

# JADC SERIES

**All Electric Servo Drive  
Injection Molding Machine**



**JSW** 株式会社 日本製鋼所  
**THE JAPAN STEEL WORKS, LTD.**



JQA-QMA13993  
JQA-EM6416

# J-ADC, the All Electric Servo Drive across the border

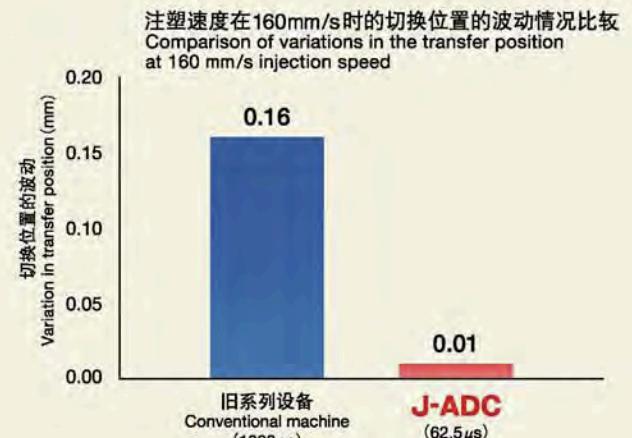


ADC是在重视性价比的同时,又可以稳定成形的中小型电动注塑成形机。由于ADC系列产品种类齐全,中小型电动注塑成形机在选择方面就变得丰富多彩,扩大了对应产品要求的最佳机械选择幅度。

The ADC model is the small and medium size electric servo drive injection molding machine that results in a stable molding operation and efficient cost performance. The wide variety of AD and ADC series allows selection of the model most suited to the requirements of the application.

由于有惊人的62μs高速伺服控制回路实现了超高精度和稳定的质量。

The marvelous 62 micro second high-speed servo control circuit attains a new high in accuracy and stable quality levels



继承了受到高度评价的SYSCOM系列控制器的操作性。升级到SYSCOM控制器。

Upgraded SYSCOM3000



- 将大型15英寸TFT彩色液晶画面纵向设计。
- 语言有中国语、英语和日本语标准装备。
- 内存存储器可以储存120个注塑成形参数,外部存储器(USB Flash Memory)能够储存操作1,000个注塑成形参数。
- A vertically arranged large 15 inch TFT color LCD screen.
- Languages are selectable from Chinese, English and Japanese.
- Storage of molding conditions: 120 conditions can be stored in internal memory and 1,000 conditions stored in external USB memory.

由于有坚固的锁模装置,实现了高速循环成形。

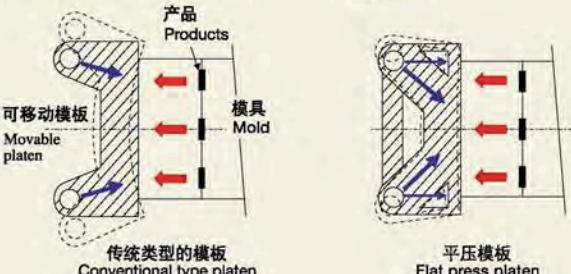
The robust clamping unit ensures fast-cycle molding

## 通过采用平压模板构造

Flat Press Platens Mechanism

- 通过采用平压模板(Flat Press Platens)构造最大限度地减少成形品壁厚不均匀现象。
- The flat press platen structure enables minimizing of wall-thickness fluctuation of molded products.

由于模板中心变形而增加了中心产品的重量  
The weight of the product processed in the central section of mold increases due to the deformation of platen in the center.



- 考虑到盘面的载重均匀分布,对机盘整体设计为箱体构造,以达到彻底轻量化,高刚性的目的。

- This design has achieved weight savings together with high rigidity characteristics considering well balanced load distribution of the platen surface. This is accomplished by utilizing a box construction of each platen.



## 宽幅度的模板

Wide platen

- 横向(H)导杆间隔扩大到本公司旧系列机器的上1个等级的尺寸,因而可以安装宽幅的模具。

- The horizontal tie bar distances are extended further than conventional machines to allow for wider molds.



## 适应于顶针强制拉回模具

Ejector Tie-down Accessibility to Clamp area has been opened up

- 为了容易进行注塑机的顶杆和模具的顶针板连接工作,将顶出装置开口部放大。
- The opening is made larger to allow the ejector mechanism in the mold to be easily tied to the knockout plate on the machine.



## JSW独有的注塑控制

JSW's original injection control

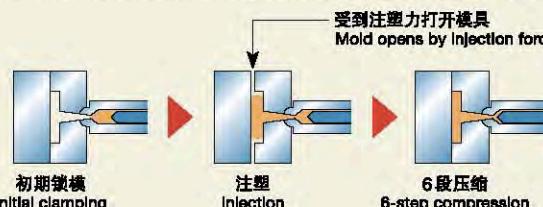
### 电动肘节方式注塑压缩成形(专利1744469)

Injection Compression Molding

- JSW电动肘节式注塑压缩成形功能以直压式注塑成形机之10倍以上的精度能够控制模具位置。

- The JSW Injection compression molding feature enables the mold position to be controlled to accuracies over 10 times that of direct-pressure molding.

### ■ A方式(A1~A6,A7<选购件>)/A-mode(A1-A6, A7 <option>)



### ■ B方式(B1·B3)/B-mode(B1 and B3)



### IWCS控制(Injection Weight and Cushion Stability)(专利3529771)

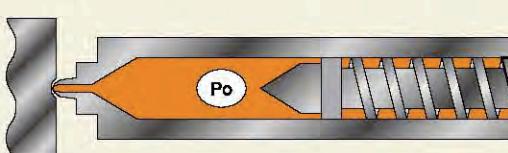
IWCS Control

为了每次稳定计量密度,装备有计量后使螺杆先端部贮存的熔化树脂密度再安定的控制机能。能够抑制产品总量与产量的偏差这是JSW独有的控制技术。

A patented control that stabilizes the density of the molten resin stored at the tip of the screw on every shot. This technology can minimize the variance in product weight.

计量完成后,为了使负载感应器检测出的树脂压力同设定值一样,通过回转伺服马达的运转,进行压力反馈控制,使计量密度再次稳定的控制方式。

This is the control method to re-stabilize the measured density of melted resin of each shot after weighing which is prepared at screw head section. This is the unique control technology of JSW that exerts great effect to correct unbalance between product mass and cushion.

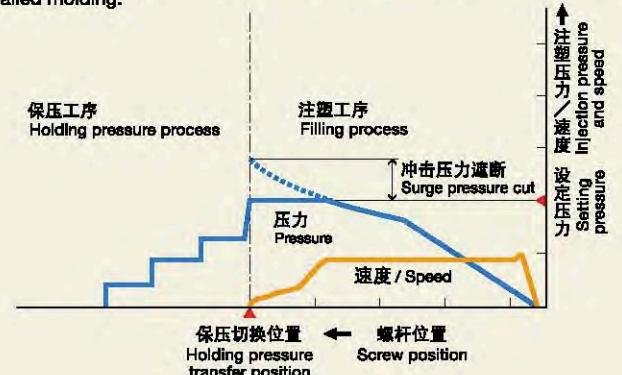


### 电动式注塑机的柔性高速低压伺服控制(专利1755568)

Electric-driven Soft Pack Servo Control

抑制在射胶工序中即将保压切换之前的峰值压力,以最适合的压力来进行充填,这是JSW独有的控制技术。在薄壁注塑中发挥了其防止过量充填的作用。

The JSW patented control technology enables filling under optimum pressure while suppressing pressure peaks before holding pressure transfer during the injection process. This will prevent over-packing in thin-walled molding.



## 广范围的注塑组件选择

A wide selection of injection modules and screws

注塑装置的型号 Unit type	螺杆直径 Screw dia. (mm)	最大注塑压力 Max. injection pressure MPa (kgf/cm <sup>2</sup> )	最大注塑速度 Max. injection speed (mm/s)
J55ADC	30H	270 (2750) 223 (2270)	350
J110ADC	60H	270 (2750) 215 (2190)	350
J140ADC	110H	270 (2750) 225 (2290)	350
J180ADC	180H	260 (2650) 199 (2020)	350
	300H	250 (2550) 189 (1920)	240

## 标准装备一览表 / Standard equipment list

装置项目 / Item	
KC 喷嘴(180H以下的注塑装置)/Open type KC Nozzle (on or below 180H)	
开放式喷嘴(芯型)/SVO open nozzle (Tip type)	
N2000F 筒/N2000F barrel	备注1 (Note 1)
耐腐蚀·耐磨损螺杆(180H以下的注塑装置) Corrosion and abrasion-resistant screw (Injection units up to 180H)	
镀铬螺杆(300H的注塑装置)/Cr-plated screw (Injection unit 300H)	
螺杆倒塑/Screw pull-back	
清洗护盖(带限位开关)/Purge cover (with a limit switch)	
注塑装置旋转装置(带限位开关)/Injection unit swiveling device (with a limit switch)	
螺杆冷态启动防止功能/Screw cold start prevention	
成形·保温切换功能/Molding/Pause temperature select	
自动清洗筒功能/Auto purging circuit	
喷嘴后退动作选择/Nozzle retract select	
螺杆后退动作选择/Pull-back select	
润滑脂自动给脂/Auto grease lubrication	
注塑·计量程序控制 Injection/Metering programmed control	注塑·保压:1~6段(可变) Injection/Holding pressure:1 to 6 steps (Variable) 计量·背压:1~3段(可变) Metering/Back pressure:1 to 3 steps (Variable)
根据检测的速度进行保压切换(VS控制) Holding pressure transfer by speed detection (VS control)	
缸筒温度画面设定/Barrel temperature remote setting	
筒温度控制(SSR)/Barrel temperature control (SSR)	
柔性高速低压伺服控制/Soft Pack Servo control	
IWCS 控制/IWCS control	
反转密封控制/Reverse seal control	
保压控制选择/Holding pressure control select	
同期升温控制/Synchronous temperature rise control	
无供脂肘节衬套/Grease-free toggle bushing	
润滑脂自动供脂/Auto grease lubrication	
高性能模板支承/High-performance platen support	
宽幅的模板/Wider platens	
平压模板构造/Flat press platen mechanism	
导杆预张机构/Tie bar pre-tensioning mechanism	
开模闭模·推顶程序控制 Mold open/close and ejection programmed control	开模闭模:4段(固定) Mold open/close:4 steps (Fixed) 推顶:1~3段(可变) Ejection: 1 to 3 steps (Variable)
电动式模厚控制装置/Electric-driven mold thickness adjusting device	
模厚画面设定/Mold thickness remote setting	
自动锁模力设定/Auto clamping force setting	
肘节式注射压缩功能 Toggle type injection compression function	A方式/A-mode B方式/B-mode 压缩段数:1~6段 Compression:1 to 6 steps
模具保护功能/Mold protection function	
锁模安全装置(电动式、机械式)/Clamping safety device (Electrical/Mechanical)	
取出机安装孔加工/Robot mounting holes	

- 备注1. 注塑组件KC或A型式中的一套作为标准装备。  
 备注2. 外部储存器能够储存1,000付模具的成形参数。外部储存器可以使用电脑市场上普及的USB Memory。  
 备注3. 打印机本体以及印刷机连接用电缆是选购件。  
 备注4. 不包括温度传感器以及接线。  
 备注5. 以下监视项目中能够选择最多8个项目的表示以及报警。  
 ①循环时间 ②注塑时间 ③计量时间 ④残余量位置 ⑤保压完成位置  
 ⑥注塑压力 ⑦保压切换压力 ⑧背压力 ⑨计量完成位置 ⑩注塑开始位置  
 ⑪保压切换位置 ⑫开模时间 ⑬闭模时间 ⑭计量转矩 ⑮保压切换速度  
 ⑯模具内压<option>  
 备注6. 显示点检的时期与项目。

●为了改良本机的外观以及规格,有可能没有通知而进行设计变更。●禁止擅自转载此样本。●此样本中登载的照片包括选购件。

## 选购件一览表 / Options list

装置项目 / Item
加长喷嘴/Long nozzle
耐腐蚀·耐磨损螺杆(300H的注塑装置) Corrosion and abrasion-resistant screw (Injection unit 300H)
型芯装置(气压式、液压式) Core pull devices (Pneumatic type and Hydraulic type)
螺钉拔出电机回路/Unscrewing motor circuit
顶针浇口切断装置/Ejector gate cutting device
浇口阀门装置(气压式) Valve gate device (Pneumatic type)
简易模具夹紧具/Mold clammer

- (Note)  
 1. For the hydraulic type, a separate hydraulic unit is needed.  
 2. The LINK10 has actual data collection, molding condition control and remote control functions.  
 3. The NET100 has quality control and production control functions in addition to the functions that the LINK10 has.

备注1. 液压式还需另外液压装置。  
 备注2. 在LINK10中,有测定值数据收集功能、注塑条件管理功能以及遥控管理功能。  
 备注3. NET100中还增加了LINK10功能中的质量管理功能以及生产管理功能。



## 周边设施参数总览表 / Utilities

### ■ 总电气容量 / Total Power Capacity

机型 Machine Model	J55ADC		J110ADC		J140ADC		J180ADC	
	30H	60H	110H	180H	110H	180H	180H	300H
总电气容量 Total Power Capacity (kVA)	6.2	9.1	14.3	17.0	14.6	17.4	15.3	19.9

(注) 因特殊的非标准配置, 预备用插座容量的不同会有变化。  
 Note: Total power capacity does not include external outlets.

### ■ 冷却水容量(概略) / Cooling Water Capacity for Barrel Temperature Control

注塑机的型号 Injection Unit Type	30H	60H	110H	180H	300H
	所需冷却水量 Cooling Water Capacity for Barrel Temperature Control (m³/h)	0.3			
	0.2				0.4

(注) 不含模具温度调节器所需的水量。  
 Note: The left figures do not include the required quantity of water for the mold temperature controller.

●The appearance and the specifications of the machine may be altered for improvement without notice. ●Unauthorized reprint from this leaflet is prohibited. ●The photographs in this leaflet include options.

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