

JADS™ SERIES

All Electric Servo Drive
Injection Molding Machine

JSW THE JAPAN STEEL WORKS, LTD.

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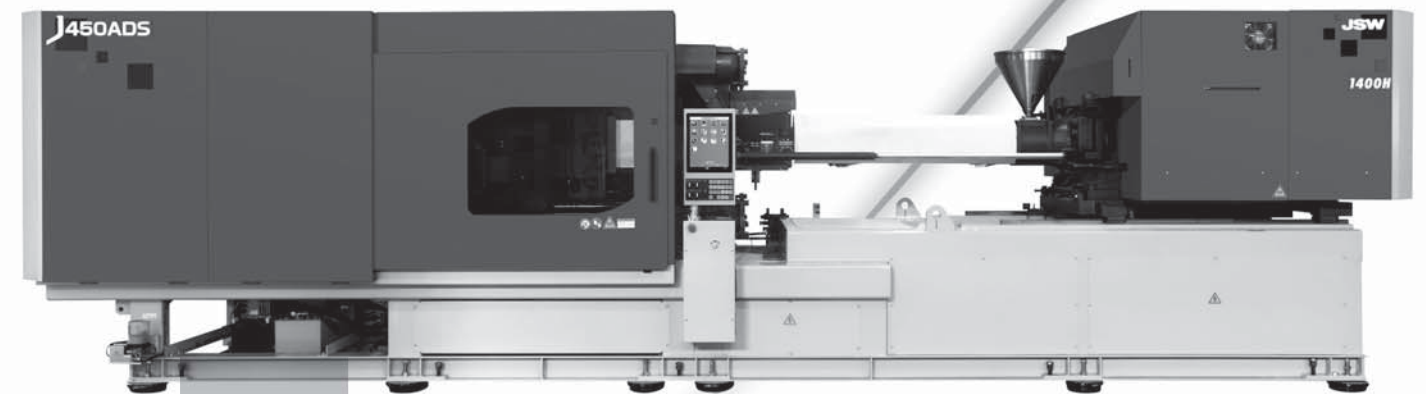
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Model
J220ADS | J280ADS | J350ADS | J450ADS
(Specifications for Europe)

JSW



JQA-QMA13993
JQA-EM6416

Performance Table

Equipment Dimensions and Mold Related Dimensions

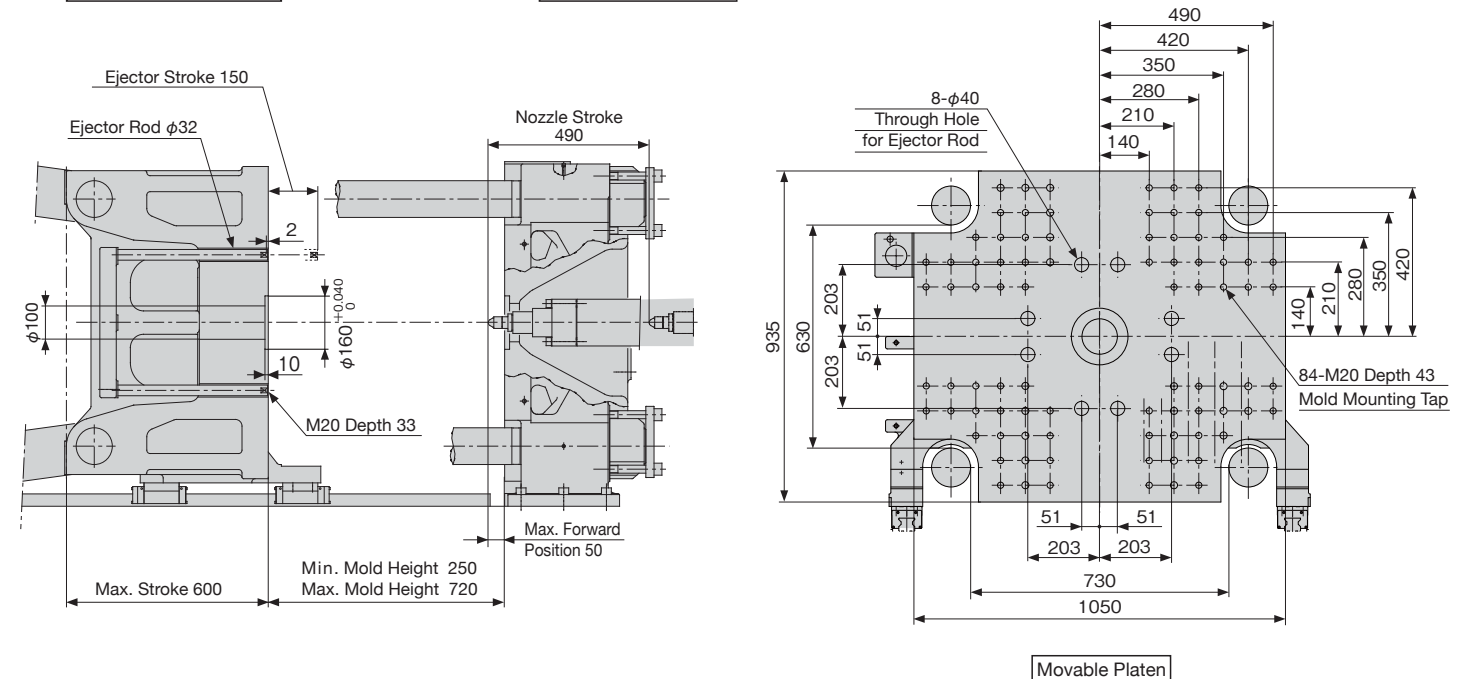
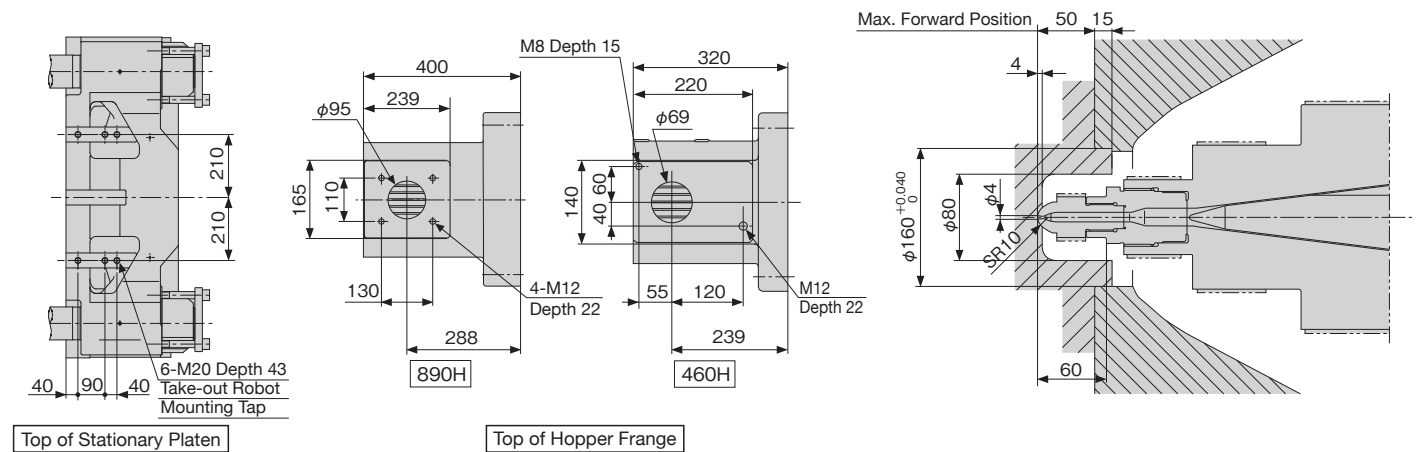
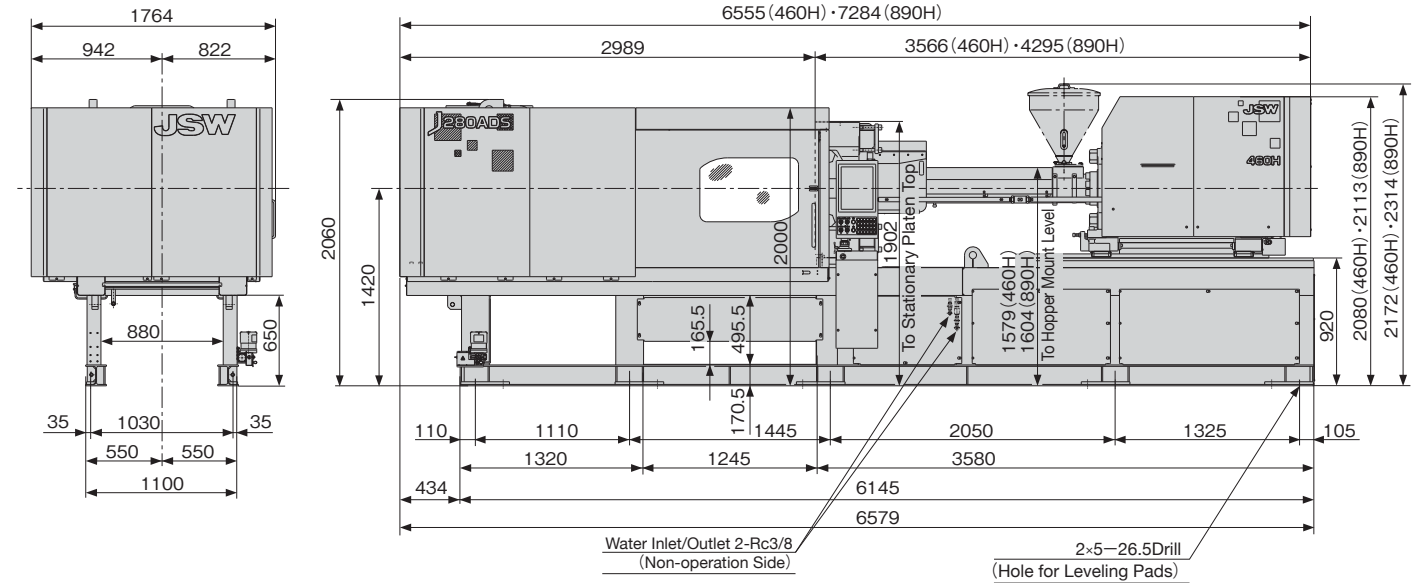
Unit	Item	Model	J280ADS						
			460H		890H				
Injection Unit	Screw Diameter	mm	46	53	58	58	66	72	
	Screw Stroke	mm	210			260			
	Theoretical Injection Capacity	cm ³	349	463	555	687	890	1059	
	Injection Capacity (GP-PS)	g	318	421	505	625	810	965	
	Standard	Injection Pressure (Max.)	MPa (kgf/cm ²)	234 {2380}	177 {1800}	147 {1490}	229 {2330}	177 {1800}	149 {1510}
		Holding Pressure (Max.)	MPa (kgf/cm ²)	213 {2170}	161 {1640}	134 {1360}	208 {2120}	161 {1640}	135 {1370}
		Injection Speed	mm/s	160			160		
		Injection Rate	cm ³ /s	266	353	423	423	547	651
		Plasticizing Rate (GP-PS)	kg/h	115	163	197	197	282	336
		Screw Speed	min ⁻¹	250			250		
		High Speed (Option)	Injection Pressure (Max.)	MPa (kgf/cm ²)	234 {2380}	177 {1800}	147 {1490}	229 {2330}	177 {1800}
	Holding Pressure (Max.)		MPa (kgf/cm ²)	213 {2170}	161 {1640}	134 {1360}	208 {2120}	161 {1640}	135 {1370}
	Injection Speed		mm/s	300			270		
	Injection Rate		cm ³ /s	499	662	793	713	924	1099
Plasticizing Rate (GP-PS)	kg/h		161	228	275	197	282	336	
Clamping Unit	Screw Speed	min ⁻¹	350			250			
	Nozzle Touch Force	kN (tf)	39.3 {4.0} Center Nozzle Touch						
	Nozzle Stroke from Platen	mm	50						
	Type of Nozzle		Open Nozzle (Tip Type)						
	Barrel Temperature Control		Barrel5, Nozzle1						
	Heater Wattage	kW	12.4		18.7				
	Mechanism		Double Toggle						
	Clamping Force	kN (tf)	2750 {280}						
	Daylight Opening (Max.)	mm	1320						
	Opening Stroke (Max.)	mm	600						
General	Mold Height	mm	250~720						
	Distance Between Tie-bars (HxV)	mm	730x630						
	Platen Size (HxV)	mm	1050x935						
	Locating Ring Diameter	mm	φ160						
	Ejector Point		8Points						
General	Ejector Force	kN (tf)	59.0 {6.0}						
	Ejector Stroke	mm	150						
General	Machine Weight	t	12.4		13.0				
	Machine Dimensions (LxWxH)	m	6.58x1.76x2.08			7.28x1.76x2.11			

Remarks:

- Maximum injection pressure and maximum holding pressure may be restricted due to molding condition.
- The theoretical injection capacity is (cross sectional area of barrel) × (stroke of screw).
- The injection capacity is applicable for GP-PS and variable according to the grade of resin, molding conditions and mold.
- The plasticizing rate is applicable for GP-PS.
- PC, HPVC, other engineering plastic, etc., low temperature setting and high speed molding may require a high torque depending on the grade or molding conditions. Please contact us if you plan.

Note:

- Due to continual improvements, specifications are subject to change without notice.
- Actual figures of the specification will vary depending on final machine configuration. Please contact us if you require more specific data.
- Performance specifications are based on theoretical data.
- High speed injection is optional.
- 1MPa=10.2 kgf/cm², 1kN=0.102tf



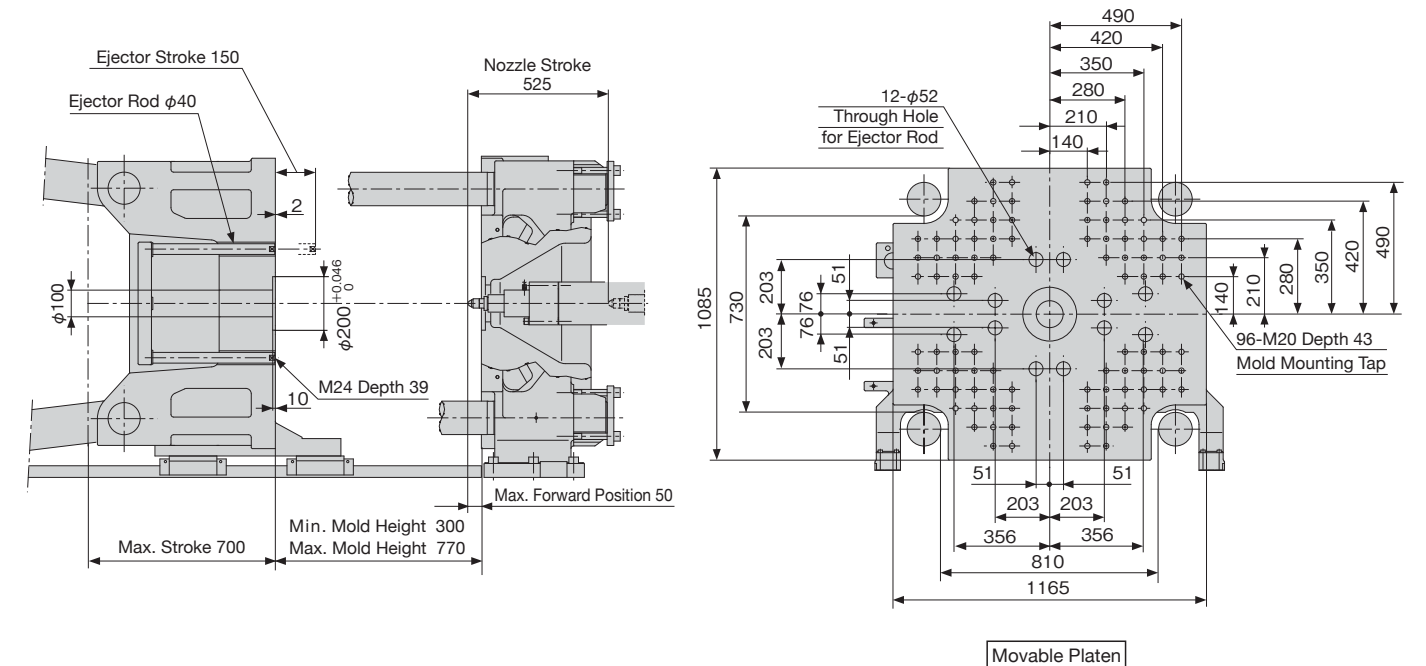
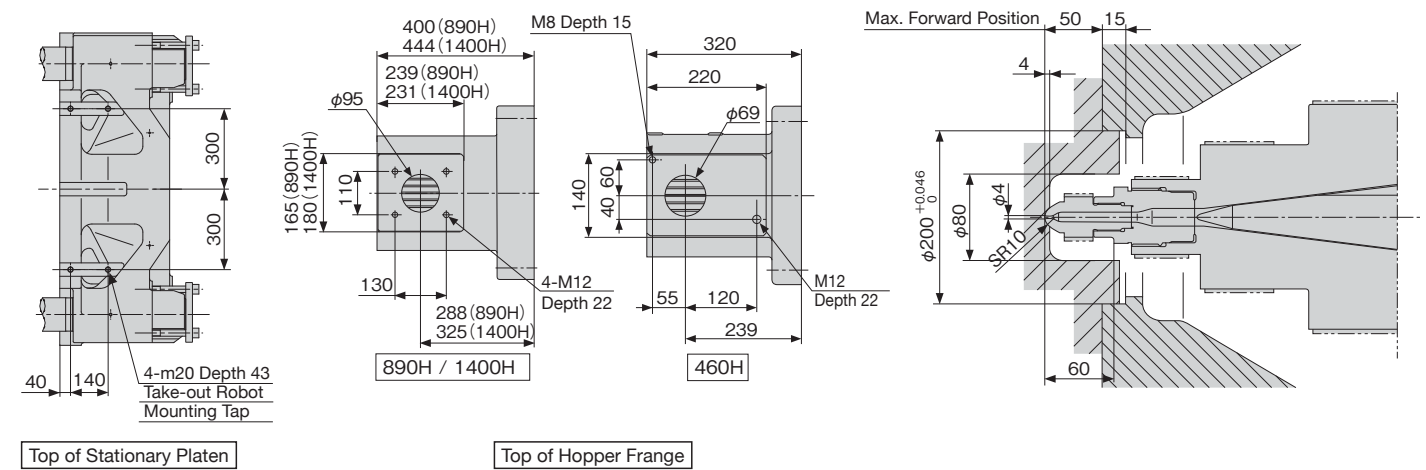
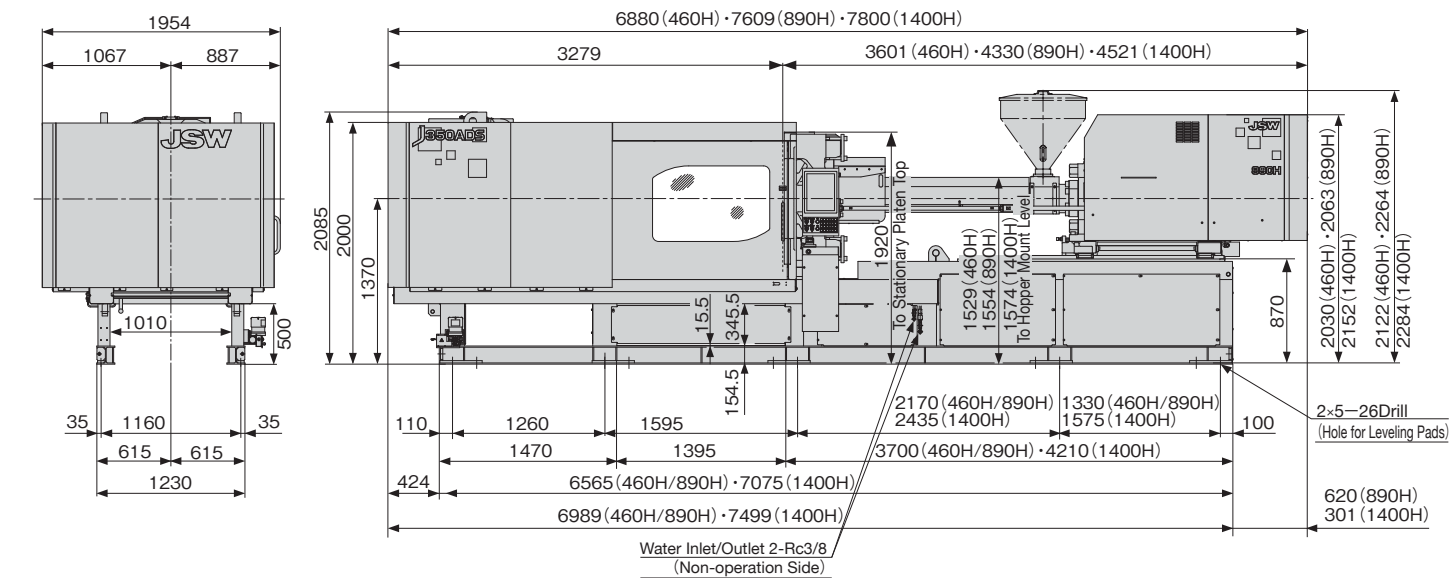
Performance Table

Equipment Dimensions and Mold Related Dimensions

Unit	Item	Model	J350ADS									
			460H			890H			1400H			
Injection Unit	Screw Diameter	mm	46	53	58	58	66	72	66	76	84	
	Screw Stroke	mm	210			260			300			
	Theoretical Injection Capacity	cm ³	349	463	555	687	890	1059	1026	1361	1663	
	Injection Capacity (GP-PS)	g	318	421	505	625	810	965	934	1238	1513	
	Standard	Injection Pressure (Max.)	MPa (kgf/cm ²)	234 (2380)	177 (1800)	147 (1490)	229 (2330)	177 (1800)	149 (1510)	241 (2450)	182 (1850)	149 (1510)
		Holding Pressure (Max.)	MPa (kgf/cm ²)	213 (2170)	161 (1640)	134 (1360)	208 (2120)	161 (1640)	135 (1370)	216 (2200)	163 (1660)	134 (1360)
		Injection Speed	mm/s	160			160			160		
		Injection Rate	cm ³ /s	266	353	423	423	547	651	547	726	887
		Plasticizing Rate (GP-PS)	kg/h	115	163	197	197	282	336	237	338	418
		Screw Speed	min ⁻¹	250			250			210		
High Speed (Option)	Injection Pressure (Max.)	MPa (kgf/cm ²)	234 (2380)	177 (1800)	147 (1490)	229 (2330)	177 (1800)	149 (1510)	241 (2450)	182 (1850)	149 (1510)	
	Holding Pressure (Max.)	MPa (kgf/cm ²)	213 (2170)	161 (1640)	134 (1360)	208 (2120)	161 (1640)	135 (1370)	216 (2200)	163 (1660)	134 (1360)	
	Injection Speed	mm/s	300			270			300			
	Injection Rate	cm ³ /s	499	662	793	713	924	1099	1026	1361	1663	
	Plasticizing Rate (GP-PS)	kg/h	161	228	275	197	282	336	237	338	418	
	Screw Speed	min ⁻¹	350			250			210			
Clamping Unit	Nozzle Touch Force	kN (tf)	39.3 (4.0) Center Nozzle Touch									
	Nozzle Stroke from Platen	mm	50									
	Type of Nozzle		Open Nozzle (Tip Type)									
	Barrel Temperature Control		Barrel 5, Nozzle 1									
	Heater Wattage	kW	12.4			18.7			26.8			
	Mechanism		Double Toggle									
	Clamping Force	kN (tf)	3440 (350)									
	Daylight Opening (Max.)	mm	1470									
	Opening Stroke (Max.)	mm	700									
	Mold Height	mm	300~770									
General	Distance Between Tie-bars (HXV)	mm	810×730									
	Platen Size (H×V)	mm	1165×1085									
	Locating Ring Diameter	mm	φ200									
	Ejector Point		17 Points									
	Ejector Force	kN (tf)	59.0 (6.0)									
	Ejector Stroke	mm	150									
	Machine Weight	t	16.1			17.0			18.5			
	Machine Dimensions (L×W×H)	m	6.99×1.95×2.09			7.61×1.96×2.09			7.80×1.95×2.15			

Remarks:
 1. Maximum injection pressure and maximum holding pressure may be restricted due to molding condition.
 2. The theoretical injection capacity is (cross sectional area of barrel) × (stroke of screw).
 3. The injection capacity is applicable for GP-PS and variable according to the grade of resin, molding conditions and mold.
 4. The plasticizing rate is applicable for GP-PS.
 5. PC, HPVC, other engineering plastic, etc., low temperature setting and high speed molding may require a high torque depending on the grade or molding conditions. Please contact us if you plan.

Note:
 1. Due to continual improvements, specifications are subject to change without notice.
 2. Actual figures of the specification will vary depending on final machine configuration. Please contact us if you require more specific data.
 3. Performance specifications are based on theoretical data.
 4. High speed injection is optional.
 5. 1MPa=10.2 kgf/cm², 1kN=0.102tf

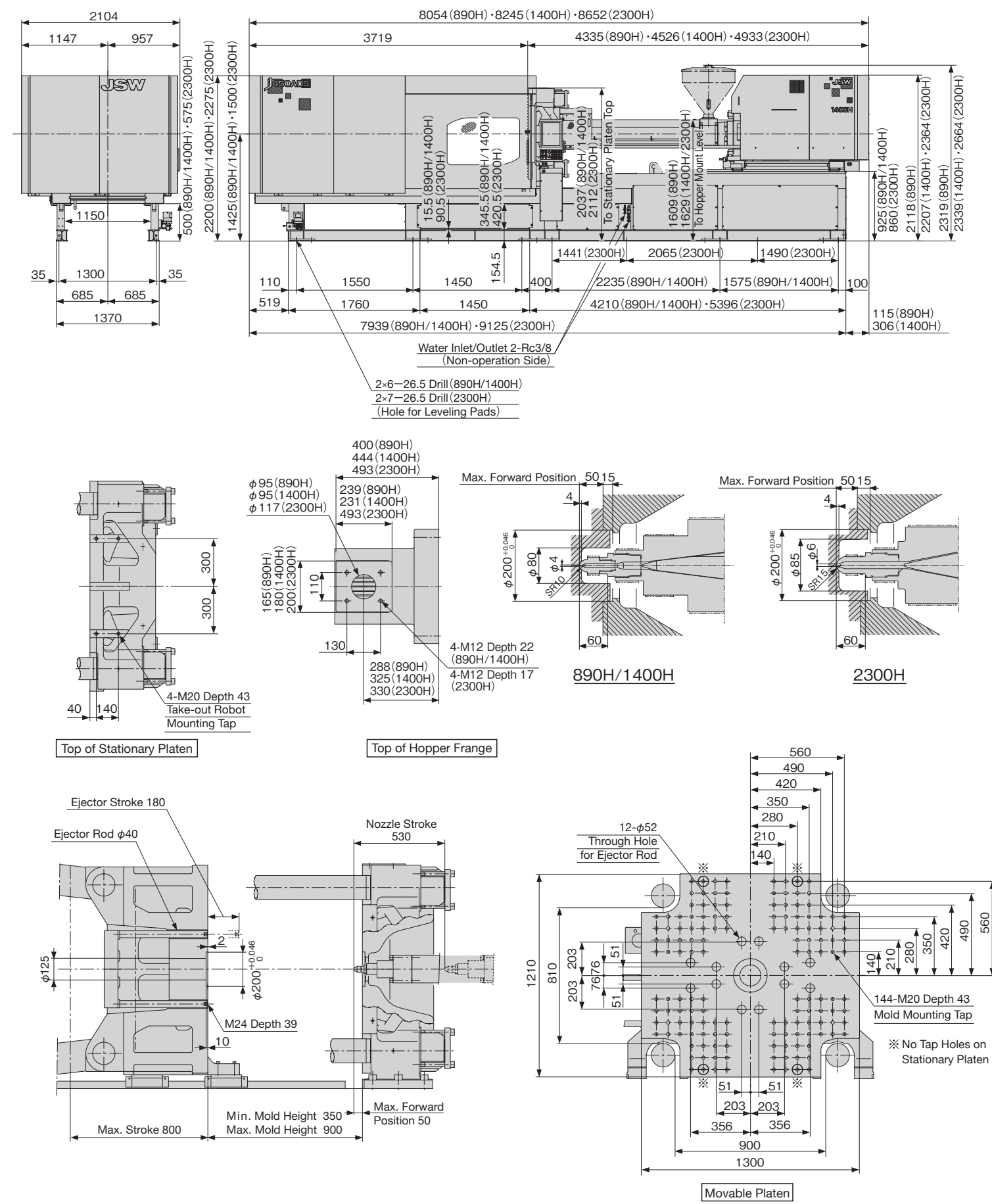


Performance Table

Equipment Dimensions and Mold Related Dimensions

Unit	Item	Model	J450ADS								
			890H			1400H			2300H		
Injection Unit	Screw Diameter	mm	58	66	72	66	76	84	84	92	
	Screw Stroke	mm	260			300			420		
	Theoretical Injection Capacity	cm ³	687	890	1059	1026	1361	1663	2328	2792	
	Injection Capacity (GP-PS)	g	625	810	965	934	1238	1513	2118	2541	
	Standard	Injection Pressure (Max.)	MPa (kgf/cm ²)	229 (2330)	177 (1800)	149 (1510)	241 (2450)	182 (1850)	149 (1510)	190 (1930)	158 (1610)
		Holding Pressure (Max.)	MPa (kgf/cm ²)	208 (2120)	161 (1640)	135 (1370)	216 (2200)	163 (1660)	134 (1360)	171 (1740)	142 (1440)
	Standard	Injection Speed	mm/s	160			160			160	
		Injection Rate	cm ³ /s	423	547	651	547	726	887	887	1064
	Standard	Plasticizing Rate (GP-PS)	kg/h	197	282	336	237	338	418	420	470
		Screw Speed	min ⁻¹	250			210			200	
High speed (Option)	Injection Pressure (Max.)	MPa (kgf/cm ²)	229 (2330)	177 (1800)	149 (1510)	241 (2450)	182 (1850)	149 (1510)	—	—	
	Holding Pressure (Max.)	MPa (kgf/cm ²)	208 (2120)	161 (1640)	135 (1370)	216 (2200)	163 (1660)	134 (1360)	—	—	
High speed (Option)	Injection Speed	mm/s	270			300			—		
	Injection Rate	cm ³ /s	713	924	1099	1026	1361	1663	—	—	
High speed (Option)	Plasticizing Rate (GP-PS)	kg/h	197	282	336	237	338	418	—	—	
	Screw Speed	min ⁻¹	250			210			—		
Clamping Unit	Nozzle Touch Force	kN (tf)	39.3 (4.0) Center Nozzle Touch						59.0 (6.0)		
	Nozzle Stroke from Platen	mm	50								
	Type of Nozzle		Open Nozzle (Tip Type)						Open Nozzle		
	Barrel Temperature Control		Barrel5, Nozzle1								
	Heater Wattage	kW	18.7			26.8			39.8		
	Mechanism		Double Toggle								
	Clamping Force	kN (tf)	4420 (450)								
	Daylight Opening (Max.)	mm	1700								
	Opening Stroke (Max.)	mm	800								
	Mold Height	mm	350~900								
General	Distance Between Tie-bars (HXV)	mm	900×810								
	Platen Size (H×V)	mm	1300×1210								
	Locating Ring Dia	mm	φ200								
	Ejector Point		17 Points								
	Ejector Force	kN (tf)	99.0 (10.0)								
	Ejector Stroke	mm	180								
	Machine Weight	t	21.0			22.3			26.2		
	Machine Dimensions (L×W×H)	m	8.05×2.10×2.20			8.25×2.10×2.21			9.13×2.10×2.36		

Remarks:
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 2. The theoretical injection capacity is (cross sectional area of barrel) × (stroke of screw).
 3. The injection capacity is applicable for GP-PS and variable according to the grade of resin, molding conditions and mold.
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 5. PC, HPVC, other engineering plastic, etc., low temperature setting and high speed molding may require a high torque depending on the grade or molding conditions. Please contact us if you plan.
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 4. High speed injection is optional.
 5. 1MPa=10.2 kgf/cm², 1kN=0.102tf



Standard Equipment List

Item		
Injection unit	Open Nozzle(Tip type)/(Injection Units up to 1400H) (Note 1)	
	N2000F Barrel	
	Chrome-plated Screw (Note 2)	
	Screw Pull-back	
	Injection Unit Swiveling Device(with Limit Switch)	
	Screw Cold Start Prevention	
	Molding/Purging/Pause Temperature Select	
	Auto Purging Circuit	
	Nozzle Retract Select	
	Injection/Metering Programmed Control	Injection/Holding Pressure:1 to 6 Steps (Variable) Metering/Back Pressure:1 to 3 Steps (Variable)
	Holding Pressure Control Select	
	Pull-back Select	
	IVS Control (Holding Pressure Transfer by Speed Detection)	
	Barrel Temperature Control (PID)	
	Synchronous Temperature Rise Control	
	Hopper Flange Temperature Control	
	Soft Pack Servo Control	
	HAVC (High Accuracy Volume Control)	
	IWCS (Injection Weight and Cushion Stability) Control	
	Reverse seal Control	
Auto Grease Lubrication		
Clamping unit	High-performance Platen Support	
	Low Vibration Mold Open/Close	
	Wide Platen	
	Flat Press Platen Mechanism (Stationary side/Movable side)	
	Mold Open/Close and Ejection Programmed Control	Mold Open/Close : 4 Steps (Fixed) Ejection : 1 to 3 Steps (Variable)
	Mold Protection Function	
	Electric-driven Mold Thickness Adjusting Device	
	Auto Clamp Force Setting	
	Clamp Force Display	
	Clamp Force Feed Back Control	
	Ejector Plate Return Confirmation Circuit	
	Toggle Type Injection Compression Function	A-mode B-mode Compression: 1 to 6 Steps (Variable)
	Parallel Motion	Screw Rotation During Mold Open/Close Eject During Mold Open Injection During Clamp Up
	Clamping Safety Device (Mechanical/Electrical)	
	Robot Mounting Holes	
	Grease-free Toggle Bushing	
	Auto Grease Lubrication	

(Note)

- Nozzle of 2300H is one piece type nozzle.
- Screw of injection units 300H, 460H, 890H and 1400H, GP21 screw is equipped as standard.
• Screw of injection unit 2300H, Hi-Meliter Mill screw is equipped as standard.
- USB memory device as external memory is capable of storing of molding conditions.
- Screen Capture can be saved in PNG format, and measuring data can be saved in CSV format
- The printer and the printer cables are options.
- Maximum of 16 items and alarms can be selected out of the following monitor items.
①Cycle time ②Injection time ③Metering time ④Max Injection pressure ⑤Cushion position
⑥Holding pressure end position ⑦Holding pressure transfer pressure ⑧Screw back pressure
⑨Metering end position ⑩Injection start position ⑪Holding pressure transfer position
⑫Metering torque ⑬Holding pressure transfer speed ⑭Mold close time ⑮Mold open time
⑯Clamping force ⑰Shift stroke (HAVC) ⑱End speed (HAVC)
- Maintenance monitor based on molding condition

Options List

Item	
Injection unit	Long Nozzle
	Shut-off Nozzles (Pneumatic Type and Hydraulic Type) (Note 1)
	KC Nozzle
	M7 Screw (High Plasticization Type)
	HP Screw (High Dispersion Type)
	LSP-2 screw (Abrasion-resistant type)
	Screws and Barrels for Optical Application
	Screws and Barrels for Super Engineered Plastics Application
	Special Screw (Note 2)
	Barrel Insulation Cover
Clamping unit	Barrel Blower Cooling Unit
	Hopper
	Hopper Slide Device (Operation Side)
	High-speed Injection
	Extended Holding Time Spec. (Note 3)
	Daylight Extension
	Mold Platen Heat Insulation Bord (5 or 10mm) (Note 4)
	Locating Rings
	Air Jet
	Core Pull Devices (Pneumatic Type and Hydraulic Type)
Valve Gate Device (Pneumatic Type and Hydraulic Type)	
Coupler joint (Hydraulic, Pneumatic)	
Hydraulic Power Pack (40L or 60L) Internal Unit	
Ejector Gate Cutting Circuit	
Unscrewing Motor Circuit	
Product Drop Detector (Photoelectric)	
Chute	
Rejecting Product Detecting Chute	
T-groove Platen	
Mold Setup Device	
Mold Clamper Device (Pneumatic Type, Hydraulic Type, Magnet Type)(Note 4)	
Mold Clamper	

Item	
Electrical instrumentation and control	Multi-language Select (1 Language Additional)
	Centralized Control System NET100
	Mold temperature display (with Mold Temperature Upper/Lower Limit Alarm)
	Mold Temperature Control device (with Mold Temperature Upper/Lower Limit Alarm)
	Hot Ranner Control Circuit
	Cooling Water Manifolds on Bed, Max.60C-deg.
Other	Cooling Water Failure Warning
	Leveling Pad for Installation
	Machine Anchoring Device
	Signal Tower (1 Color, 3 Colors)
	Export Specification (Note 5)
	Designated Color (Bed & Covers only) (Note 6)

(Note)

- Pneumatic shut-off nozzle and hydraulic shut-off nozzle can be mounted, Additional hydraulic unit is required for hydraulic type.
- Contact sales to know the application.
- The motor is prevented from being overloaded in a long holding time and high holding pressure molding condition.
- Extension nozzle is required. Ask sales to confirm the nozzle length to meet requirement.
Note that the usable mold thickness range will change.
- Ask sales to confirm the details depending upon the final destination.
- Color sample or Muncell code is required.

Utilities

■ Total Power Capacity

Machine Model	Total Power Capacity (kVA)	
	Standard Injection	High Speed Injection
J220ADS	300H	20.0
	460H	27.0
	890H	34.0
J280ADS	460H	27.0
	890H	34.0
J350ADS	460H	27.0
	890H	35.0
	1400H	46.0
J450ADS	890H	36.0
	1400H	48.0
	2300H	56.0

- Note: 1. Total power capacity does not include external outlets.
2. We recommend that the rated interrupting current of the main power supply breaker is more than 25 kA at AC400V/460V.

■ Cooling Water Capacity for Barrel Temperature Control

Machine Model	Cooling Water Capacity for Barrel Temperature Control (m ³ /h)
300H	0.4
460H	
890H	
1400H	0.6
2300H	1.2

Note: The above figures do not include the required quantity of water for the mold temperature controller.