332	355
Overall HxWxD (mm)	1008 x 1900 x 1359		1088 x 2060 x 1513		1248 x 2300 x 1513		1488 x 2460 x 1781	
Working air pressure (MPa)	0.5							
Air consumption 1 (ℓ/cycle[ANR])	1.07	1.09	1.07	1.09	1.07	1.09	1.67	1.69
Control method	Digital AC servo motor(3/5 axes)							
Power supply (V)	3-phase AC200V ± 10% (50Hz/60Hz)							
Power consumption (W)	1700	2300	1700	2300	1700	2300	1700	2300

1 When vacuum ejectors are used, another 46 ℓ /min { ANR } is consumed for each. 【 】 =Option

* This brochure is subject to change without notice.

Manufacturer:

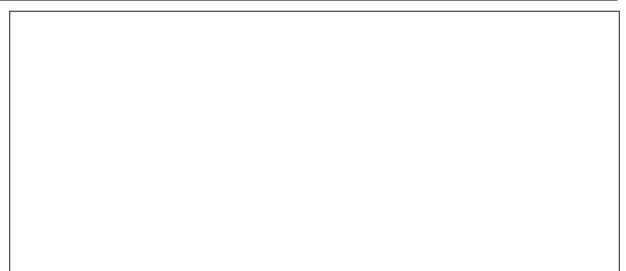
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