

# Series 10-ASD

Dual Speed Controller with One-touch Fitting

RoHS

## How to Order

**10 - ASD 3 30 F - 01 - 06 S -**  

**Clean series**

**Body size**

2	M5 standard
3	1/8 standard
4	1/4 standard
5	3/8 standard
6	1/2 standard

**Type**

3	Universal
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**With One-touch fittings**

**Lock nut option**

Nil	Hexagon lock nut
J	Round lock nut

**With sealant**

**Applicable tubing O.D. (Note)**


**Metric size**

04	ø4
06	ø6
08	ø8
10	ø10
12	ø12

Note) Refer to the following Model list for selection of applicable tubing O.D.

**Port size**

M5	M5 x 0.8
01	R1/8
02	R1/4
03	R3/8
04	R1/2



## Model

Model	Port size	Applicable tubing O.D.				
		Metric size				
		ø4	ø6	ø8	ø10	ø12
10-ASD230F-M5	M5 x 0.8	●	●			
10-ASD330F-01	R1/8		●	●		
10-ASD430F-02	R1/4		●	●	●	
10-ASD530F-02	R1/4		●	●	●	●
10-ASD530F-03	R3/8		●	●	●	●
10-ASD630F-04	R1/2				●	●

### Specifications

<b>Proof pressure</b>	1.5 MPa
<b>Max. operating pressure</b>	1 MPa
<b>Min. operating pressure</b>	0.1 MPa
<b>Ambient and fluid temperature</b>	-5 to 60°C (No freezing)
<b>Applicable tubing material</b>	Polyurethane <sup>Note 1)</sup>
<b>Option</b>	Round lock nut
<b>Grease</b>	Fluorine grease
<b>Cleanliness class (ISO class)</b>	Class 5

Note 1) The maximum operating pressure for polyurethane (at 20°C) is 0.8 MPa.  
(Refer to the **WEB catalog** for details.)

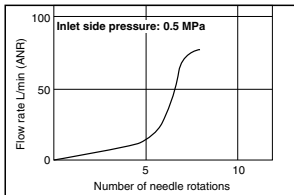
### Flow Rate and Sonic Conductance

	Model	10-ASD230F	10-ASD330F	10-ASD430F		10-ASD530F			10-ASD630F	
<b>Tubing O.D.</b>	Metric size	ø4, ø6	ø6, ø8	ø6	ø8, ø10	ø6	ø8	ø10, ø12	ø10	ø12
<b>Controlled flow</b>	Flow rate L/min (ANR)	75	175	295	350	500	600	700	1200	1300
<b>Free flow</b>	Sonic conductance dm <sup>3</sup> /(s·bar)	0.21	0.49	0.82	0.97	1.4	1.7	1.9	3.3	3.6
<b>Critical pressure ratio</b>	Controlled flow	0.25	0.2	0.2		0.2			0.2	
	Free flow	0.3	0.15	0.15		0.15			0.15	

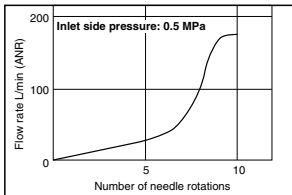
Note) Supply pressure: 0.5 MPa, Temperature: 20°C.

### Needle Valve / Flow Rate Characteristics

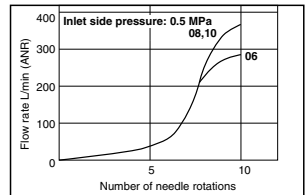
**10-ASD230F**



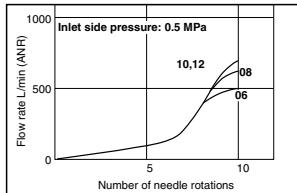
**10-ASD330F**



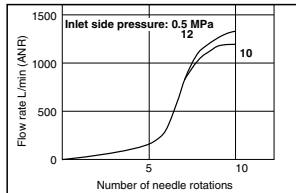
**10-ASD430F**



**10-ASD530F**



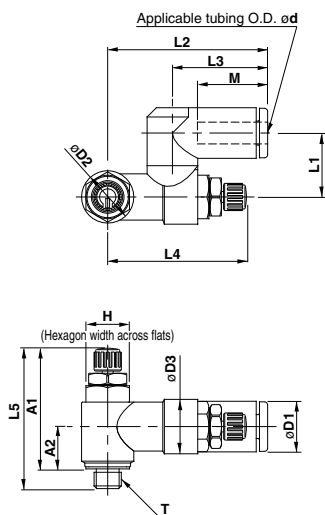
**10-ASD630F**



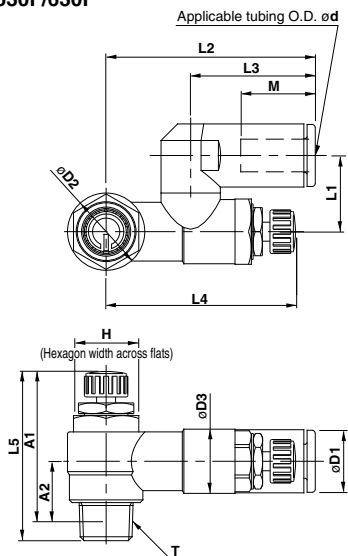
Directional Control Valves  
 Air Cylinders  
 Rotary Actuators  
 Air Grippers  
 Air Preparation Equipment  
 Modular F. R.  
 Pressure Control Equipment  
 Fittings & Tubing  
 Flow Control Equipment  
 Pressure Switches/ Pressure Sensors

**Dimensions**

**10-ASD230F**



**10-ASD330F/430F**  
**10-ASD530F/630F**



Model	d	T	H	D1	D2	D3	L1	L2	L3	L4		L5		A1 *		A2 †	M	Weight (g)
										MAX.	MIN.	MAX.	MIN.	MAX.	MIN.			
10-ASD230F-M5-04	4	M5 x 0.8	8	9.3	9.6	10	11.7	29.4	17.5	28.3	25.5	28.6	25.8	25	22.2	7.8	12.7	12
10-ASD230F-M5-06	6			11.6				20.6	13									
10-ASD330F-01-06S	6	R1/8	12	11.6	14.2	11.8	14	38.5	22.9	39.6	34.6	36.1	31.1	32.1	27.1	10.6	13.5	29
10-ASD330F-01-08S	8			15.2				28.2	31									
10-ASD430F-02-06S	6	R1/4	17	12.8	18.5	15	18	43.5	25.2	41.7	36.7	40.4	35.4	34.4	29.4	11	17	53
10-ASD430F-02-08S	8			15.2				28.2	29.4									
10-ASD430F-02-10S	10	R1/4	17	18.5	18.5	15	19.7	49.3	31	46.9	41.9	48.8	43.8	42.8	37.8	15.4	21	58
10-ASD530F-02-06S	6			20.3				25.2	27									
10-ASD530F-02-08S	8	R1/4	17	15.2	18.5	15	20.3	51.3	28.2	46.9	41.9	48.8	43.8	42.8	37.8	15.4	17	74
10-ASD530F-02-10S	10			18.5				32.6	34									
10-ASD530F-02-12S	12	R1/4	17	20.9	18.5	15	23.1	55.9	34.4	46.9	41.9	48.8	43.8	42.8	37.8	15.4	22	83
10-ASD530F-03-06S	6			12.8				25.2	27									
10-ASD530F-03-08S	8	R3/8	19	15.2	23	19.8	20.3	51.3	28.2	46.9	41.9	46.5	41.5	40	35	14	18.5	93
10-ASD530F-03-10S	10			18.5				32.6	34									
10-ASD530F-03-12S	12	R3/8	19	20.9	18.5	15	23.1	55.9	34.4	46.9	41.9	46.5	41.5	40	35	14	21	98
10-ASD630F-04-10S	10			18.5				32.6	34									
10-ASD630F-04-12S	12	R1/2	24	20.9	28.6	26.5	25.9	64.3	32.6	64.8	57.3	57.6	50.1	49.6	42.1	18.6	21	177
10-ASD630F-04-12S	12			20.9				34.4	34									

\* Reference dimensions of after M5 x 0.8, R thread being screwed in.



# Series ASD Specific Product Precautions

Be sure to read this before handling. Refer to page 1382 for Safety Instructions and pages 1305 to 1308 for Flow Control Equipment Precautions.

## Design / Selection

### ⚠ Caution

#### 1. Single acting cylinder

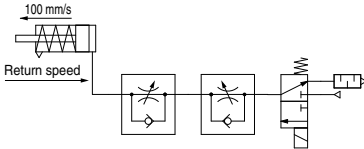
When controlling a single acting cylinder, the cylinder's return speed will differ depending on the operating conditions. Operate referring to the maximum return speed shown in the table below.

Speed Controller	Cylinder	Solenoid valve	Tubing	Silencer	Maximum return speed (mm/s)		
					100	200	300
ASD230F	CJ2	SYJ500	TU0604 1m	AN110-01			
ASD330F	CM2	SYJ700	TU0604 1m	AN110-01			

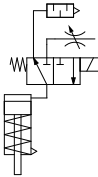
\* Values at 0.5 MPa and 20°C.

<Operating conditions>

- Cylinder extension speed: 100 mm/s
- Meter-out needle fully open



(Reference) Recommended circuit for high return speed  
When low extension speed and high return speed are desired, the following circuit using 3-port is recommended.



Note) Use the AS-F series with -X214 for the throttle valve.

Directional Control Valves

Air Cylinders

Rotary Actuators

Air Grippers

Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

Pressure Switches/ Pressure Sensors