

# DP-100-D, 100F-D

**RED MAN**<sup>TM</sup>  
ULTRA-HIGH PERFORMANCE SOLENOID

Pilot type	Direct type	Piston	Diaphragm
Normally closed	Normally opened	AC coil	DC coil
Stainless steel	110 V / 220 V	Explosion-proof	JWWA
Leak 0			

## ■Features

1. DC voltage piston type solenoid valve.
2. Horizontal and vertical installation is available.



DP-100-D



DP-100F-D

Stainless steel	DC coil
	Normally closed
Screwed type	DP-100-D
Flanged type	DP-100F-D

## ■Specifications

Model	DC coil	DP-100-D	DP-100F-D
Nominal size		10A-50A	15A-65A
Structure		Pilot-operated piston type	
Application		Steam, Air, Cold and hot water, N <sub>2</sub> gas, CO <sub>2</sub> gas (dry), Ar gas, Oil (20 cSt or less)	
Working pressure		0-1.0 MPa (unusable under vacuum)	
Min. differential pressure		0 MPa (0.03 MPa or more is required for vertical installation)	
Allowable valve seat leakage		50 mL/min under standard conditions (at air pressure of 0.6 MPa)	
Temperature range		5-180°C (no freeze condition)	
Ambient temperature		5-60°C (no freeze condition)	
Installation posture		Vertical or horizontal installation (within 90 degrees from upward position of the coil)	
Material	Body	Stainless steel (SCS14A)	
	Piston	Stainless steel (SCS14A)	
	Valve disc	PTFE	
Connection		JIS Rc screwed	JIS 10K FF flanged

11

Solenoid Valve/Motor Valve

■ Specifications of Coil

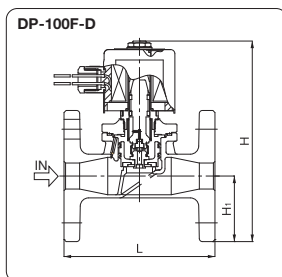
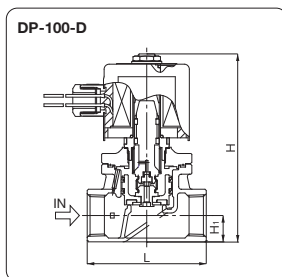
Rated voltage	DC 24 V	
Nominal size	10-25A	32-65A
Rated current	1.34 A	1.14 A
Allowable fluctuation	Rated voltage -5% to +10%	
Insulation class	Insulation class H	
Protective structure	Dust tight, Splash proof	
Ingress protection code	IP64 (JIS C0920)	
Insulation resistance	50 MΩ and more / 500 V megger	
Withstand voltage test	1500 V/min	

\* Available with a terminal box.

■ Dimensions (mm) and Weights (kg)

· DP-100-D

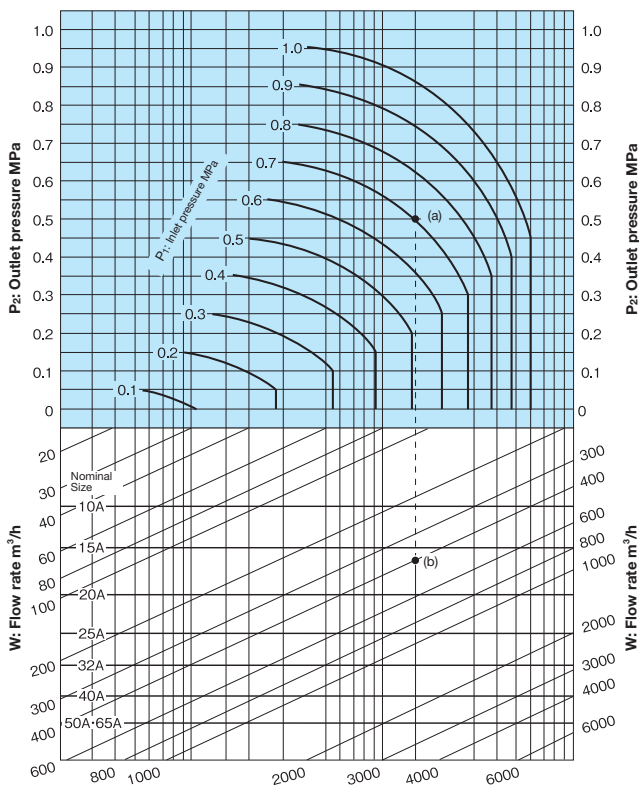
Nominal size	d	L	H <sub>1</sub>	H	Weight
10A	Rc 3/8	70	14.5	143	2.2
15A	Rc 1/2	70	14.5	143	2.2
20A	Rc 3/4	80	17.5	147	2.3
25A	Rc 1	95	21.0	151	2.7
32A	Rc 1-1/4	110	26.0	194	4.3
40A	Rc 1-1/2	120	29.5	200	5.2
50A	Rc 2	140	36.5	209	6.8



· DP-100F-D

Nominal size	d	L	H <sub>1</sub>	H	Weight
15A	15	120	47.5	177	3.5
20A	20	130	50.0	180	4.0
25A	25	145	62.5	193	5.3
32A	32	160	67.5	235	8.1
40A	40	170	70.0	241	9.2
50A	50	195	77.5	250	11.7
65A	50	198	87.5	260	13.5

## Nominal Size Selection Chart (For Steam)



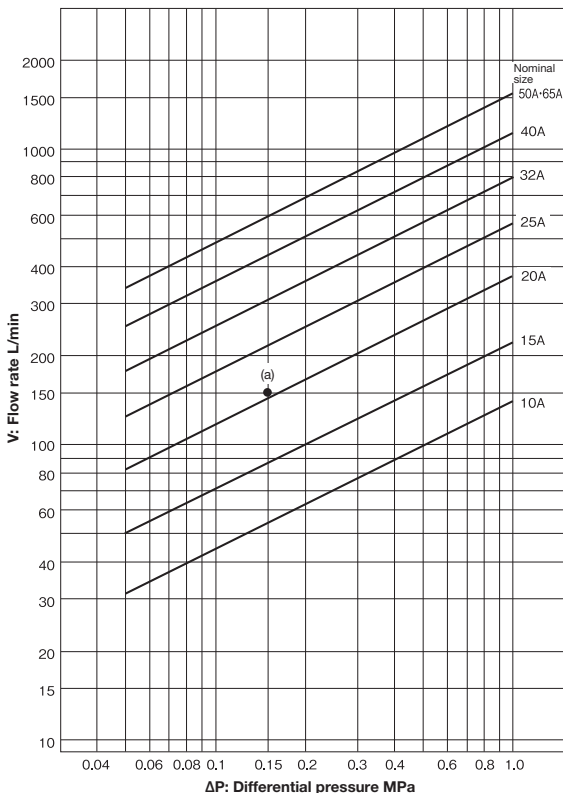
### How to use the chart

When selecting the nominal size of a solenoid valve whose inlet pressure ( $P_1$ ), outlet pressure ( $P_2$ ), and steam (saturated steam) flow rate ( $W$ ) are 0.7 MPa, 0.5 MPa, and 400 kg/h, respectively, first find intersection point (a) of  $P_1 = 0.7$  MPa and  $P_2 = 0.5$  MPa.

Trace down vertically from this intersection point (a) to find intersection point (b) with  $W = 400$  kg/h. Since this intersection point (b) lies between nominal sizes 15A and 20A, select the larger one, 20A.

\* Please refer to P.11-9 for Cv value and calculation formula.

## Nominal Size Selection Chart (For Water)

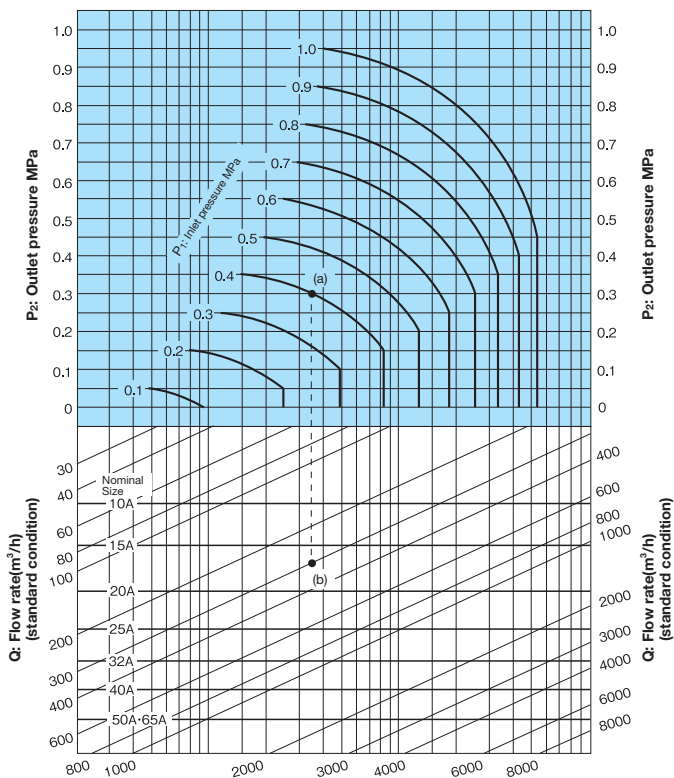


### How to use the chart

When selecting the nominal size of a solenoid valve whose inlet pressure ( $P_1$ ), outlet pressure ( $P_2$ ), and flow rate ( $V$ ) are 0.5 MPa, 0.35 MPa, and 150 L/min, respectively, first find intersection point (a) of the differential pressure before and after the valve [ $\Delta P = 0.5 - 0.35 = 0.15$  MPa] and  $V = 150$  L/min. Since this intersection point (a) lies between nominal sizes 20A and 25A, select the larger one, 25A.

\* Please refer to P.11-9 for Cv value and calculation formula.

## Nominal Size Selection Chart (For Air)



### How to use the chart

When selecting the nominal size of a solenoid valve whose inlet pressure ( $P_1$ ), outlet pressure ( $P_2$ ), and air (20°C) flow rate ( $Q$ ) are 0.4 MPa, 0.3 MPa, and 300  $m^3/h$  (standard condition), respectively, first find intersection point (a) of  $P_1 = 0.4$  MPa and  $P_2 = 0.3$  MPa. Trace down vertically from this intersection point (a) to find intersection point (b) with  $Q = 300$   $m^3/h$  (standard condition). Since this intersection point (b) lies between nominal sizes 15A and 20A, select the larger one, 20A.

\* Please refer to P.11-9 for Cv value and calculation formula.