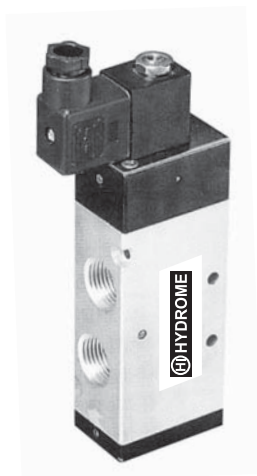


# AIR SOLENOID VALVE, AIR VALVE

## 5/2 WAY AND 5/3 WAY 100 SERIES



## HOW TO ORDER

**4V - 1 10 - 06 - AC110V**

100 SERIES











SIZE OF PORT:  
04:M5\*0.8  
06:1/8"










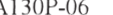
STANDARD VOLTAGE  
DC12V DC24V  
AC110V AC220V

VALVE TYPE:  
10 : Single solenoid 5/2 way  
20 : Double solenoid 5/2 way  
30C : Double solenoid 5/3 way closed center  
30E : Double solenoid 5/3 way exhaust center  
30P : Double solenoid 5/3 way pressure center

4V : 5 Way solenoid valve  
4A : 5 way air valve

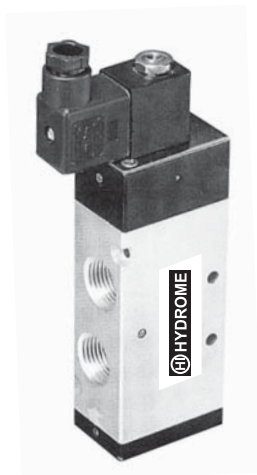
## SPECIFICATIONS

Solenoid	Single solenoid	Double solenoid	Double solenoid	Double solenoid	Double solenoid
Model	4V110-04	4V120-04	4V130C-04	4V130E-04	4V130P-04
					
	4A110-04	4A120-04	4A130C-04	4A130E-04	4A130P-04
					
Media	Air				
Operating method	Internally piloted				
Valve type	2 Positions 5 Ports		3 Positions 5 Ports		
Effective sectional area   mm <sup>2</sup> (CV)	10 (0.56)		9 (0.5)		
Port size	In = Out = Exhaust = M5*0.8				
Lubrication	Not required				
Service pressure range       kg/cm <sup>2</sup>	1.7 ~ 7.0				
Service temperature range   ℃	5 ~ 50				
Pressure resistance         kg/cm <sup>2</sup>	10.5				
Voltage change	± 10%				
Power consumption	AC : 1.3VA   DC : 1.2W				
Insulation	F Class				
Maximum frequency       cycle/sec	5				
Min. activating time       sec	0.05				

Solenoid	Single solenoid	Double solenoid	Double solenoid	Double solenoid	Double solenoid
Model	4V110-06	4V120-06	4V130C-06	4V130E-06	4V130P-06
					
	4A110-06	4A120-06	4A130C-06	4A130E-06	4A130P-06
					
Effective sectional area    mm <sup>2</sup> (CV)	12 (0.67)		9 (0.5)		
Port size	In = Out = Exhaust = 1/8"				

# AIR SOLENOID VALVE, AIR VALVE

## 5/2 WAY AND 5/3 WAY 200 SERIES



## HOW TO ORDER

**4V - 2 10 - 08 - AC110V**

200 SERIES











SIZE OF PORT:  
06:1/8"  
08:1/4"











STANDARD VOLTAGE  
DC12V DC24V  
AC110V AC220V

VALVE TYPE:  
10 : Single solenoid 5/2 way  
20 : Double solenoid 5/2 way  
30C : Double solenoid 5/3 way closed center  
30E : Double solenoid 5/3 way exhaust center  
30P : Double solenoid 5/3 way pressure center

4V : 5 Way solenoid valve  
4A : 5 way air valve

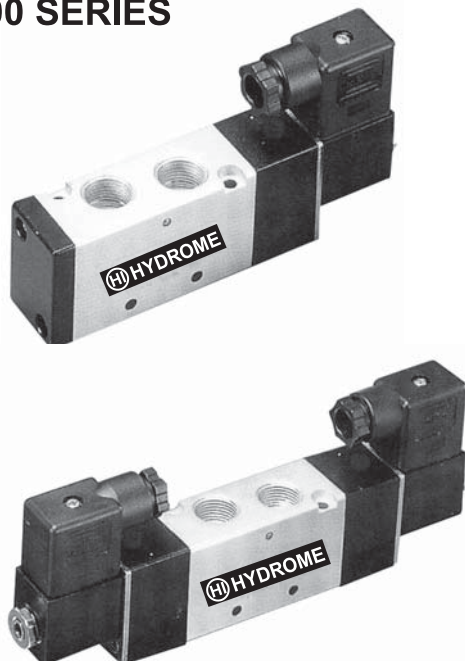
## SPECIFICATIONS

Solenoid	Single solenoid	Double solenoid	Double solenoid	Double solenoid	Double solenoid
Model	4V210-06	4V220-06	4V230C-06	4V230E-06	4V230P-06
					
	4A210-06	4A220-06	4A230C-06	4A230E-06	4A230P-06
					
Media	Air				
Operating method	Internally piloted				
Valve type	2 Positions 5 Ports		3 Positions 5 Ports		
Effective sectional area   mm <sup>2</sup> (CV)	14 (0.78)		12 (0.67)		
Port size	In = Out = Exhaust = 1/8"				
Lubrication	Not required				
Service pressure range       kg/cm <sup>2</sup>	1.7 ~ 7.0				
Service temperature range   ℃	5 ~ 50				
Pressure resistance         kg/cm <sup>2</sup>	10.5				
Voltage change	± 10%				
Power consumption	AC : 4.5VA   DC : 3W				
Insulation	F Class				
Maximum frequency       cycle/sec	5				
Min. activating time       sec	0.05				

Solenoid	Single solenoid	Double solenoid	Double solenoid	Double solenoid	Double solenoid
Model	4V210-08	4V220-08	4V230C-08	4V230E-08	4V230P-08
					
	4A210-08	4A220-08	4A230C-08	4A230E-08	4A230P-08
					
Effective sectional area   mm <sup>2</sup> (CV)	16 (0.89)		12 (0.67)		
Port size	In = Out = 1/4”   Exhaust = 1/8”				

# AIR SOLENOID VALVE, AIR VALVE

## 5/2 WAY AND 5/3 WAY 300 SERIES



## HOW TO ORDER

**4V - 3 10 - 10 - AC110V**

300 SERIES


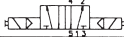
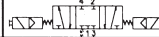
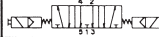






SIZE OF PORT:  
08 : 1/4"  
10 : 3/8"

STANDARD VOLTAGE  
DC12V DC24V  
AC110V AC220V

VALVE TYPE:  
10 : Single solenoid 5/2 way  
20 : Double solenoid 5/2 way  
30C : Double solenoid 5/3 way closed center  
30E : Double solenoid 5/3 way exhaust center  
30P : Double solenoid 5/3 way pressure center

4V : 5 Way solenoid valve  
4A : 5 way air valve

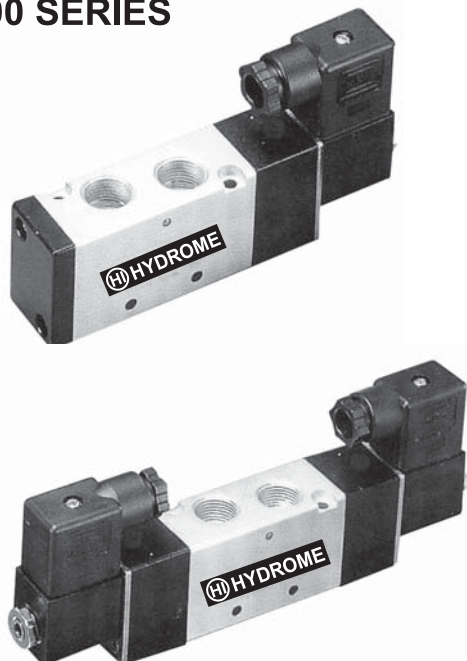
## SPECIFICATIONS

Solenoid	Single solenoid	Double solenoid	Double solenoid	Double solenoid	Double solenoid
Model	4V310-08	4V320-08	4V330C-08	4V330E-08	4V330P-08
					
	4A310-08	4A320-08	4A330C-08	4A330E-08	4A330P-08
					
Media	Air				
Operating method	Internally piloted				
Valve type	2 Positions 5 Ports		3 Positions 5 Ports		
Effective sectional area   mm <sup>2</sup> (CV)	30 (1.68)		18 (1)		
Port size	In = Out = Exhaust = 1/4”				
Lubrication	Not required				
Service pressure range       kg/cm <sup>2</sup>	1.7 ~ 7.0				
Service temperature range    °C	5 ~ 50				
Pressure resistance           kg/cm <sup>2</sup>	10.5				
Voltage change	± 10%				
Power consumption	AC : 4.5VA   DC : 3W				
Insulation	F Class				
Maximum frequency       cycle/sec	4				
Min. activating time        sec	0.05				

Solenoid	Single solenoid	Double solenoid	Double solenoid	Double solenoid	Double solenoid
Model	4V310-10	4V320-10	4V330C-10	4V330E-10	4V330P-10
	4A310-10	4A320-10	4A330C-10	4A330E-10	4A330P-10
Effective sectional area    mm <sup>2</sup> (CV)	25 (1.4)		18 (1)		
Port size	In = Out = 3/8”    Exhaust = 1/4”				

# AIR SOLENOID VALVE, AIR VALVE

## 5/2 WAY AND 5/3 WAY 400 SERIES



## HOW TO ORDER

**4V - 4 10 - 15 - AC110V**

400 SERIES



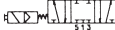







SIZE OF PORT:  
15 : 1/2"

STANDARD VOLTAGE  
DC12V DC24V  
AC110V AC220V

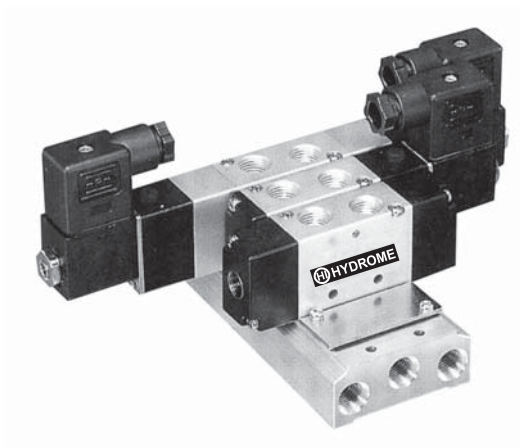
VALVE TYPE:  
10 : Single solenoid 5/2 way  
20 : Double solenoid 5/2 way  
30C : Double solenoid 5/3 way closed center  
30E : Double solenoid 5/3 way exhaust center  
30P : Double solenoid 5/3 way pressure center

4V : 5 Way solenoid valve  
4A : 5 way air valve

## SPECIFICATIONS

Solenoid	Single solenoid	Double solenoid	Double solenoid	Double solenoid	Double solenoid
Model	4V410-15	4V420-15	4V430C-15	4V430E-15	4V430P-15
					
	4A410-15	4A420-15	4A430C-15	4A430E-15	4A430P-15
					
Media	Air				
Operating method	Internally piloted				
Valve type	2 Positions 5 Ports		3 Positions 5 Ports		
Effective sectional area   mm <sup>2</sup> (CV)	50 (2.79)		30 (1.68)		
Port size	In = Out = Exhaust = 1/2”				
Lubrication	Not required				
Service pressure range   kg/cm <sup>2</sup>	1.7 ~ 7.0				
Service temperature range   ℃	5 ~ 50				
Pressure resistance   kg/cm <sup>2</sup>	10.5				
Voltage change	± 10%				
Power consumption	AC : 4.5VA   DC : 3W				
Insulation	F Class				
Maximum frequency   cycle/sec	4				
Min. activating time   sec	0.05				

# MANIFOLD FOR 100-400 SERIES



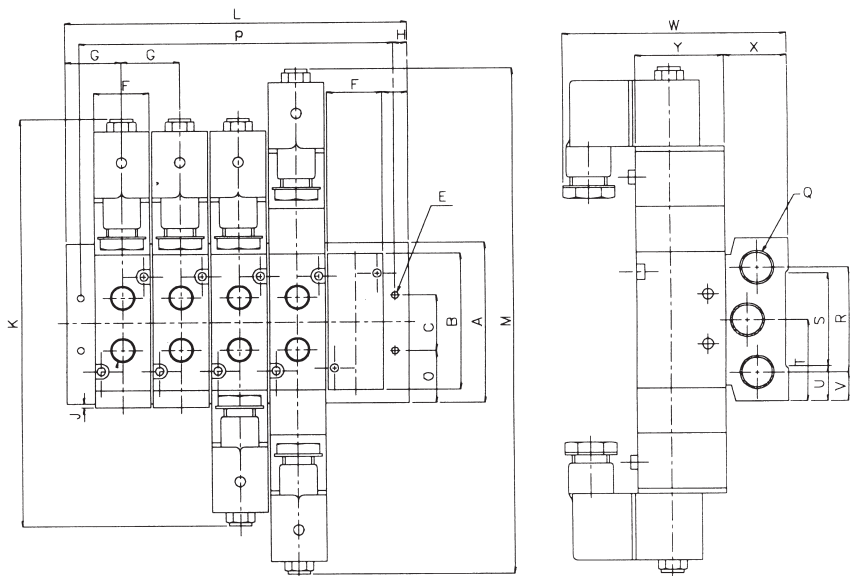
## HOW TO ORDER

**100M** — **※** **F**

NUMBER OF VALVE  
1-12 : 1-12 VALVE

100M : Manifold for 100 series  
200M : Manifold for 200 series  
300M : Manifold for 300 series  
400M : Manifold for 400 series

## DIMENSIONS



SYMBOL	A	B	C	E	F	G	H	I	J	K	L											
											1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F
100M □ F	58	43	20	18	18	19	5	10	1	138	38	57	76	95	114	133	152	171	190	209	228	247
200M □ F	60	50	21	22	22	23	6	11.5	2	115	46	69	92	115	138	161	184	207	230	253	276	299
300M □ F	75	60	26	27	27	28	6	14.5	3	225	54	82	110	138	166	194	222	250	278	306	334	362
400M □ F	100	95	32	34	34	35	7	18	3	224	63	98	133	168	203	238	273	308	—	—	—	—

SYMBOL	M	P												Q	R	S	T	U	V	W	X	Y
		1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F									
100M □ F	153	28	47	66	85	104	123	142	161	180	199	218	237	1/4"	40	22	29	9	9	79.5	25	27
200M □ F	167	34	57	80	103	126	149	172	195	218	241	264	287	1/4"	42	40	30	10	9	94	25	35
300M □ F	185	42	70	98	126	154	182	210	238	266	294	322	350	3/8"	52	53	32.5	11	12	101	31	40
400M □ F	224	49	84	119	154	189	224	259	294	—	—	—	—	1/2"	64	64	50	—	19	116	42	50



# AIR SOLENOID VALVE

## 3/2 WAY 3V SERIES



## HOW TO ORDER

**3V — 1 — 06 — AC110V**

3V : 3 Way solenoid valve

1 : ORIFICE SIZE:  
1-1.2mm

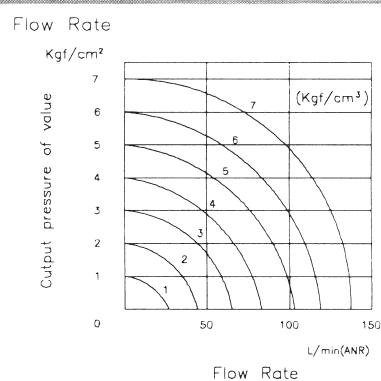
06 : SIZE OF PORT:  
06 : 1/8"

AC110V : STANDARD VOLTAGE\*  
DC12V DC24V  
AC110V AC220V

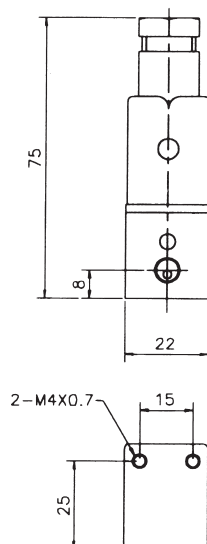
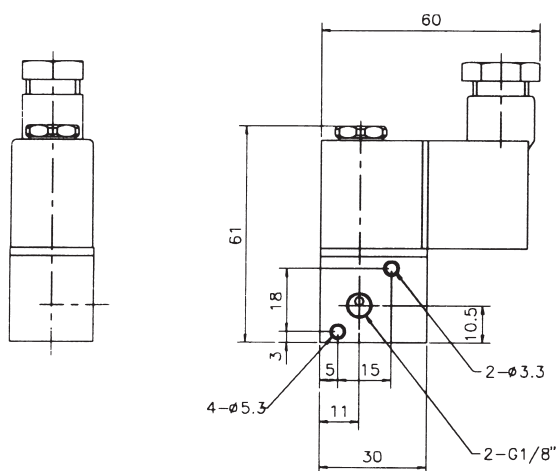
## SPECIFICATIONS

MODEL	3V1
Media	Air
Operating method	Direct acting
Function	Normally closed
Orifice size	mm 1.2
Port size	1/8"
Service pressure range	kg/cm <sup>2</sup> 0 ~ 10
Pressure resistance	kg/cm <sup>2</sup> 16
Service temperature range	°C -10 ~ 60
Voltage change	± 10%
Protection	IP00 / IP65
Power consumption	AC : 4.5VA DC : 3W
Insulation	F Class
Min. activating time	sec 0.05

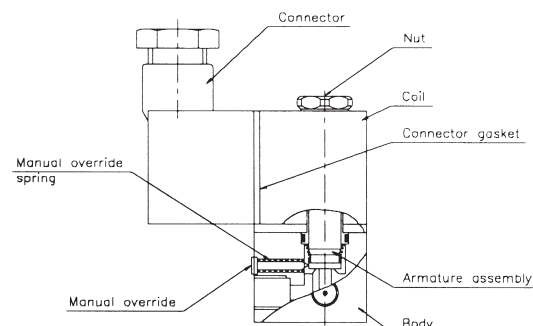
## 3 V1 FLOW CHARACTERISTICS



## DIMENSIONS



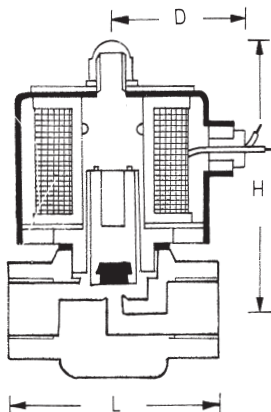
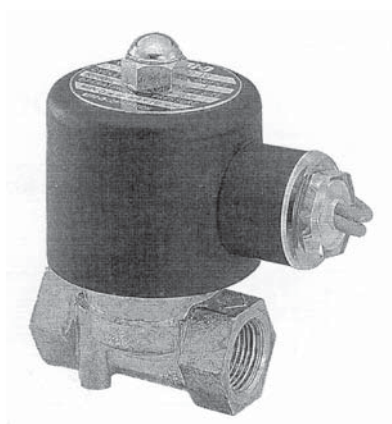
## INTERNAL STRUCTURE OF 3V1



# AIR, WATER, STEAM, OIL, GAS SOLENOID VALVE

## UD-SERIES

**MODEL: UD-6,8,10, UD-6H,8H,10H NORMALLY CLOSED**  
**FLUID: HOT WATER, WATER, AIR, OIL GAS & VACUUM.**



### MATERIAL

PARTS NAME	MATERIAL
Body	Forge Brass
Coil	Special Copper Wire
Disc	NBR O Ring
Fixed Steel	Special St. Steel
Tube	Special St. Steel
Spring	St. St. 304

### SPECIFICATION AND CHARACTER:

1. 2-WAY normally closed solenoid valve.
2. Type UD is normally closed, can direct operating without pressure. used for the fluid of Water, Air, Gas, Oil & Vacuum.
3. Standard voltage: AC 110V/220V (50/60 Hz).
4. Voltage is with  $\pm 10\%$  differential.
5. Simple size & easy assembly.
6. Other voltage of AC/DC available when required.
7. Installation: Mountable in any position without affecting operation.

### NOT FOR FLUID OF:

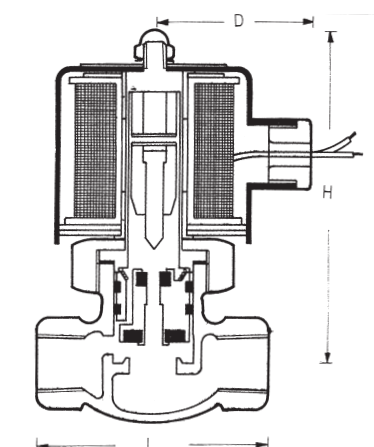
1. Liquid when heat, solid when cool.
2. Corrosive fluid.
3. Viscosity over 50 cst.
4. Temperature over 80°C of Centigrade: UD-6, UD-8 & UD-10.  
Temperature over 130°C of Centigrade: UD-6H, UD-8H & UD-10H.

### CAUTION:

1. Pipes must be washed neat and clean before fitted.
2. A Y-STRAINER has to be installed in the front of solenoid valve, that is best for long life.

## US-SERIES

**MODEL: US-15,20,25,35,40,50 NORMALLY CLOSED**  
**FLUID: STEAM, WATER & AIR**



### MATERIAL

PARTS NAME	MATERIAL
Body	Brass / Bronze
Bonnt/Nut	Brass / Bronze
Coil	Special Copper Wire
Piston	Special Copper with PTFE O Ring
Main Valve	PTFE+ 15% GF
Needle	Special St. Steel
Fixed Steel	Special St. Steel

### SPECIFICATION AND CHARACTER:

1. 2-WAY normally closed solenoid valve.
2. Type US withstand high temperature, best use for the fluid of STEAM, also for WATER & AIR.
3. Standard voltage: AC 110V/220V (50/60 Hz).
4. Voltage is with  $\pm 10\%$  differential.
5. Simple construction & easy assembly.
6. Other voltage of AC/DC available when required.
7. Installation: Mountable in level position only. (Prohibition in vertical position).

### NOT FOR FLUID OF:

1. Liquid when heat, solid when cool.
2. Corrosive fluid.
3. Viscosity over 20 cst.
4. Temperature over 185°C of Centigrade.

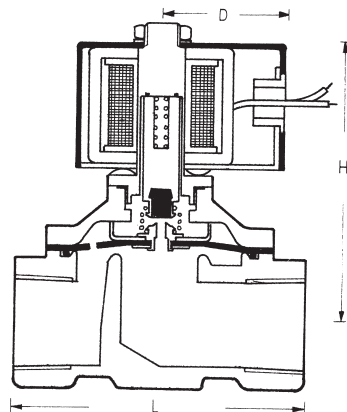
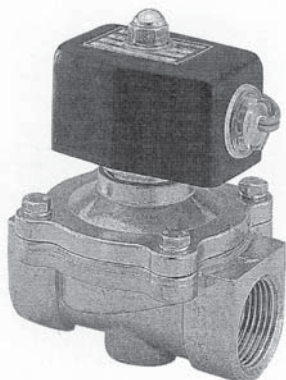
### CAUTION:

1. Pipes must be washed neat and clean before fitted.
2. A Y-STRAINER has to be installed in the front of solenoid valve, that is best for long life.

# AIR, WATER. STEAM, OIL, GAS SOLENOID VALVE

## UW-SERIES

**MODEL: UW-10,15,20,25,35,40,50 NORMALLY CLOSED**  
**FLUID: WATER, AIR, OIL, GAS & VACUUM.**



### MATERIAL

PARTS NAME	MATERIAL
Body	Forge Brass
Bonnt/Nut	Forge Brass
Coil	Special Copper Wire
Diaphragm	N.B.R.
Disc	N.B.R.
Spring	St. St. 304
Fixed Steel	Special St. Steel

### SPECIFICATION AND CHARACTER:

1. 2-WAY normally closed solenoid valve.
2. Type UW is normally closed, can direct operating without pressure.
3. For Fluid: Water, Air, Oil, Gas & Vacuum.
4. Standard voltage: AC 110V/220V (50/60 Hz).
5. Voltage is with  $\pm 10\%$  differential.
6. Other voltage of AC/DC available when required.
7. Small size, high flow, little electric power required.
8. Installation: Mountable in any position without affecting operation.

### NOT FOR FLUID OF:

1. Liquid when heat, solid when cool.
2. Corrosive fluid.
3. Viscosity over 20 cst.
4. Temperature over 80°C of Centigrade.

### CAUTION:

1. Pipes must be washed neat and clean before fitted.
2. A Y-STRAINER has to be installed in the front of solenoid valve, that is best for long life.

## REFERENCE

MODEL	CONNECTION PIPE SIZE	CV	ORIFICE mm	FLUID TEMP. °C	MAX. OPERATING PRESSURE DIFE. kgf/cm <sup>2</sup>						L mm	H mm	D mm	Weight kg
					HOT WATER	WATER	AIR	OIL	GAS	VACUUM				
UD-6	1/8"	0.23	2.5	-5°C	0-7	0-7	0-7	0-7	0-7	0-10 <sup>-6</sup> Torr	41	63	21	0.3
UD-8	1/4"	0.23	2.5	}	0-7	0-7	0-7	0-7	0-7	0-10 <sup>-6</sup> Torr	41	63	21	0.3
UD-10	3/8"	0.60	4		0-10	0-10	0-10	0-10	0-10	0-10 <sup>-6</sup> Torr	53	75	48	0.6
UD-6H	1/8"	0.18	1.2	-5°C	0-20	0-20	0-20	0-20	0-20	0-10 <sup>-6</sup> Torr	41	63	21	0.3
UD-8H	1/4"	0.18	1.2	}	0-20	0-20	0-20	0-20	0-20	0-10 <sup>-6</sup> Torr	41	63	21	0.3
UD-10H	3/8"	0.45	2.0		0-20	0-20	0-20	0-20	0-20	0-10 <sup>-6</sup> Torr	53	75	48	0.6
UW-10	3/8"	2.4	10	-5°C }	-	0-5	0-7	0-5	0-7	0-10 <sup>-4</sup> Torr	70	100	50	0.9
UW-15	1/2"	4.5	15		-	0-5	0-7	0-5	0-7	0-10 <sup>-4</sup> Torr	70	100	50	0.9
UW-20	3/4"	8.6	20		-	0-5	0-7	0-5	0-7	0-10 <sup>-4</sup> Torr	73	102	50	1.0
UW-25	1"	12	25		-	0-5	0-7	0-5	0-7	0-10 <sup>-4</sup> Torr	93	106	50	1.8
UW-35	1 1/4"	24	35		-	0-5	0-7	0-5	0-7	0-10 <sup>-3</sup> Torr	125	140	58	3.2
UW-40	1 1/2"	28	40		-	0-5	0-7	0-5	0-7	0-10 <sup>-3</sup> Torr	125	140	58	3.5
UW-50	2"	48	50		-	0-5	0-7	0-5	0-7	0-10 <sup>-3</sup> Torr	167	170	58	5.4
US-15	1/2"	4.0	17	-5°C }	0.5-15	0.5-15	0.5-15	-	-	-	82	120	58	1.7
US-20	3/4"	6.0	17		0.5-15	0.5-15	0.5-15	-	-	-	82	123	58	1.7
US-25	1"	12	22		0.5-15	0.5-15	0.5-15	-	-	-	91	130	58	2.0
US-35	1 1/4"	18	30		0.5-15	0.5-15	0.5-15	-	-	-	110	141	58	3.1
US-40	1 1/2"	22	32		0.5-15	0.5-15	0.5-15	-	-	-	111	144	58	3.3
US-50	2"	48	50		0.5-15	0.5-15	0.5-15	-	-	-	163	173	58	7.2