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**Global Leader**



**CE**

# HP 160



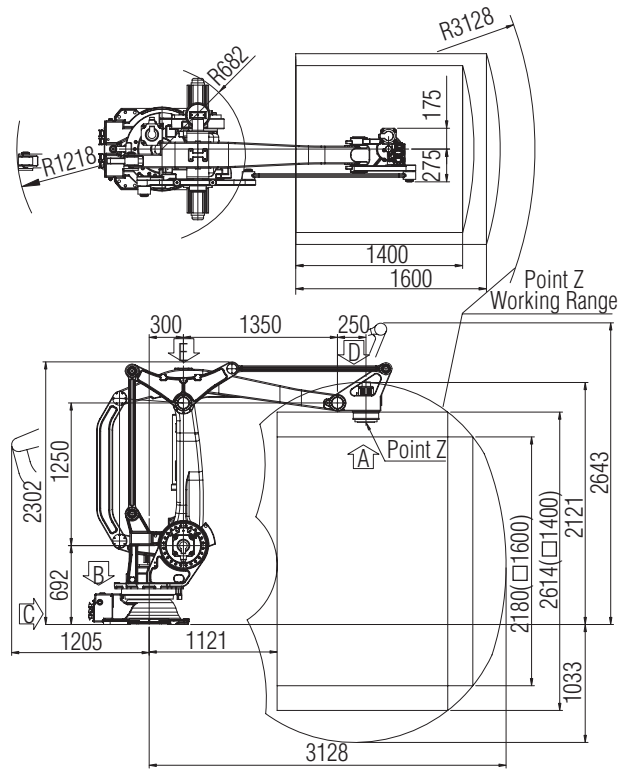
 **HYUNDAI**  
HEAVY INDUSTRIES CO., LTD.

# HP160

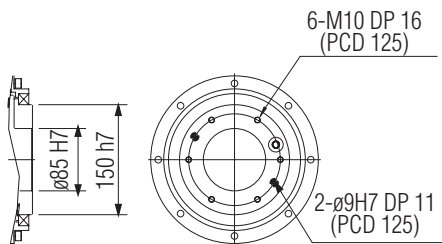
## Manipulator Specifications

Item		Specification	
<b>Model</b>		<b>HP160</b>	
Payload		160 kg	
Structure		Articulated	
Degree of freedom		4 Axes	
Max. Operating Range	S	Swivel	±180 °
	Pallatizing Range	□1400	2,614 mm
		□1600	2,180 mm
R	Rotating	±360 °	
Ability of Operation	Box	1,300 CPH	
	Bag	1,560 CPH	
Allowable Wrist Torque		50 kgf·m	
Allowable Wrist Inertia		78 kgf·m <sup>2</sup>	
Repeatability		±0.5 mm	
Ambient Temperature		0 ~ 45 °C (273 ~ 318 K)	
Approximate Weight		1,400 kg	
Motion Range Section Area		5.76 m <sup>2</sup>	

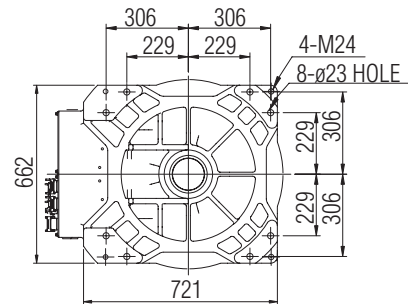
### Working Envelope



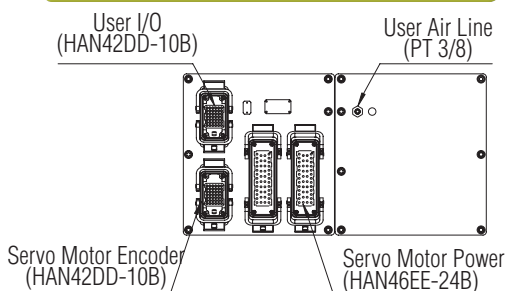
### View "A" For Tool Attachment



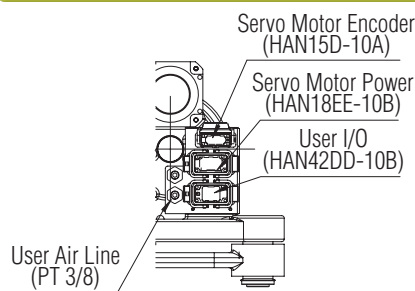
### View "B" For Installation



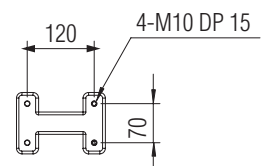
### View "C" For User Application



### View "D" For User Application (Option)



### View "E" For Cable Guide



## ■ Controller Specifications

Item	Specification	
<b>Model Name</b>	<b>Hi5</b>	
Control Hardware	Multi Processor System	
Execution Mode	Teaching & Playback	
Interpolation Type	Point-to-Point, Linear, Circular	
Max. Axes	Max. 16 Axes Simultaneously	
Number of Step	17,000 Points	
External Program Selection	Binary 255 / Discrete 8	
Position Detector	Serial Absolute Encoder	
Program Back-up	USB Memory	
Servo Control	Full Digital Servo	
Digital Input / Output	Max. Input : 256 / Output : 256 Points	
Analog Input / Output	Input : 4 ch / Output : 4 ch	
Conveyor Pulse Counter	Differential Input / Open Collector Input, 2ch	
Communication	Ethernet	100BaseT (2 Ports)
	CAN	User1 / User2
	Serial	RS232C, RS422 (RS485)
	Field Bus	CC-Link, Profibus-DP, Devicenet, Modbus
Rated Supply Voltage	AC220V ± 10%, 50 / 60 Hz	
Max. Rated Power	8 kVA (Instant Max. 30 kVA)	
Cabinet Dimension (WxDxH)	650 mm x 600 mm x 1,100 mm (Except Caster)	
Weight	150 kg (Without Transformer)	
Protection Classification	IP54	
Ambient Temperature	0 ~ 45 °C	

## ■ Teaching Pendant Specifications

Item	Specification
Microprocessor	32 bits RISC Processor
Operating System	Windows CE
Display	7" Color TFT-LCD
Operation Mode	Menu Driven and Code Input / Touch Panel

### · Easy and simple operation

- Easy/convenient programming language similar to BASIC

### · Easy maintenance

- Excellent maintenance ability using on-line display function

### · Advanced control technology

- Dynamic control
- Advanced vibration suppression control
- Extended torque-velocity control

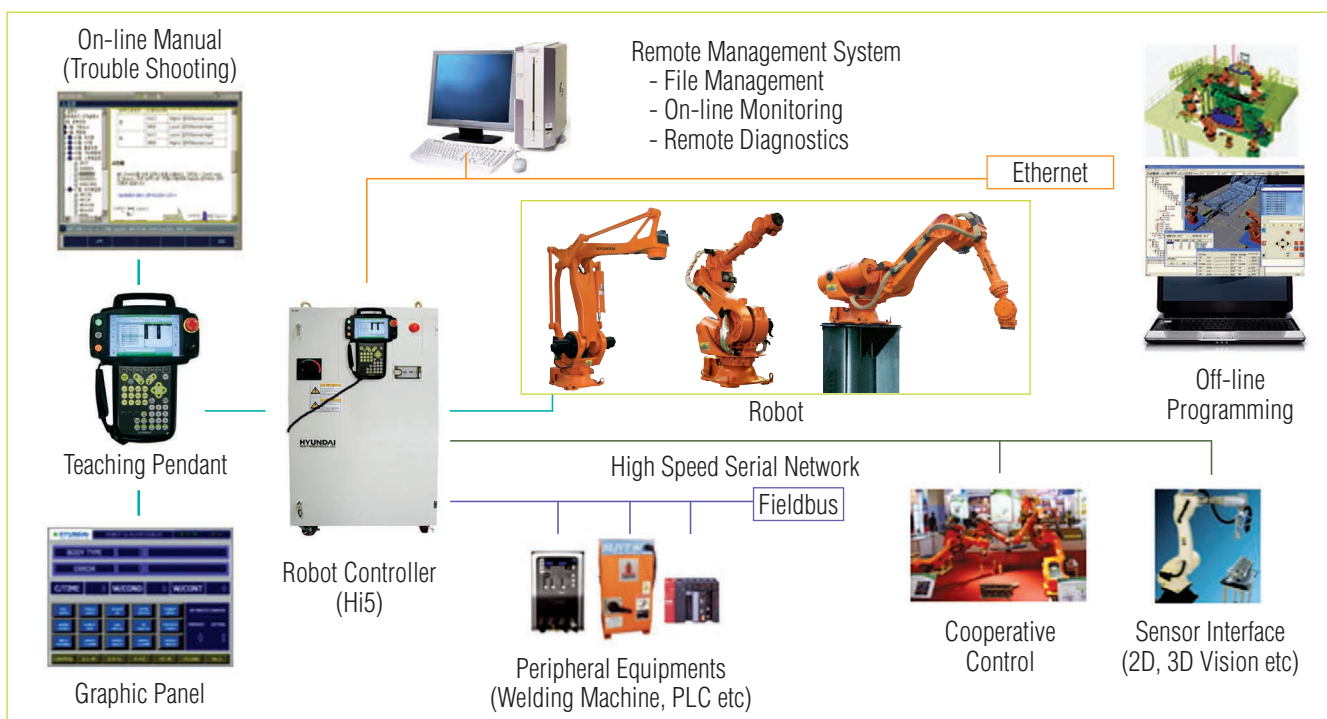
### · Safety

- Compliant with ANSI/RIA15.6\_1999 and CE Directives

### · Compatibility and connectivity

- Embedded soft PLC
- Fieldbus : CC-Link, Profibus-DP, Devicenet, Modbus, etc.
- Ethernet, Serial Communication

## ■ System Configuration





### Key Features

- Enlargement of working envelope by link structure
- Improvement of dynamic performance

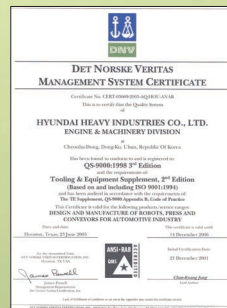


### Application

- Palletizing
- Material Handling



## ■ Certificate (ISO 9001, ISO 14001, QS-9000TE, CE) ■



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\*Materials and specifications are subject to change without notice