

## Robot Optimized for Press Handling MOTOMAN-PH130RF, PH200RF

Payload PH130RF: 130 kg , PH200RF: 200 kg  
6-axis vertically-articulated robot

Controller: YRC1000

### Fast and accurate transfer of large and heavy panels

#### Optimized for high-frequency handling

- Optimized for high-frequency handling as a result of the longer service life of the speed reducer

#### Transfer of large and heavy panels at the highest speed in its class

- PH200RF: Can transfer A0 class panels (3,500 × 1,500 mm, mass: 50 kg)
- Cycle time of 4.1 s (press pitch: 6.0 m) \* highest cycle time in its class

#### Wide range of motion

- PH130RF: Maximum press pitch of 4 to 7 m
- PH200RF: Wide range of motion with a maximum press pitch of 6 to 8.5 m



MOTOMAN-PH130RF

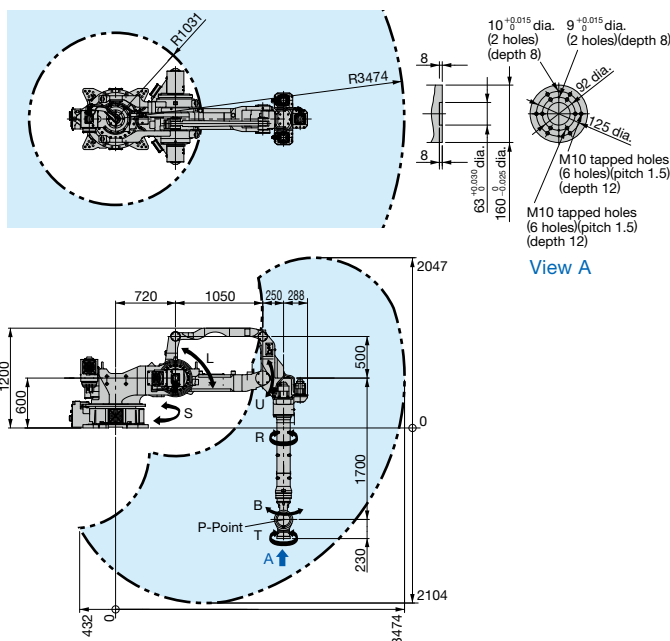


MOTOMAN-PH200RF

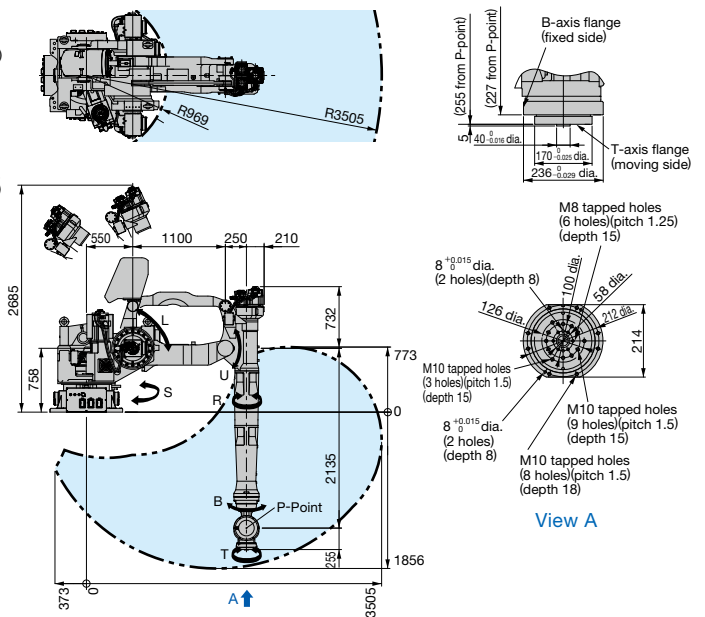
#### Dimensions Units: mm : P-point Maximum Envelope

Note: Refer to individual dimension diagrams for detailed dimensions and specifications of the following models.

##### ●PH130RF



##### ●PH200RF



Note: The direction of the power cable slot varies with the manipulator type.

YR-1-06VRF200-

J: Right side position  
K: Back side position  
L: Left side position

# MOTOMAN-PH130RF, PH200RF

## Manipulator Specifications

Items		Specifications	
Model		MOTOMAN-PH130RF	MOTOMAN-PH200RF
Type		YR-1-06VRF130-A00	YR-1-06VRF200-00000
Controlled Axis		6 (vertically articulated)	
Payload	Wrist	130 kg	200 kg*3
	U -arm	10 kg	10 kg
Repeatability*1		±0.3 mm	±0.5mm
Range of Motion	S-axis (turning)	-180° - +180°	-150° - +150°
	L-axis (lower arm)	-130° - +70°	-122° - +25°
	U-axis (upper arm)	-70° - +95°	-70° - +53°
	R-axis (wrist roll)	-360° - +360°	-360° - +360°
	B-axis (wrist pitch/yaw)	-130° - +130°	-120° - +120°*3
	T-axis (wrist twist)	-360° - +360°	-360° - +360°*3
Maximum Speed	S-axis (turning)	1.92 rad/s, 110°/s	1.57 rad/s, 90°/s
	L-axis (lower arm)	1.92 rad/s, 110°/s	1.57 rad/s, 90°/s
	U-axis (upper arm)	1.92 rad/s, 110°/s	1.57 rad/s, 90°/s
	R-axis (wrist roll)	3.75 rad/s, 215°/s	1.40 rad/s, 80°/s
	B-axis (wrist pitch/yaw)	3.14 rad/s, 180°/s	1.40 rad/s, 80°/s
	T-axis (wrist twist)	5.23 rad/s, 300°/s	2.79 rad/s, 160°/s
Allowable Moment	R-axis (wrist roll)	735 N·m	1274 N·m*4
	B-axis (wrist pitch/yaw)	735 N·m	2156 N·m*4
	T-axis (wrist twist)	421 N·m	0 N·m*4
Allowable Inertia (GD <sup>2</sup> /4)	R-axis (wrist roll)	45 kg·m <sup>2</sup>	84.5 kg·m <sup>2</sup> *4
	B-axis (wrist pitch/yaw)	45 kg·m <sup>2</sup>	330 kg·m <sup>2</sup> *4
	T-axis (wrist twist)	15 kg·m <sup>2</sup>	80 kg·m <sup>2</sup> *4
Approx. Mass		1560 kg	2940 kg
IEC Protection Class		Body: IP30 Wrist: IP67	Body: - Wrist: IP67
Ambient Conditions	Temperature	0 °C to +45 °C	
	Humidity	20% to 80%RH (non-condensing)	
	Vibration	9.8 m/s <sup>2</sup> (1.0G) or less	
	Altitude	1000 m or less	
	Others	<ul style="list-style-type: none"> <li>Free from corrosive gas or liquid, or explosive gas or liquid</li> <li>Free from exposure to water, oil, or dust</li> <li>Free from excessive electrical noise (plasma)</li> <li>Free from strong magnetic fields</li> </ul>	
	Power Requirements*2	7.5 kVA	22 kVA
Mounting		Shelf	

\*1: Conforms to ISO 9283.

\*2: Varies in accordance with applications and motion patterns.

\*3: Contact your Yaskawa representative if a parallel-linked hand is mounted on the T-axis of the PH200RF.

## YRC1000 Robot Controller Specifications

Items	Specifications
Configuration	Dust proof IP54 (area of backside duct fan: IP2X)
Dimensions*5, Approx. Mass	PH130RF: 598 (W)×427 (D)×490 (H) mm, 125 L 85 kg max. (External axis amplifiers for up to two axes can be built in.)
	PH200RF: 1190 (W)×650 (D)×1400 (H) mm, 910 L * Including the regenerative resistor box (width 190 mm) 350 kg max. (External axis amplifiers cannot be built in.)
Cooling System	Indirect cooling
Ambient Temperature	During operation: 0 °C to +45 °C, During storage: -10 °C to +60 °C
Relative Humidity	90% max. (non-condensing)
Altitude	2000 m (with temperature derating)
	Derating condition of over 1000 m: max. ambient temperature decreases 1% per 100 m.
Power Supply	PH130RF: Japan: three-phase 200 VAC to 240 VAC (+10% to -15%), 50/60 Hz (±2%) Asia and Europe: three-phase 380 VAC to 440 VAC (+10% to -15%), 50/60 Hz (±2%) (neutral grounding) North America: three-phase 380 VAC to 480 VAC (+10% to -15%), 50/60 Hz (±2%) (neutral grounding)
	PH200RF: Japan, Asia, Europe, and North America: three-phase 200 VAC (+10% to -15%), 50/60 Hz (±2%), three-phase 220 VAC (+10% to -15%), 60 Hz (±2%)
Grounding	Grounding resistance: 100 Ω or less for 200-V class, 10 Ω or less for 400-V class
Digital I/Os	Specialized signals: 19 inputs and 6 outputs General signals: 40 inputs and 40 outputs (32 transistor outputs, 8 relay outputs)
Positioning System	Serial communications (absolute encoder)
Programming Capacity	JOB: 200,000 steps, 10,000 instructions CIO ladder: 20,000 steps max.
Expansion Slots	PCI express: 2 slots
LAN (Connection to Host)	2 (10BASE-T/100BASE-TX)
Interface	RS-232C: 1ch
Control Method	Software servo control
Drive Units	SERVOPACK for AC servomotors

\*4: Shows the values when a parallel-linked hand or a fixed hand is mounted on the T-axis of the PH200RF (values include the weight of the parallel-linked hand, fixed hand, and workpiece). The allowable inertia under a load for the T-axis is based on the condition that the PH200RF is transferring a workpiece in a horizontal position (with the T-axis facing downward).

\*5: Protrusions are not included.

Note: SI units are used for the specifications.

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