

### Certificate





**ISO 9001** 



CE



CSA







LITI-I SOLENOID VALVE



### **Products List**

|                 |             |                 | Operating               | Fluid Temp  |       |       | F     | luid |       |        |      |
|-----------------|-------------|-----------------|-------------------------|-------------|-------|-------|-------|------|-------|--------|------|
| Model           | Pipe Size   | Material        | Pressure<br>kgf / cm²   | ℃ .         | Steam | Water | Air   | Oil  | Gas   | Vacuum | Page |
| UD-6~8          | 1/8" ~ 1/4" | Brass           | 0-7                     | -5℃ ~ 80℃   |       | • • • | • • • | • •  | • •   | • •    | 5    |
| UG-6~8          |             |                 |                         |             |       |       |       |      |       |        |      |
| UD-10           | 3/8"        | Brass           | 0-10                    | -5℃ ~ 80℃   |       | • • • | • • • | • •  | • •   | • •    | 5    |
| UD-15           | 1/2"        | Brass           | 0-5                     | -5℃ ~ 80℃   |       | • • • | • • • | • •  | • •   | • •    | 5    |
| SUS-6           | 1/8" ~ 1/4" | #316            | 0-7                     | -5℃ ~ 185℃  |       |       |       |      |       |        | 6    |
| SUS-8           | 1/8 ~ 1/4   | #310            | 0-7                     | -50 ~ 1650  |       |       |       |      |       |        | 0    |
| SUS-10          | 3/8"        | #316            | 0-10                    | -5℃ ~ 185℃  | • • • | • • • | • • • | • •  |       |        | 6    |
| UPS             | 1/2" ~ 1"   | Brass           | 0.5-10                  | -5℃ ~ 185℃  | • • • | • • • | • • • | • •  |       |        | 9    |
| SUS#316         | 1/2" ~ 2"   | #316            | 0.5-10                  | -5℃ ~ 185℃  | • • • | • • • | • • • | • •  |       |        | 10   |
| บร              | 1/2" ~ 2"   | Bronze          | 0.5-15                  | -5℃ ~ 185℃  | • • • | • • • | • • • | • •  |       |        | 11   |
| USF<br>(Conn.)  | 1/2" ~ 2"   | Bronze          | 0.5-15                  | -5℃ ~ 185℃  | • • • | • • • | • •   | • •  |       |        | 11   |
| UW              | 3/8" ~ 1"   | Brass           | 0-7(Air)                | -5℃ ~ 80℃   |       |       |       |      |       |        | _    |
| UW-1            | 11/4" ~ 2"  | Bronze          | 0-5(Liquid)             | -50 ~ 600   |       |       |       |      |       |        | 7    |
| UWF             | 3/8" ~ 2"   | Brass           | 0 <b>-</b> 7(Air)       | -5℃ ~ 80℃   |       | • • • | • • • | • •  |       |        | 15   |
| (Conn.)         | 0/0 2       | Bronze          | 0-5(Liquid)             |             |       |       |       |      |       |        |      |
| SUW             | 1/2" ~ 1"   | #316            | 0-7(Air)                | -5℃ ~ 80℃   |       | • • • | • • • | • •  |       |        | 8    |
| SUW-1           | 11/4" ~ 2"  |                 | 0-5(Liquid)             |             |       |       |       |      |       |        |      |
| SUWF<br>(Conn.) | 1/2" ~ 2"   | #316            | 0-7(Air)<br>0-5(Liquid) | -5℃ ~ 80℃   |       | • • • | • • • | • •  |       |        | 15   |
| UWF             | 11/4" ~ 4"  | FC-20           | 0.2-8                   | -5℃ ~ 80℃   |       | • • • | • • • |      |       |        | 16   |
| USF             | 11/4" ~ 4"  | FC-20           | 0.5-10                  | -5℃ ~ 185℃  | • • • | • • • | • • • | • •  |       |        | 17   |
| UV              | 3/8" ~ 2"   | Brass<br>Bronze | 0-7                     | -5℃ ~ 80℃   |       | • •   | • •   |      | • • • | • • •  | 12   |
| UAW             | 1/2" ~ 2"   | Bronze          | 2-10                    | -5℃ ~ 80℃   |       | • • • | • • • |      |       |        | 12   |
| UA-8            | 1/4"        | _               | 0-7                     |             |       |       |       |      |       |        | 4.0  |
| UA-10           | 3/8"        | Brass           | 0-10                    | -5℃ ~ 80℃   |       | • • • | • • • |      |       | • •    | 13   |
| UAO             | 1/4" ~ 1/2" | Brass           | 0.5-15                  | -5℃ ~ 80℃   |       | • •   | • • • | •••  |       |        | 13   |
| UD              | 1/8"~1/4"   |                 | 0-7                     | <b>5</b> °0 |       |       |       |      |       |        | _    |
| (NO)            | 3/8"        | Brass           | 0-10                    | -5℃ ~ 80℃   |       | • • • | • • • | • •  | • •   | • •    | 5    |
| sus             | 1/8"~1/4"   | <b>#040</b>     | 0-7                     | F°0 00°0    |       | • • • |       |      |       |        |      |
| (NO)            | 3/8"        | #316            | 0-10                    | -5℃ ~ 80℃   |       |       |       |      |       |        | 6    |
| UW-NO           | 3/8" ~ 1"   | Brass           | 0-7(Air)                | 5°C -: 90°C |       |       |       |      |       |        | 7    |
| UW-1NO          | 11/4" ~ 2"  | Bronze          | 0-5(Liquid)             | -5℃ ~ 80℃   |       |       |       |      |       |        | 7    |

2 Uni-d Solenoid Valve

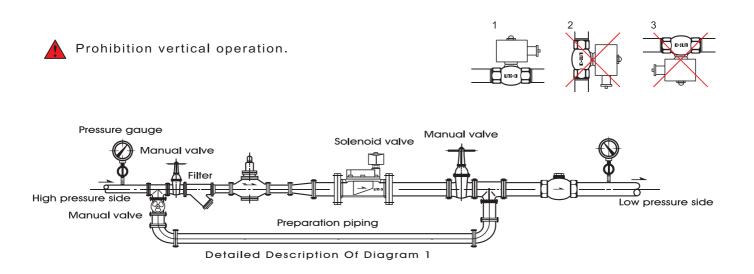


### **Products List**

| Model                       | Pipe Size        | Material         | Operating<br>Pressure   | Fluid Temp  |       |       | F     | Fluid |       |        | Page    |
|-----------------------------|------------------|------------------|-------------------------|-------------|-------|-------|-------|-------|-------|--------|---------|
| Model                       | i ipe Size       | Material         | kgf / cm <sup>2</sup>   | င           | Steam | Water | Air   | Oil   | Gas   | Vacuum | .ir age |
| SUW-NO                      | 3/8" ~ 1"        | #316             | 0-7(Air)                | -5℃ ~ 80℃   |       |       |       |       |       |        | 8       |
| SUW-1NO                     | 11/4" ~ 2"       |                  | 0-5(Liquid)             | -30 000     |       |       |       |       |       |        | 0       |
| UDC                         | 1/4" ~ 1/2"      | PVC              | 0-1                     | -5℃ ~ 80℃   |       | • • • | • • • |       |       |        | 14      |
| UDC-TF                      | 1/4"~ 1"         | PTFE<br>(TEFLON) | 0-1<br>0-0.5            | -5℃ ~ 80℃   |       | • • • | • • • |       |       |        | 14      |
| PKW<br>(EXPLOSION<br>PROOF) | 3/8" ~ 1"        | Brass            | 0-7(Air)<br>0-5(Liquid) | -5°C ~ 80°C |       | • • • | • • • | • •   | • • • | • •    | 21      |
| SKW<br>(EXPLOSION<br>PROOF) | 1/2" ~ 1"        | #316             | 0-7(Air)<br>0-5(Liquid) | -5℃ ~ 80℃   |       | • • • | • • • | • •   | • • • | • •    | 21      |
| PKS<br>(EXPLOSION<br>PROOF) | 1/2" ~ 1"        | Brass            | 0.5-10                  | -5℃ ~ 185℃  | • • • | •     | • • • | • •   |       |        | 20      |
| SKS<br>(EXPLOSION<br>PROOF) | 1/2" ~ 1"        | #316             | 0.5-10                  | -5℃ ~ 185℃  | • • • | • • • | • • • | • •   |       |        | 20      |
| UPS<br>(NO)                 | 1/2" ~ 1"        | Brass            | 0.5-10                  | -5℃ ~ 185℃  | • • • | • • • | • • • | • •   |       |        | 9       |
| SUS<br>(NO)                 | 1/2"~11/2"<br>2" | #316             | 0.5-10<br>0.5-8         | -5℃ ~ 185℃  | • • • | • • • | • • • | • •   |       |        | 10      |
| UWF<br>(NO)                 | 11/4"~ 4"        | FC-20            | 0.2-8                   | -5℃ ~ 80℃   |       | • • • | • • • |       |       |        | 16      |
| USF<br>(NO)                 | 11/4"~ 4"        | FC-20            | 0.5-10                  | -5℃ ~ 185℃  | • • • | • • • | • • • | • •   |       |        | 17      |

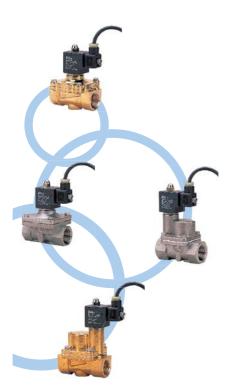
#### **CAUTION:**

- 1. Pipes must be washed neat and clean before fitted.
- 2. A Y-STRAINER has to installed in the front of solenoid valve, that is best for long life.
- 3. Before installation, be sure what type of fluid, voltage, pressure and fluid temperature used.









**SOLENOID VALVE** Of Explosion Proof

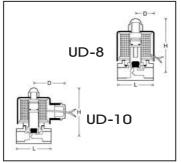
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### **UD. UD-NO Series**

#### **UD** Series





- 1. UD series is Direct-Acting, conductive, normal close.
- 2. Valve body made of forged brass.
- 3. UD can be operated directly without pressure.
- 4. Small size and easy assembly.
- 5. Standard voltage: 110VAC / 220VAC / 24VDC
- 6. Other special AC/DC can be made to client's order.
- 7. Screwed end: BSPT, NPT, BSP.
- 8. The standard product fluid temperature is 80°C(NBR).
- 9. Viton(130°C), Silicon(130°C), PTFE(185°C).
- 10. AC Voltage tolerance: ± 10%.

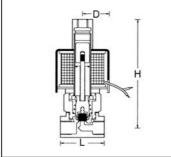
  DC Voltage tolerance: ± 1%.
- 11. UD-6~UD-8 provide Gas specification.

|        | MATERAIL                  |
|--------|---------------------------|
| PARTS  | MATERAIL                  |
| Body   | Forge Brass               |
| Coil   | Special Copper Wire (H)   |
| Core   | Stainless Steel           |
| Tube   | Stainless Steel           |
| Spring | Stainless Steel           |
| Plug   | NBR, Viton, Silicon, PTFE |
| Washer | NBR · PTFE                |

| DIN | MODEL  | PIPE | Cv   | ORIFICE | FLUID        | MAX. OP | ERATING P | RESSURE | DIFF. KGF/CM <sup>2</sup> | DIME | NSION | l(mm) | WEIGHT |
|-----|--------|------|------|---------|--------------|---------|-----------|---------|---------------------------|------|-------|-------|--------|
| DIN | MODEL  | SIZE | CV   | ORIFICE | TEMP.°C      | WATER   | AIR       | STEAM   | VACUUM                    | L    | Н     | D     | (kg)   |
|     | UD-6   | 1/8" | 0.23 | 2.5 mm  | -5°C ~ 80°C  | 0-7     | 0-7       |         | 0-10 <sup>-3</sup> Torr   | 41   | 63    | 21    | 0.3    |
|     | UD-8   | 1/4" | 0.23 | 2.5 mm  | -5°C ~ 80°C  | 0-7     | 0-7       |         | 0-10 <sup>-3</sup> Torr   | 41   | 63    | 21    | 0.3    |
|     | UD-8   | 1/4" | 0.58 | 4 mm    | -5°C ~ 80°C  | 0-3     | 0-3       |         | 0-10 <sup>-3</sup> Torr   | 41   | 63    | 21    | 0.3    |
|     | UD-8   | 1/4" | 0.79 | 6 mm    | -5°C ~ 80°C  | 0-1     | 0-1       |         | 0-10 <sup>-3</sup> Torr   | 41   | 63    | 21    | 0.3    |
|     | UD-8H  | 1/4" | 0.18 | 1.2 mm  | -5°C ~ 130°C | 0-20    | 0-20      |         | 0-10 <sup>-3</sup> Torr   | 41   | 63    | 21    | 0.3    |
|     | US-8   | 1/4" | 0.23 | 2.5 mm  | -5°C ~ 185°C |         |           | 0-7     |                           | 41   | 63    | 21    | 0.3    |
|     | UD-10  | 3/8" | 0.58 | 4 mm    | -5°C ~ 80°C  | 0-10    | 0-10      |         | 0-10 <sup>-3</sup> Torr   | 53   | 75    | 48    | 0.6    |
|     | UD-10  | 3/8" | 0.79 | 8 mm    | -5°C ~ 80°C  | 0-3     | 0-5       |         | 0-10 <sup>-3</sup> Torr   | 53   | 90    | 48    | 0.8    |
|     | UD-15  | 1/2" | 0.58 | 8 mm    | -5°C ~ 80°C  | 0-3     | 0-5       |         | 0-10 <sup>-3</sup> Torr   | 53   | 90    | 48    | 0.8    |
|     | UD-10H | 3/8" | 0.45 | 2 mm    | -5°C ~ 130°C | 0-20    | 0-20      |         | 0-10 <sup>-3</sup> Torr   | 53   | 75    | 48    | 0.6    |
|     | US-10  | 3/8" | 0.58 | 4 mm    | -5°C ~ 185°C |         |           | 0-10    |                           | 53   | 75    | 48    | 0.6    |

#### **UD-NO Series**





- 1. UD-NO series is Direct-Acting, conductive, normal open.
- 2. Valve body made of forged brass.
- 3. UD-NO can be operated directly without pressure.
- 4. Small size and easy assembly.
- 5. Standard votlage: 110VAC / 220VAC / 24VDC
- 6. Other special AC/DC can be made to client's order.
- 7. Screwed end: BSPT, NPT, BSP.
- 8. The standard product fluid temperature is 80°C(NBR).
- 9. Viton(130°C), Silicon(130°C).
- 10. AC Voltage tolerance: ±10%.

  DC Voltage tolerance: ±1%.

|        | MATERAIL                |
|--------|-------------------------|
| PARTS  | MATERAIL                |
| Body   | Forge Brass             |
| Coil   | Special Copper Wire (H) |
| Core   | Stainless Steel         |
| Tube   | Stainless Steel         |
| Spring | Stainless Steel         |
| Plug   | NBR, Viton, Silicon     |
| Washer | NBR                     |

| DIN |          | PIPE | ٥    | ODIFICE | FLUID        | мах. оре | MAX. OPERATING PRESSURE DIFF. KGF/CM <sup>2</sup> |      |                         |    |     | DIMENSION(mm) |      |  |  |
|-----|----------|------|------|---------|--------------|----------|---|------|-------------------------|----|-----|---------------|------|--|--|
| DIN | MODEL    | SIZE | Cv   | ORIFICE | TEMP .°C     | WATER    | AIR   | GAS  | VACUUM                  | L  | Н   | D             | (kg) |  |  |
|     | UD-6-NO  | 1/8" | 0.23 | 2.5 mm  | -5°C ~ 80°C  | 0-7      | 0-7   | 0-7  | 0-10 <sup>-3</sup> Torr | 41 | 81  | 21            | 0.4  |  |  |
|     | UD-8-NO  | 1/4" | 0.23 | 2.5 mm  | -5°C ~ 80°C  | 0-7      | 0-7   | 0-7  | 0-10 <sup>-3</sup> Torr | 41 | 81  | 21            | 0.4  |  |  |
|     | UD-8-NO  | 1/4" | 0.58 | 4 mm    | -5°C ~ 80°C  | 0-3      | 0-3   | 0-7  | 0-10 <sup>-3</sup> Torr | 41 | 81  | 21            | 0.4  |  |  |
|     | UD-8-NO  | 1/4" | 0.79 | 6 mm    | -5°C ~ 80°C  | 0-1      | 0-1   | 0-7  | 0-10 <sup>-3</sup> Torr | 41 | 81  | 21            | 0.4  |  |  |
|     | UD-8H-NO | 1/4" | 0.18 | 1.2 mm  | -5°C ~ 130°C | 0-20     | 0-20  | 0-20 | 0-10 <sup>-3</sup> Torr | 41 | 81  | 21            | 0.4  |  |  |
|     | UD-10-NO | 3/8" | 0.58 | 4 mm    | -5℃ ~ 130℃   | 0-10     | 0-10  | 0-7  | 0-10 <sup>-3</sup> Torr | 54 | 106 | 48            | 0.7  |  |  |

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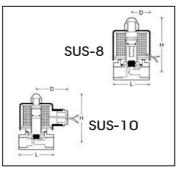
UD.UD-NO Not for Fluid Of: 1. Liquid Status When Heat, Solid Status When Cool. 3. Corrosive Fluid 2. Viscosity Over 50 cst.



### SUS-6~10 . SUS-NO Series

#### SUS-6~10 Series





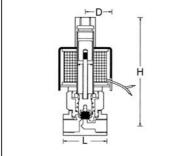
- 1. SUS series is direct-drive, conductive, normal close.
- 2. Valve body made of investment casting S/S 316.
- 3. SUS can be operated directly without pressure.
- 4. Small size and easy assembly.
- 5. Standard voltage: 110VAC / 220VAC / 24VDC
- 6. Other special AC/DC can be made to client's order.
- 7. Screwed end: BSPT, NPT, BSP.
- 8. Viton(130°C), Silicon(130°C), PTFE(185°C), NBR(80°C).
- AC Voltage tolerance: ±10%.
   DC Voltage tolerance: ±1%.

|        | MATERAIL                  |
|--------|---------------------------|
| PARTS  | MATERAIL                  |
| Body   | CF8M                      |
| Coil   | Special Copper Wire (H)   |
| Core   | Stainless Steel           |
| Tube   | Stainless Steel           |
| Spring | Stainless Steel           |
| Plug   | NBR, Viton, Silicon, PTFE |
| Washer | NBR · PTFE                |

|     |            | PIPE | 0    | ORIFICE | FLUID        | MAX. OPERATING PRESSURE DIFF. KGF/CM <sup>2</sup> |      |       |     |        |    | DIMENSION(mm) |    |      |
|-----|------------|------|------|---------|--------------|---|------|-------|-----|--------|----|---------------|----|------|
| DIN | MODEL      | SIZE | CV   | OKIFICE | TEMP .°C     | WATER   | AIR  | STEAM | GAS | VACUUM | L  | Н             | D  | (kg) |
|     | SUS-6#316  | 1/8" | 0.23 | 2.5 mm  | -5°C ~ 185°C | 0-7   | 0-7  | 0-7   |     |        | 41 | 63            | 21 | 0.3  |
|     | SUS-8#316  | 1/4" | 0.23 | 2.5 mm  | -5°C ~ 185°C | 0-7   | 0-7  | 0-7   |     |        | 41 | 63            | 21 | 0.3  |
|     | SUS-10#316 | 3/8" | 0.58 | 4 mm    | -5°C ~ 185°C | 0-10  | 0-10 | 0-10  |     |        | 54 | 75            | 48 | 0.6  |

#### **SUS-NO Series**





- 1. SUS-NO series is direct-drive, connected, normal open.
- 2. Valve body made of investment casting S/S 316.
- 3. SUS can be operated directly without pressure.
- 4. Small size and easy assembly.
- 5. Standard voltage: 110VAC / 220VAC / 24VDC.
- 6. Other special AC/DC can be made to client's order.
- 7. Screwed end: BSPT ,NPT , BSP.
- 8. Viton(130°C), Silicon(130°C), PTFE(185°C), NBR(80°C).
- 9 . AC Voltage tolerance: ±10% . DC Voltage tolerance: ±1%.

|        | MATERAIL                |
|--------|-------------------------|
| PARTS  | MATERAIL                |
| Body   | CF8M                    |
| Coil   | Special Copper Wire (H) |
| Core   | Stainless Steel         |
| Tube   | Stainless Steel         |
| Spring | Stainless Steel         |
| Plug   | NBR, Viton, Silicon     |
| Washer | NBR                     |

|     |           | PIPE |      | ODIFIOE | FLUID       | MAX. OPERATING PRESSURE DIFF. KGF/CM <sup>2</sup> DIMENSION(mm) |      |      |                    |    |     |    |        |  |
|-----|-----------|------|------|---------|-------------|---|------|------|--------------------|----|-----|----|--------|--|
| DIN | MODEL     | SIZE | CV   | ORIFICE | TEMP .°C    | WATER   | AIR  | GAS  | VACUUM             | L  | Η   | D  | ( kg ) |  |
|     | SUS-6-NO  | 1/8" | 0.23 | 2.5 mm  | -5°C ~ 80°C | 0-7   | 0-7  | 0-7  | 0-10 <sup>-3</sup> | 41 | 90  | 21 | 0.4    |  |
|     | SUS-8-NO  | 1/4" | 0.23 | 2.5 mm  | -5°C ~ 80°C | 0-7   | 0-7  | 0-7  | 0-10-3             | 41 | 90  | 21 | 0.4    |  |
|     | SUS-10-NO | 3/8" | 0.58 | 4 mm    | -5°C ~ 80°C | 0-10  | 0-10 | 0-10 | 0-10 <sup>-3</sup> | 54 | 116 | 48 | 0.7    |  |

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SUS-10.SUS-10-NO Not for Fluid Of: 1. Liquid Status When Heat, Solid Status When Cool. 3. Corrosive Fluid

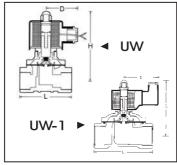
2. Viscosity Over 50 cst.



## UW(-1) . UW(-1)NO Series

#### **UW/UW-1 Series**





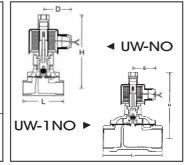
- 1. UW(-1)series is pilot diaphgram drive, normal close.
- 2. Valve body made of 3/8"~1" brass or 1/4"~2" cast bronze.
- 3. UW can be operated directly wothout pressure
- 4. Standard voltage: 110VAC / 220VAC / 24VDC
- 5. Other special AC/DC can be made to client's order.
- 6. Screwed end: BSPT, NPT, BSP.
- 8. Viton(130°C), Silicon(130°C), NBR(80°C).
- 9. AC Voltage tolerance: ±10%. DC Voltage tolerance: ±1%

|           | MATERAIL                  |
|-----------|---------------------------|
| PARTS     | MATERAIL                  |
| Body      | Forge Brass / Cast Bronze |
| Coil      | Special Copper Wire (H)   |
| Core      | Stainless Steel           |
| Tube      | Stainless Steel           |
| Spring    | Stainless Steel           |
| Plug      | NBR,Viton,Silicon         |
| Diaphragm | NBR,Viton,Silicon         |

|     |         | PIPE  | <u></u> | ODIFICE | FLUID       | MAX. OPERAT | ING PRESSURE | DIFF, KGF/CM <sup>2</sup> | DIME | (mm) | WEIGHT |      |
|-----|---------|-------|---------|---------|-------------|-------------|--------------|---------------------------|------|------|--------|------|
| DIN | MODEL   | SIZE  | Cv      | ORIFICE | TEMP .°C    | AIR         | WATER        | LIGHT OIL                 | L    | Н    | D      | (kg) |
|     | UW-10   | 3/8"  | 2.4     | 15 mm   | -5°C ~ 80°C | 0-7         | 0-5          | 0-5                       | 70   | 100  | 50     | 0.9  |
|     | UW-15   | 1/2"  | 4.5     | 15 mm   | -5°C ~ 80°C | 0-7         | 0-5          | 0-5                       | 70   | 100  | 50     | 0.9  |
|     | UW-20   | 3/4"  | 8.6     | 20 mm   | -5°C ~ 80°C | 0-7         | 0-5          | 0-5                       | 73   | 102  | 50     | 1.0  |
|     | UW-25   | 1"    | 12      | 25 mm   | -5°C ~ 80°C | 0-7         | 0-5          | 0-5                       | 93   | 106  | 50     | 1.8  |
|     | UW-35-1 | 11/4" | 24      | 35 mm   | -5°C ~ 80°C | 0-7         | 0-5          | 0-5                       | 125  | 140  | 58     | 3.2  |
|     | UW-40-1 | 11/2" | 28      | 40 mm   | -5℃ ~ 80℃   | 0-7         | 0-5          | 0-5                       | 125  | 140  | 58     | 3.5  |
|     | UW-50-1 | 2"    | 48      | 50 mm   | -5°C ~ 80°C | 0-7         | 0-5          | 0-5                       | 167  | 170  | 58     | 5.4  |

### UW-NO/UW-1NO Series





- 1. UW(-1)NO series is pilot diaphgram drive, normal open.
- 2. Valve body made of 3/8"~1" forged brass or 1/4"~2" cast bronze.
- 3. UW(-1)NO can be operated directly without pressure
- 5. Standard voltage: 110VAC / 220VAC / 24VDC
- 6. Other special AC/DC can be made to client's order.
- 7. Screwed end: BSPT, NPT, BSP.
- 8. Viton(130°C), Silicon(130°C), NBR(80°C).
- 9. AC Voltage tolerance: ±10%. DC Voltage tolerance: ±1%.

|           | MATERAIL                  |
|-----------|---------------------------|
| PARTS     | MATERAIL                  |
| Body      | Forge Brass / Cast Bronze |
| Coil      | Special Copper Wire (H)   |
| Core      | Stainless Steel           |
| Tube      | Stainless Steel           |
| Spring    | Stainless Steel           |
| Plug      | NBR, Viton, Silicon       |
| Diaphragm | NBR, Viton, Silicon       |

|           | PIPE   | C   | ORIFICE   | FLUID   | MAX. OPERATING PRESSURE DIFF. KGF/CM <sup>2</sup> |                          |                                |                                     |   | DIMENSION(mm)                            |      |   |  |
|-----------|--|---|---|---|---|--------------------------|--------------------------------|-------------------------------------|---|--|------|---|--|
| MODEL     | SIZE   | Cv  | UKIFICE   | TEMP .°C  | WATER   | AIR                      | GAS                            | VACUUM                              | L   | Η  | D    | ( kg )  |  |
| UW-10-NO  | 3/8"   | 4.5   | 15 mm   | -5°C ~ 80°C   | 0-5   | 0-7                      | 0-7                            | 0-10-3                              | 70  | 100                                      | 50   | 1.1   |  |
| UW-15-NO  | 1/2"   | 4.5   | 15 mm   | -5°C ~ 80°C   | 0-5   | 0-7                      | 0-7                            | 0-10 <sup>-3</sup>                  | 70  | 100                                      | 50   | 1.1   |  |
| UW-20-NO  | 3/4"   | 8.6   | 20 mm   | -5°C ~ 80°C   | 0-5   | 0-7                      | 0-7                            | 0-10 <sup>-3</sup>                  | 73  | 102                                      | 50   | 1.2   |  |
| UW-25-NO  | 1"   | 12  | 25 mm   | -5°C ~ 80°C   | 0-5   | 0-7                      | 0-7                            | 0-10-3                              | 93  | 106                                      | 50   | 2   |  |
| JW-35-1NO | 11/4"  | 24  | 35 mm   | -5℃ ~ 80℃   | 0-5   | 0-7                      | 0-7                            | 0-10 <sup>-3</sup>                  | 125   | 158                                      | 58   | 3.5   |  |
| JW-40-1NO | 11/2"  | 28  | 40 mm   | -5°C ~ 80°C   | 0-5   | 0-7                      | 0-7                            | 0-10 <sup>-3</sup>                  | 125   | 158                                      | 58   | 3.8   |  |
| JW-50-1NO | 2"   | 48  | 50 mm   | -5°C ~ 80°C   | 0-5   | 0-7                      | 0-7                            | 0-10-3                              | 167   | 158                                      | 58   | 5.7   |  |
| J         | JW-10-NO<br>JW-15-NO<br>JW-20-NO<br>JW-25-NO<br>W-35-1NO<br>W-40-1NO | JW-10-NO 3/8" JW-15-NO 1/2" JW-20-NO 3/4" JW-25-NO 1" W-35-1NO 11/4" W-40-1NO 11/2" | JW-10-NO 3/8" 4.5<br>JW-15-NO 1/2" 4.5<br>JW-20-NO 3/4" 8.6<br>JW-25-NO 1" 12<br>W-35-1NO 11/4" 24<br>W-40-1NO 11/2" 28 | JW-10-NO 3/8" 4.5 15 mm<br>JW-15-NO 1/2" 4.5 15 mm<br>JW-20-NO 3/4" 8.6 20 mm<br>JW-25-NO 1" 12 25 mm<br>W-35-1NO 11/4" 24 35 mm<br>W-40-1NO 11/2" 28 40 mm | SIZE  | SIZE   STEMP - C   WATER | SIZE   STEMP   C   WATER   AIR | SIZE   STEMP.*C   WATER   AIR   GAS | SIZE   STEMP.C   WATER   AIR   GAS   VACUUM | TEMP.*C   WATER   AIR   GAS   VACUUM   L | SIZE | SIZE   STEMP.C   WATER   AIR   GAS   VACUUM   L   H   D |  |

UW(-1).UW(-1)NO Not for Fluid Of:

- 1. Liquid Status When Heat , Solid Status When Cool.
- 3. Corrosive Fluid

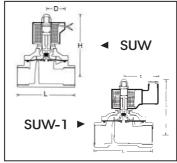
2. Viscosity Over 20 cst.



### SUW(-1) . SUW(-1)NO Series

#### SUW/SUW-1 Series





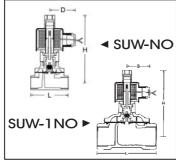
- 1. SUW(-1) series is pilot diaphgram drive, normal close.
- 2. Valve body made of investment casting S/S 316.
- 3. SUW(-1) can be operated directly without pressure.
- 4. Standard voltage: 110VAC/ 220VAC/ 24VDC
- 5. Other special AC/DC can be made to client's order.
- 6. Screwed end: BSPT, NPT, BSP.
- 7. Viton(130°C), Silicon(130°C), NBR(80°C).
- 8. AC Voltage tolerance: ±10%. DC Voltage tolerance: ±1%.

|           | MATERAIL                |
|-----------|-------------------------|
| PARTS     | MATERAIL                |
| Body      | CF8M                    |
| Coil      | Special Copper Wire (H) |
| Core      | Stainless Steel         |
| Tube      | Stainless Steel         |
| Spring    | Stainless Steel         |
| Plug      | NBR, Viton, Silicon     |
| Diaphragm | NBR,Viton,Silicon       |

|     | PIPE CONT  |       | anicios. | FLUID   | MAX. OPE    | RATING | PRESSURE DI | FF. KGF/CM <sup>2</sup> | DIMENSION(mm) |     |     | WEIGHT |      |
|-----|------------|-------|----------|---------|-------------|--------|-------------|-------------------------|---------------|-----|-----|--------|------|
| DIN | MODEL      | SIZE  | Cv       | ORIFICE | TEMP .°C    | WATER  | AIR         | LIGHT OIL               | VACUUM        | L   | Н   | D      | (kg) |
|     | SUW-15#316 | 1/2"  | 4.5      | 15 mm   | -5°C ~ 80°C | 0-5    | 0-7         | 0-5                     |               | 70  | 100 | 50     | 0.9  |
|     | SUW-20#316 | 3/4"  | 8.6      | 20 mm   | -5°C ~ 80°C | 0-5    | 0-7         | 0-5                     |               | 73  | 102 | 50     | 1.0  |
|     | SUW-25#316 | 1"    | 12       | 25 mm   | -5°C ~ 80°C | 0-5    | 0-7         | 0-5                     |               | 93  | 106 | 50     | 1.6  |
|     | SUW-35#316 | 11/4" | 24       | 35 mm   | -5°C ~ 80°C | 0-5    | 0-7         | 0-5                     |               | 125 | 140 | 58     | 3.2  |
| •   | SUW-40#316 | 11/2" | 28       | 40 mm   | -5°C ~ 80°C | 0-5    | 0-7         | 0-5                     |               | 125 | 140 | 58     | 3.4  |
|     | SUW-50#316 | 2"    | 48       | 50 mm   | -5°C ~ 80°C | 0-5    | 0-7         | 0-5                     |               | 167 | 170 | 58     | 5.8  |

### SUW-NO/SUW-1NO Series





- 1. SUW(-1)NO series is pilot diaphgram drive, normal open.
- 2. Valve body made of investment casting S/S 316.
- 3. SUW(-1)NO can be operated directly without pressure.
- 4. Standard voltage: 110VAC/ 220VAC/ 24VDC
- 5. Other special AC/DC can be made to client's order.
- 6. Screwed end: BSPT, NPT, BSP.
- 7. Viton(130°C), Silicon(130°C), NBR(80°C).
- 8. AC Voltage tolerance: ±10%. DC Voltage tolerance: ±1%.

|           | MATERAIL                |
|-----------|-------------------------|
| PARTS     | MATERAIL                |
| Body      | CF8M                    |
| Coil      | Special Copper Wire (H) |
| Core      | Stainless Steel         |
| Tube      | Stainless Steel         |
| Spring    | Stainless Steel         |
| Plug      | NBR,Viton,Silicon       |
| Diaphragm | NBR, Viton, Silicon     |

|     |           | PIPE  | IPE . |         | FLUID<br>TEMP.°C | MAX. OPERATING PRESSURE DIFF. KGF/CM <sup>2</sup> |     |     |                    |     | DIMENSION(mm) |    |      |  |
|-----|-----------|-------|-------|---------|------------------|---|-----|-----|--------------------|-----|---------------|----|------|--|
| DIN | MODEL     | SIZE  | Cv    | ORIFICE |                  | WATER   | AIR | GAS | VACUUM             | L   | Н             | D  | (kg) |  |
|     | SUW-15-NO | 1/2"  | 4.5   | 15 mm   | -5°C ~ 80°C      | 0-5   | 0-7 | 0-7 | 0-10 <sup>-3</sup> | 70  | 126           | 50 | 1    |  |
|     | SUW-20-NO | 3/4"  | 8.6   | 20 mm   | -5℃ ~ 80℃        | 0-5   | 0-7 | 0-7 | 0-10-3             | 73  | 132           | 50 | 1.1  |  |
|     | SUW-25-NO | 1"    | 12    | 25 mm   | -5°C ~ 80°C      | 0-5   | 0-7 | 0-7 | 0-10 <sup>-3</sup> | 93  | 139           | 50 | 1.7  |  |
|     | SUW-35-NO | 11/4" | 24    | 35 mm   | -5°C ~ 80°C      | 0-5   | 0-7 | 0-7 | 0-10 <sup>-3</sup> | 125 | 154           | 58 | 3.5  |  |
|     | SUW-40-NO | 11/2" | 28    | 40 mm   | -5℃ ~ 80℃        | 0-5   | 0-7 | 0-7 | 0-10-3             | 125 | 156           | 58 | 3.7  |  |
|     | SUW-50-NO | 2"    | 48    | 50 mm   | -5°C ~ 80°C      | 0-5   | 0-7 | 0-7 | 0-10 <sup>-3</sup> | 167 | 175           | 58 | 6.1  |  |

<u>^</u>

SUW(-1).SUW(-1)NO Not for Fluid Of: 1. Liquid Status When Heat, Solid Status When Cool. 3. Corrosive Fluid

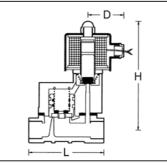
2. Viscosity Over 20 cst.



### **UPS. UPS-NO Series**

#### **UPS Series**





- UPS series is multiplex-drive, piston guide, conductive normal close.
- 2. Valve body made of forge bronze.
- 3. Standard voltage: 110VAC / 220VAC / 24VDC
- 4. Other special AC/DC can be made to client's order.
- 5. Screwed end: BSPT, NPT, BSP.
- 6. The standard product fluid temperature is 185°C(PTFE).
- 7. Applicable for working in high frequency movement location.
- 8. AC Voltage tolerance: ±10%.

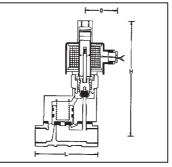
  DC Voltage tolerance: ±1%.

|           | MATERAIL                |
|-----------|-------------------------|
| PARTS     | MATERAIL                |
| Body      | Forge Brass             |
| Coil      | Special Copper Wire (H) |
| Core      | Stainless Steel         |
| Tube      | Stainless Steel         |
| Spring    | Stainless Steel         |
| Plug      | PTFE                    |
| Bonne/Nut | PTFE                    |
| Piston    | Bronze                  |

| DIM | MODEL  | PIPE | Cu  | ORIFICE |              | MAX. OPERATING PRESSURE DIFF. KGF/CM <sup>2</sup> DIMENSION(mm |        |        |           |     |     |    |        |
|-----|--------|------|-----|---------|--------------|--|--------|--------|-----------|-----|-----|----|--------|
| DIN | MODEL  | SIZE | CV  |         |              | WATER  | AIR    | STEAM  | LIGHT OIL | L   | Н   | D  | ( kg ) |
|     | UPS-15 | 1/2" | 4.0 | 17 mm   | -5°C ~ 185°C | 0.5-10   | 0.5-10 | 0.5-10 | 0.5-10    | 82  | 120 | 48 | 1.4    |
|     | UPS-20 | 3/4" | 6.0 | 17 mm   | -5°C ~ 185°C | 0.5-10   | 0.5-10 | 0.5-10 | 0.5-10    | 82  | 120 | 48 | 1.5    |
|     | UPS-25 | 1"   | 12  | 22 mm   | -5°C ~ 185°C | 0.5-10   | 0.5-10 | 0.5-10 | 0.5-10    | 100 | 134 | 48 | 1.8    |

#### **UPS-NO Series**





- 1. UPS-NO series is multiplex-drive, piston guide, conductive normal open.
- 2. Valve body made of cast bronze.
- 3. Standard voltage: 110VAC / 220VAC / 24VDC
- 4. Other special AC/DC can be made to client's order.
- 5. Screwed end: BSPT, NPT, BSP.
- 6. The standard product fluid temperature is 185°C(PTFE).
- 7. Applicable for working in high frequency movement location.
- 8. AC Voltage tolerance: ±10%. DC Voltage tolerance: ±1%.

|           | MATERAIL                |
|-----------|-------------------------|
| PARTS     | MATERAIL                |
| Body      | Forge Brass             |
| Coil      | Special Copper Wire (H) |
| Core      | Stainless Steel         |
| Tube      | Stainless Steel         |
| Spring    | Stainless Steel         |
| Plug      | PTFE                    |
| Bonne/Nut | PTFE                    |
| Piston    | Bronze                  |

| l   |           | PIPE |     | ODIFIOE. | FLUID        | MAX. OPERATING PRESSURE DIFF. KGF/CM <sup>2</sup> |        |        |           |     | DIMENSION(mm) |    |      |
|-----|-----------|------|-----|----------|--------------|---|--------|--------|-----------|-----|---------------|----|------|
| DIN | MODEL     | SIZE | CV  | ORIFICE  | TEMP .°C     | WATER   | AIR    | STEAM  | LIGHT OIL | L   | Η             | D  | (kg) |
|     | UPS-15-NO | 1/2" | 4.0 | 17 mm    | -5°C ~ 185°C | 0.5-10  | 0.5-10 | 0.5-10 | 0.5-10    | 82  | 120           | 48 | 1.4  |
|     | UPS-20-NO | 3/4" | 6.0 | 17 mm    | -5°C ~ 185°C | 0.5-10  | 0.5-10 | 0.5-10 | 0.5-10    | 82  | 120           | 48 | 1.5  |
|     | UPS-25-NO | 1"   | 12  | 22 mm    | -5°C ~ 185°C | 0.5-10  | 0.5-10 | 0.5-10 | 0.5-10    | 100 | 134           | 48 | 1.8  |

<u>^</u>

**UPS.UPS-NO Not for Fluid Of:** 

- 1. Liquid Status When Heat , Solid Status When Cool.
- 3. Corrosive Fluid

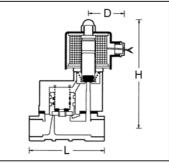
2. Viscosity Over 20 cst.



### SUS . SUS-NO Series

#### **SUS Series**





- SUS series is multiplex-drive, piston guide, conductive normal close.
- 2. Valve body made of investment casting S/S 316.
- 3. Standard voltage: 110VAC / 220VAC / 24VDC
- 5. Other special AC/DC can be made to client's order.
- 6. Screwed end: BSPT, NPT, BSP.
- 7. The standard product fluid temperature is 185°C(PTFE).
- 8. Applicable for working in high frequency movement location
- 9. AC Voltage tolerance: ±10%.

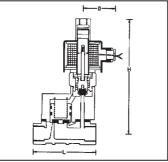
  DC Voltage tolerance: ±1%.

|           | MATERAIL                |
|-----------|-------------------------|
| PARTS     | MATERAIL                |
| Body      | CF8M                    |
| Coil      | Special Copper Wire (H) |
| Core      | Stainless Steel         |
| Tube      | Stainless Steel         |
| Spring    | Stainless Steel         |
| Plug      | PTFE                    |
| Bonne/Nut | PTFE                    |
| Piston    | #316                    |

|     |            | PIPE  |     | 0015105 | FLUID        | MAX. OPERATING PRESSURE DIFF. KGF/CM <sup>2</sup> DIMENSION(m |        |        |           |     |     | l(mm) | WEIGHT |
|-----|------------|-------|-----|---------|--------------|---|--------|--------|-----------|-----|-----|-------|--------|
| DIN | MODEL      | SIZE  | Cv  | ORIFICE | TEMP.°C      | WATER   | AIR    | STEAM  | LIGHT OIL | ١   | Η   | D     | (kg)   |
|     | SUS-15#316 | 1/2"  | 4.0 | 17 mm   | -5°C ~ 185°C | 0.5-10  | 0.5-10 | 0.5-10 | 0.5-10    | 82  | 120 | 48    | 1.4    |
|     | SUS-20#316 | 3/4"  | 6.0 | 17 mm   | -5℃ ~ 185℃   | 0.5-10  | 0.5-10 | 0.5-10 | 0.5-10    | 82  | 120 | 48    | 1.5    |
|     | SUS-25#316 | 1"    | 12  | 22 mm   | -5°C ~ 185°C | 0.5-10  | 0.5-10 | 0.5-10 | 0.5-10    | 100 | 134 | 48    | 1.8    |
|     | SUS-35#316 | 11/4" | 18  | 30 mm   | -5°C ~ 185°C | 0.5-10  | 0.5-10 | 0.5-10 | 0.5-10    | 125 | 138 | 48    | 2.8    |
|     | SUS-40#316 | 11/2" | 22  | 30 mm   | -5°C ~ 185°C | 0.5-10  | 0.5-10 | 0.5-10 | 0.5-10    | 125 | 146 | 48    | 2.9    |
|     | SUS-50#316 | 2"    | 48  | 50 mm   | -5℃ ~ 185℃   | 0.5-10  | 0.5-10 | 0.5-10 | 0.5-10    | 168 | 173 | 48    | 5.8    |

#### **SUS-NO Series**





- 1. SUS-NO series is multiplex-drive, piston guide, conductive normal open.
- 2. Valve body made of cast bronze.
- 3. Standard voltage: 110VAC / 220VAC / 24VDC
- 5. Other special AC/DC can be made to client's order.
- 6. Screwed end: BSPT, NPT, BSP.
- 7. The standard product fluid temperature is 185°C(PTFE).
- 9. Applicable for working in high frequency movement location.
- 10. AC Voltage tolerance: ±10%.

  DC Voltage tolerance: ±1%.

|        | MATERAIL                |
|--------|-------------------------|
| PARTS  | MATERAIL                |
| Body   | CF8M                    |
| Coil   | Special Copper Wire (H) |
| Core   | Stainless Steel         |
| Tube   | Stainless Steel         |
| Spring | Stainless Steel         |
| Plug   | PTFE                    |
|        |                         |

|     |           | PIPE  |     |         | FLUID<br>TEMP .°C | MAX. OPE | RATING P | RESSURE I | DIFF. KGF/CM <sup>2</sup> | DIMENSION(mm) |     |    | WEIGHT |
|-----|-----------|-------|-----|---------|-------------------|----------|----------|-----------|---------------------------|---------------|-----|----|--------|
| DIN | MODEL     | SIZE  | Cv  | ORIFICE |                   | WATER    | AIR      | STEAM     | LIGHT OIL                 | L             | Н   | D  | ( kg ) |
|     | SUS-15-NO | 1/2"  | 4.0 | 17 mm   | -5°C ~ 185°C      | 0.5-10   | 0.5-10   | 0.5-10    | 0.5-8                     | 82            | 120 | 48 | 1.4    |
|     | SUS-20-NO | 3/4"  | 6.0 | 17 mm   | -5°C ~ 185°C      | 0.5-10   | 0.5-10   | 0.5-10    | 0.5-8                     | 82            | 120 | 48 | 1.5    |
|     | SUS-25-NO | 1"    | 12  | 22 mm   | -5°C ~ 185°C      | 0.5-10   | 0.5-10   | 0.5-10    | 0.5-8                     | 100           | 134 | 48 | 1.8    |
|     | SUS-35-NO | 11/4" | 18  | 30 mm   | -5℃ ~ 185℃        | 0.5-10   | 0.5-10   | 0.5-10    | 0.5-8                     | 125           | 138 | 48 | 2.8    |
|     | SUS-40-NO | 11/2" | 22  | 30 mm   | -5℃ ~ 185℃        | 0.5-10   | 0.5-10   | 0.5-10    | 0.5-8                     | 125           | 146 | 48 | 2.9    |
|     | SUS-50-NO | 2"    | 48  | 50 mm   | -5℃ ~ 185℃        | 0.5-8    | 0.5-8    | 0.5-8     | 0.5-8                     | 168           | 173 | 48 | 5.8    |

SUS.SUS-NO Not for Fluid Of:

- 1. Liquid Status When Heat, Solid Status When Cool.
- 3. Corrosive Fluid

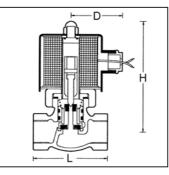
2. Viscosity Over 20 cst.



### **US Series. US-F Series**

#### **US Series**





- US series is multiplex-drive, piston guide ,conductive normal close.
- 2. Valve body made of cast bronze.
- 3. Standard voltage: 110VAC / 220VAC / 24VDC
- 4. Other special AC/DC can be made to client's order.
- 5. Screwed end: BSPT, NPT, BSP.
- 6. The standard product fluid temperature is 185°C(PTFE).
- In special case ,US can made 20 kgf/ cm², 30kgf/cm²
   40 kgf/cm² Please state the type of fluid with your order.
- 9. AC Voltage tolerance: ±10%.

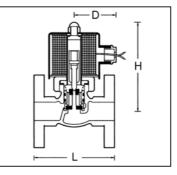
  DC Voltage tolerance: ±1%.

|             | MATERAIL                |
|-------------|-------------------------|
| PARTS       | MATERAIL                |
| Body        | Cast Bronze             |
| Coil        | Special Copper Wire (H) |
| Core Needle | Stainless Steel         |
| Tube        | Stainless Steel         |
| Spring      | Stainless Steel         |
| Plug        | PTFE + 15%GF            |
| Bonne/Nut   | PTFE                    |
| Piston      | Brass                   |

| DIN | MODEL | PIPE          | Cv      | ORIFICE  | FLUID        | мах. оре | DIME   | WEIGHT    |        |     |     |        |     |
|-----|-------|---------------|---------|----------|--------------|----------|--------|-----------|--------|-----|-----|--------|-----|
| DIN | MODEL | SIZE CV OKIFI | OKIFICE | TEMP .°C | WATER        | AIR      | STEAM  | HEAVY OIL | L      | Н   | D   | ( kg ) |     |
|     | US-15 | 1/2"          | 4.0     | 17 mm    | -5°C ~ 185°C | 0.5-15   | 0.5-15 | 0.5-10    | 0.5-10 | 82  | 120 | 58     | 1.7 |
|     | US-20 | 3/4"          | 6.0     | 17 mm    | -5°C ~ 185°C | 0.5-15   | 0.5-15 | 0.5-10    | 0.5-10 | 82  | 123 | 58     | 1.7 |
|     | US-25 | 1"            | 12      | 22 mm    | -5°C ~ 185°C | 0.5-15   | 0.5-15 | 0.5-10    | 0.5-10 | 91  | 130 | 58     | 2.0 |
|     | US-35 | 11/4"         | 18      | 30 mm    | -5℃ ~ 185℃   | 1-10     | 1-15   | 1-10      | 1-10   | 110 | 141 | 58     | 3.1 |
|     | US-40 | 11/2"         | 22      | 30 mm    | -5℃ ~ 185℃   | 1-10     | 1-15   | 1-10      | 1-10   | 110 | 144 | 58     | 3.3 |
|     | US-50 | 2"            | 48      | 50 mm    | -5°C ~ 185°C | 1-10     | 1-15   | 1-10      | 1-10   | 163 | 173 | 58     | 7.2 |

#### **US-F Series**





- 1. US-F series is multiplex-drive, piston guide , conductive normal close.
- 2. Valve body made of cast bronze.
- 3. Standard voltage: 110VAC / 220VAC / 24VDC
- 4. Other special AC/DC can be made to client's order.
- 5. Screwed end: BSPT, NPT, BSP.
- 6. The standard product fluid temperature is 185°C(PTFE).
- In special case ,US can made 20 kgf/ cm², 30kgf/cm²
   40 kgf/cm² Please state the type of fluid with your order.
- 8. AC Voltage tolerance: ±10%. DC Voltage tolerance: ±1%.

|           | MATERAIL                |
|-----------|-------------------------|
| PARTS     | MATERAIL                |
| Body      | Cast Bronze             |
| Coil      | Special Copper Wire (H) |
| Core      | Stainless Steel         |
| Tube      | Stainless Steel         |
| Spring    | Stainless Steel         |
| Plug      | PTFE                    |
| Bonne/Nut | PTFE + 15%GF            |
| Piston    | Brass                   |

|     | MODEL  | PIPE  |     | ODIFIOE |              | мах. оре | RATING P | DIFF. KGF/CM <sup>2</sup> | DIME      | WEIGHT |     |    |      |
|-----|--------|-------|-----|---------|--------------|----------|----------|---------------------------|-----------|--------|-----|----|------|
| DIN | MODEL  | SIZE  | Cv  | ORIFICE |              | WATER    | AIR      | STEAM                     | HEAVY OIL | L      | Н   | D  | (kg) |
|     | US-15F | 1/2"  | 4.0 | 17 mm   | -5°C ~ 185°C | 0.5-10   | 0.5-15   | 0.5-10                    | 0.5-10    | 105    | 120 | 58 | 2.6  |
|     | US-20F | 3/4"  | 6.0 | 17 mm   | -5°C ~ 185°C | 0.5-10   | 0.5-15   | 0.5-10                    | 0.5-10    | 110    | 123 | 58 | 3    |
|     | US-25F | 1"    | 12  | 22 mm   | -5°C ~ 185°C | 0.5-10   | 0.5-15   | 0.5-10                    | 0.5-10    | 120    | 130 | 58 | 4.2  |
|     | US-35F | 11/4" | 18  | 30 mm   | -5°C ~ 185°C | 1-10     | 1-15     | 1-10                      | 1-10      | 140    | 141 | 58 | 5.8  |
|     | US-40F | 11/2" | 22  | 32 mm   | -5°C ~ 185°C | 1-10     | 1-15     | 1-10                      | 1-10      | 140    | 144 | 58 | 6.5  |
|     | US-50F | 2"    | 48  | 50 mm   | -5°C ~ 185°C | 1-10     | 1-15     | 1-10                      | 1-10      | 195    | 173 | 58 | 10.5 |

🔥 u

US.US-F Not for Fluid Of:

- 1. Liquid Status When Heat, Solid Status When Cool.
- 3. Corrosive Fluid

2. Viscosity Over 20 cst.

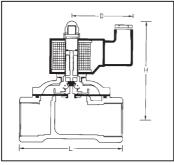
LITI-D SOLENOID VALVE



### UG(For Gas)/UV(For Vacuum) . UAW Series

### UG(For Gas)/UV(For Vacuum) Series





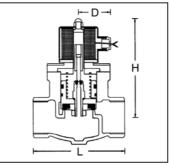
- UG/UV series is pilot diaphgram drive, connected to diaphragm, normal close.
- 2. Valve body made of forged brass or cast bronze.
- 3. UG/UV can be operated directly without pressure.
- 5. Standard voltage: 110VAC / 220VAC / 24VDC
- 6. Other special AC/DC can be made to client's order.
- 7. Screwed end: BSPT, NPT, BSP.
- 8. The standard product fluid temperature is 80 °C(NBR).
- AC Voltage tolerance: ±10%.
   DC Voltage tolerance: ±1%.

|           | MATERAIL                  |
|-----------|---------------------------|
| PARTS     | MATERAIL                  |
| Body      | Forge Brass / Cast Bronze |
| Coil      | Special Copper Wire (H)   |
| Core      | Stainless Steel           |
| Tube      | Stainless Steel           |
| Spring    | Stainless Steel           |
| Plug      | NBR                       |
| Diaphragm | NBR For Gas use           |

|     | MODEL PIPE CV ORIFICE |       | FLUID | MAX. OPERATING PRE | SSURE DIFF. KGF/CM2 | DIMENSION(mm) |                         |     | WEIGHT |    |        |
|-----|-----------------------|-------|-------|--------------------|---------------------|---------------|-------------------------|-----|--------|----|--------|
| DIN | MODEL                 | SIZE  | CV    | UKIFICE            | TEMP .°C            | GAS           | VACUUM                  | L   | Н      | D  | ( kg ) |
|     | U(G/V)-10             | 3/8"  | 4.5   | 15 mm              | -5°C ~ 80°C         | 0-7           | 0-10 <sup>-3</sup> Torr | 70  | 100    | 50 | 0.9    |
|     | U(G/V)-15             | 1/2"  | 4.5   | 15 mm              | -5°C ~ 80°C         | 0-7           | 0-10 <sup>-3</sup> Torr | 70  | 100    | 50 | 0.9    |
|     | U(G/V)-20             | 3/4"  | 8.6   | 20 mm              | -5°C ~ 80°C         | 0-7           | 0-10 <sup>-3</sup> Torr | 73  | 102    | 50 | 1.0    |
|     | U(G/V)-25             | 1"    | 12    | 25 mm              | -5°C ~ 80°C         | 0-7           | 0-10 <sup>-3</sup> Torr | 93  | 106    | 50 | 1.8    |
| •   | U(G/V)-35             | 11/4" | 24    | 35 mm              | -5°C ~ 80°C         | 0-7           | 0-10 <sup>-3</sup> Torr | 125 | 140    | 58 | 3.2    |
|     | U(G/V)-40             | 11/2" | 28    | 40 mm              | -5°C ~ 80°C         | 0-7           | 0-10 <sup>-3</sup> Torr | 125 | 140    | 58 | 3.5    |
|     | U(G/V)-50             | 2"    | 48    | 50 mm              | -5°C ~ 80°C         | 0-7           | 0-10 <sup>-3</sup> Torr | 167 | 170    | 58 | 5.4    |

### **UAW Series**





- 1. UAW series is multiplex-drive, piston guide, conductive normal close.
- 2. Valve body made of cast bronze.
- 3. Standard voltage: 110VAC / 220VAC / 24VDC
- 6. Other special AC/DC can be made to client's order.
- 7. Screwed end: BSPT, NPT, BSP.
- In case the pressure range is more than 15 kgf/cm² (with in 20 kgf/cm²) please state the type of fluid with your order.
- AC Voltage tolerance: ±10%.
   DC Voltage tolerance: ±1%.

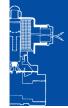
| I           | MATERAIL                |
|-------------|-------------------------|
| PARTS       | MATERAIL                |
| Body        | Cast Bronze             |
| Coil        | Special Copper Wire (H) |
| Core Needle | Stainless Steel         |
| Tube        | Stainless Steel         |
| Spring      | Stainless Steel         |
| Plug        | PTFE + 15%GF            |
| Bonne/Nut   | NBR                     |
| Piston      | Bronze                  |

|     |        | PIPE  |     | anifiar | FLUID<br>TEMP.°C | MAX. OPERATIN | IG PRESSURE | DIFF. KGF/CM <sup>2</sup> | DIME | WEIGHT |    |      |
|-----|--------|-------|-----|---------|------------------|---------------|-------------|---------------------------|------|--------|----|------|
| DIN | MODEL  | SIZE  | Cv  | ORIFICE |                  | WATER         | AIR         | HEAVY OIL                 | L    | Н      | D  | (kg) |
|     | UAW-15 | 1/2"  | 4.0 | 17 mm   | -5°C ~ 80°C      | 2-10          | 2-15        |                           | 82   | 120    | 58 | 1.7  |
|     | UAW-20 | 3/4"  | 6.0 | 17 mm   | -5°C ~ 80°C      | 2-10          | 2-15        |                           | 82   | 123    | 58 | 1.7  |
|     | UAW-25 | 1"    | 12  | 22 mm   | -5°C ~ 80°C      | 2-10          | 2-15        |                           | 91   | 130    | 58 | 2.0  |
|     | UAW-35 | 11/4" | 18  | 30 mm   | -5°C ~ 80°C      | 2-10          | 2-15        |                           | 110  | 141    | 58 | 3.1  |
|     | UAW-40 | 11/2" | 22  | 32 mm   | -5°C ~ 80°C      | 2-10          | 2-15        |                           | 110  | 144    | 58 | 3.3  |
|     | UAW-50 | 2"    | 48  | 50 mm   | -5°C ~ 80°C      | 2-10          | 2-15        |                           | 163  | 173    | 58 | 7.2  |

UG/UV.UAW Not for Fluid Of:

- 1. Liquid Status When Heat , Solid Status When Cool.
- 3. Corrosive Fluid

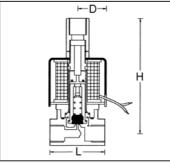
2. Viscosity Over 20 cst.



### UA(3 way) . UAO Series

### **UA**(3 way) Series





- 1. UA series is direct-drive, conductive normal close.
- 2. Valve body made of forged brass.
- 3. UA can be operated directly without pressure.
- 4. Standard voltage: 110VAC / 220VAC / 24VDC
- 5. Other special AC/DC can be made to client's order.
- 6. Screwed end: BSPT, NPT, BSP.
- 7. The standard product fluid temperature is 80°C(NBR).
- 8. Applicable for exhausting facility needed as poweroff, such as pneumatic control valve
- 9. UA series is most applicable for cylinder control valve, diaphragm control valve, and spring rebound type cylinder.
- 10. AC Voltage tolerance: ±10%.

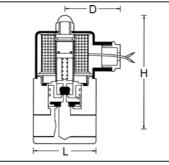
  DC Voltage tolerance: ±1%.

|           | MATERAIL                |
|-----------|-------------------------|
| PARTS     | MATERAIL                |
| Body      | Forge Brass             |
| Coil      | Special Copper Wire (H) |
| Core      | Stainless Steel         |
| Tube      | Stainless Steel         |
| Spring    | Stainless Steel         |
| Plug      | NBR                     |
| Diaphragm | NBR                     |

|     | MODEL | PIPE<br>SIZE | Cv   | ORIFICE | FLUID<br>TEMP .°C | MAX. OPERATING PRESSURE DIFF. KGF/CM2 DIMENSION(mm) |      |                         |    |     |    |      |  |
|-----|-------|--------------|------|---------|-------------------|---|------|-------------------------|----|-----|----|------|--|
| DIN |       |              |      |         |                   | WATER   | AIR  | VACUUM                  | L  | Н   | D  | (kg) |  |
|     | UA-8  | 1/4"         | 0.1  | 1.2 mm  | -5℃ ~ 80℃         | 0-10  | 0-10 | 0-10 <sup>-3</sup> Torr | 42 | 88  | 21 | 0.39 |  |
|     | UA-10 | 3/8"         | 0.12 | 1.5 mm  | -5℃ ~ 80℃         | 0-10  | 0-10 | 0-10 <sup>-3</sup> Torr | 53 | 105 | 49 | 0.7  |  |

#### **UAO** Series





- UAO series is multiplex-drive, piston guide, conductive normal close.
- 2. Valve body made of brass.
- 3. Standard voltage: 110VAC / 220VAC / 24VDC
- 4. Other special AC/DC can be made to client's order.
- 5. Screwed end: BSPT, NPT, BSP.
- 6. Applicable for high frequency movement.
- 7. Heavy oil must be pressing and heating.
- 8. UAO series is most applicable for sand blasting machine and high-pressure air/oil spray system.
- 9. The standard product fluid temperature is 80°C(NBR).
- 10. AC Voltage tolerance: ±10%.

DC Voltage tolerance: ± 1%.

|        | MATERAIL                |
|--------|-------------------------|
| PARTS  | MATERAIL                |
| Body   | Brass                   |
| Coil   | Special Copper Wire (H) |
| Core   | Stainless Steel         |
| Tube   | Stainless Steel         |
| Spring | Stainless Steel         |
| Plug   | NBR                     |
| Piston | Brass                   |

|     | MODEL  | PIPE<br>SIZE | Cv  | ORIFICE | FLUID<br>TEMP.°C | MAX. OPERATING PRESSURE DIFF. KGF/CM <sup>2</sup> DIMENSION(mm) |        |        |    |     |    |        |  |
|-----|--------|--------------|-----|---------|------------------|---|--------|--------|----|-----|----|--------|--|
| DIN |        |              |     |         |                  | AIR   | WATER  | OIL    | L  | Η   | D  | ( kg ) |  |
| •   | UAO-8  | 1/4"         | 2.5 | 10 mm   | -5°C ~ 80°C      | 0.5-15  | 0.5-15 | 0.5-15 | 49 | 110 | 49 | 1.1    |  |
|     | UAO-10 | 3/8"         | 2.5 | 10 mm   | -5°C ~ 80°C      | 0.5-15  | 0.5-15 | 0.5-15 | 49 | 110 | 49 | 1.1    |  |
|     | UAO-15 | 1/2"         | 2.5 | 10 mm   | -5°C ~ 80°C      | 0.5-15  | 0.5-15 | 0.5-15 | 49 | 110 | 49 | 1.1    |  |

LA.UAO Not for Fluid Of :

- 1. Liquid Status When Heat, Solid Status When Cool.
- 3. Corrosive Fluid

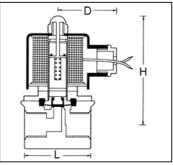
2. Viscosity Over 50 cst.



### UDC . UDC-TF Series (Corrosion Resistance)

### **UDC** Corrosion Resistance Series (PVC Body)





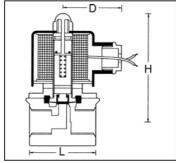
- UDC series is direct-drive, conductive to diaphragm, normal close.
- 2. Valve body made of PVC.
- 3. Small size and easy assembly.
- 4. Standard voltage: 110VAC / 220VAC / 24VDC
- 5. Other special AC/DC can be made to client's order.
- 6. The standard product fluid temperature is 80°C(NBR).
- 7. Screwed end: BSPT, NPT, BSP.
- 8. UDC can be operated directly without pressure
- AC Voltage tolerance: ±10%.
   DC Voltage tolerance: ±1%.

|           | MATERAIL                |
|-----------|-------------------------|
| PARTS     | MATERAIL                |
| Body      | PVC                     |
| Coil      | Special Copper Wire (H) |
| Core      | Stainless Steel         |
| Tube      | Stainless Steel         |
| Spring    | Stainless Steel         |
| Diaphragm | PTFE                    |
| Washer    | Synthetic Rubber        |

|     | PIPE C. ORIFICE |                         | FLUID    | MAX. OPERATING PRI | DIMENSION(mm) |     |     | WEIGHT |      |    |     |
|-----|-----------------|-------------------------|----------|--------------------|---------------|-----|-----|--------|------|----|-----|
| DIN | MODEL           | EL SIZE CV ORIFICE TEMP | TEMP .°C | WATER              | AIR           | L   | Н   | D      | (kg) |    |     |
|     | UDC-8           | 1/4"                    | 0.28     | 6.5 mm             | -5℃ ~ 80℃     | 0-1 | 0-1 | 54     | 103  | 48 | 0.6 |
| •   | UDC-10          | 3/8"                    | 0.28     | 6.5 mm             | -5℃ ~ 80℃     | 0-1 | 0-1 | 54     | 103  | 48 | 0.6 |
|     | UDC-15          | 1/2"                    | 0.28     | 6.5 mm             | -5°C ~ 80°C   | 0-1 | 0-1 | 54     | 103  | 48 | 0.6 |

### **UDC-TF Corrosion Resistance Series (TEFLON Body)**





- UDC-TF series is direct-drive, conductive to diaphragm, normal close.
- 2. Valve body made of PTFE.
- 3. Standard voltage: 110VAC / 220VAC / 24VDC
- 4. Other special AC/DC can be made to client's order.
- 5. The standard product fluid temperature is 185°C(PTFE).
- 6. Screwed end: BSPT, NPT, BSP.
- 7. The UDC-TF is for Strong acid and alkali.
- 8. AC Voltage tolerance: ±10%.

  DC Voltage tolerance: ±1%.

|           | MATERAIL                |
|-----------|-------------------------|
| PARTS     | MATERAIL                |
| Body      | PTFE                    |
| Coil      | Special Copper Wire (H) |
| Core      | Stainless Steel         |
| Tube      | Stainless Steel         |
| Spring    | Stainless Steel         |
| Diaphragm | PTFE                    |
| Washer    | Synthetic Rubber        |

|     | MODEL     | PIPE | ٥    | ODIFIOE | FLUID       | MAX, OPERATING PRI | DIME  | WEIGHT |     |    |        |
|-----|-----------|------|------|---------|-------------|--------------------|-------|--------|-----|----|--------|
| DIN |           | SIZE | Cv   | ORIFICE | TEMP .°C    | WATER              | AIR   | L      | Н   | D  | ( kg ) |
| •   | UDC-8-TF  | 1/4" | 0.28 | 6.5 mm  | -5℃ ~ 80℃   | 0-1                | 0-1   | 51     | 90  | 48 | 0.576  |
| •   | UDC-10-TF | 3/8" | 0.28 | 6.5 mm  | -5℃ ~ 80℃   | 0-1                | 0-1   | 51     | 90  | 48 | 0.567  |
| •   | UDC-15-TF | 1/2" | 0.28 | 6.5 mm  | -5℃ ~ 80℃   | 0-1                | 0-1   | 54     | 103 | 48 | 0.65   |
|     | UDC-20-TF | 3/4" | 4    | 13 mm   | -5°C ~ 80°C | 0-0.5              | 0-0.5 | 71     | 115 | 54 | 1.8    |
|     | UDC-25-TF | 1"   | 4    | 13 mm   | -5℃ ~ 80℃   | 0-0.5              | 0-0.5 | 71     | 115 | 54 | 1.8    |

 $\triangle$ 

UDC.UDC-TF Not for Fluid Of:

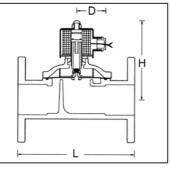
- 1. Liquid Status When Heat , Solid Status When Cool.
- 3. Corrosive Fluid
- 2. Prohibition applicable for high frequency movement.



### UW-F . SUW-F Series

#### **UW-F Series**





- 1. UW-F series is direct multiplex-drive, connected to diaphragm, conductive normal close.
- 2. Valve body made of 3/8"~1" brass or 1/4"~2" cast bronze.
- 3. UWF can be operated directly without pressure.
- 4. Standard voltage: 110VAC / 220VAC / 24VDC
- 5. Other special AC/DC can be made to clinet's order.
- 6. Flange end: JIS 10K, ANSI 150LBS or PN-16.
- 7. The standard product fluid temperature is 80°C(NBR).
- 8. Viton(130°C), Silicon(130°C).

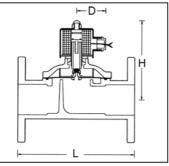
| 9. | AC Voltage tolerance: ±10%. |
|----|-----------------------------|
|    | DC Voltage tolerance: ± 1%. |

|           | MATERAIL                  |
|-----------|---------------------------|
| PARTS     | MATERAIL                  |
| Body      | Forge Brass / Cast Bronze |
| Coil      | Special Copper Wire (H)   |
| Core      | Stainless Steel           |
| Tube      | Stainless Steel           |
| Spring    | Stainless Steel           |
| Plug      | NBR, Viton, Silicon       |
| Diaphragm | NBR,Viton,Silicon         |

|     | MODEL  | PIPE  |     | ORIFICE | FLUID<br>TEMP.°C | MAX. OPERAT | ING PRESSURE | DIFF. KGF/CM <sup>2</sup> | DIMENSION(mm) |     |    | WEIGHT |
|-----|--------|-------|-----|---------|------------------|-------------|--------------|---------------------------|---------------|-----|----|--------|
| DIN |        | SIZE  | Cv  |         |                  | AIR         | WATER        | LIGHT OIL                 | L             | Н   | D  | (kg)   |
|     | UW-15F | 1/2"  | 4.5 | 15 mm   | -5°C ~ 80°C      | 0-7         | 0-5          | 0-5                       | 95            | 100 | 50 | 2.1    |
|     | UW-20F | 3/4"  | 8.6 | 20 mm   | -5°C ~ 80°C      | 0-7         | 0-5          | 0-5                       | 100           | 102 | 50 | 2.6    |
| •   | UW-25F | 1"    | 12  | 25 mm   | -5°C ~ 80°C      | 0-7         | 0-5          | 0-5                       | 150           | 106 | 50 | 4.3    |
| •   | UW-35F | 11/4" | 24  | 35 mm   | -5°C ~ 80°C      | 0-7         | 0-5          | 0-5                       | 155           | 140 | 58 | 5.9    |
| •   | UW-40F | 11/2" | 28  | 40 mm   | -5°C ~ 80°C      | 0-7         | 0-5          | 0-5                       | 155           | 140 | 58 | 6.8    |
|     | UW-50F | 2"    | 48  | 50 mm   | -5°C ~ 80°C      | 0-7         | 0-5          | 0-5                       | 200           | 170 | 58 | 8.8    |

#### **SUW-F Series**





- 1. SUW-F series is direct multiplex-drive, connected to diaphragm, normal close.
- 2. Valve body made of investment casting S/S 316.
- 3. SUW-F can be operated directly wothout pressure.
- 4. Standard voltage: 110VAC / 220VAC / 24VDC
- 5. Other special AC/DC can be made to client's order
- 6. Flange end: JIS 10K, ANSI 150LBS or PN-16
- 7. Viton(130°C), Silicon(130°C), NBR(80°C).
- 8. AC Voltage tolerance: ±10%. DC Voltage tolerance: ± 1%.

|           | MATERAIL                |
|-----------|-------------------------|
| PARTS     | MATERAIL                |
| Body      | CF8M                    |
| Coil      | Special Copper Wire (H) |
| Core      | Stainless Steel         |
| Tube      | Stainless Steel         |
| Spring    | Stainless Steel         |
| Plug      | NBR,Viton,Silicon       |
| Diaphragm | NBR, Viton, Silicon     |

|     | MODEL   | PIPE<br>SIZE | Cv  | ORIFICE | FLUID<br>TEMP .°C | MAX. OPERATING PRESSURE DIFF. KGF/CM <sup>2</sup> DIMENSION(mm) |     |           |        |     |     |    | WEIGHT |
|-----|---------|--------------|-----|---------|-------------------|---|-----|-----------|--------|-----|-----|----|--------|
| DIN |         |              |     |         |                   | WATER   | AIR | LIGHT OIL | VACUUM | L   | Н   | D  | ( kg ) |
|     | SUW-15F | 1/2"         | 4.5 | 15 mm   | -5°C ~ 80°C       | 0-5   | 0-7 | 0-5       |        | 110 | 100 | 36 | 1.9    |
|     | SUW-20F | 3/4"         | 8.6 | 20 mm   | -5°C ~ 80°C       | 0-5   | 0-7 | 0-5       |        | 120 | 102 | 36 | 2.4    |
|     | SUW-25F | 1"           | 12  | 25 mm   | -5°C ~ 80°C       | 0-5   | 0-7 | 0-5       |        | 150 | 106 | 36 | 3.6    |
|     | SUW-35F | 11/4"        | 24  | 35 mm   | -5°C ~ 80°C       | 0-5   | 0-7 | 0-5       |        | 170 | 140 | 58 | 6.1    |
|     | SUW-40F | 11/2"        | 28  | 40 mm   | -5°C ~ 80°C       | 0-5   | 0-7 | 0-5       |        | 170 | 140 | 58 | 6.4    |
|     | SUW-50F | 2"           | 48  | 50 mm   | -5°C ~ 80°C       | 0-5   | 0-7 | 0-5       |        | 210 | 170 | 58 | 9.3    |

UW-F.SUW-F Not for Fluid Of:

- 1. Liquid Status When Heat, Solid Status When Cool.
- 3. Corrosive Fluid

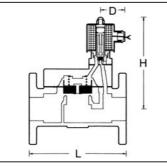
2. Viscosity Over 20 cst.



### **UWF. UWF-NO Series**

### **UWF Series**





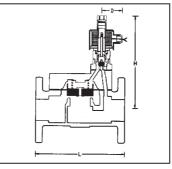
- UWF series is multiplex-drive, diaphragm guide, conductive normal close.
- 2. Valve body made of FC-20.
- 3. Standard voltage: 110VAC / 220VAC / 24VDC
- 4. Other special AC/DC can be made to client's order.
- 5. Flange end: JIS 10K, ANSI 150 LB or PN-16
- 6. The standard product fluid temperature is 80°C(NBR).
- 7. AC Voltage tolerance: ±10%. DC Voltage tolerance: ±1%.

|           | MATERAIL                |
|-----------|-------------------------|
| PARTS     | MATERAIL                |
| Body      | FC-20                   |
| Coil      | Special Copper Wire (H) |
| Core      | Stainless Steel         |
| Tube      | Stainless Steel         |
| Spring    | Stainless Steel         |
| Plug      | NBR                     |
| Diaphragm | NBR                     |

|     |         | PIPE  |     | ORIFICE |             | MAX. OPERATII | NG PRESSURE | DIFF. KGF/CM <sup>2</sup> | DIME | NSION | WEIGHT |        |
|-----|---------|-------|-----|---------|-------------|---------------|-------------|---------------------------|------|-------|--------|--------|
| DIN | MODEL   | SIZE  | Cv  | UKIFICE | TEMP .°C    | AIR           | WATER       | LIGHT OIL                 | L    | Н     | D      | ( kg ) |
|     | UW-35F  | 11/4" | 22  | 35 mm   | -5°C ~ 80°C | 0.2-8         | 0.2-8       |                           | 200  | 185   | 58     | 8.7    |
|     | UW-40F  | 11/2" | 30  | 40 mm   | -5°C ~ 80°C | 0.2-8         | 0.2-8       |                           | 200  | 185   | 58     | 8.8    |
|     | UW-50F  | 2"    | 40  | 50 mm   | -5°C ~ 80°C | 0.2-8         | 0.2-8       |                           | 210  | 203   | 58     | 11.2   |
|     | UW-65F  | 21/2" | 68  | 65 mm   | -5°C ~ 80°C | 0.2-8         | 0.2-8       |                           | 240  | 198   | 58     | 15.2   |
|     | UW-80F  | 3"    | 102 | 80 mm   | -5°C ~ 80°C | 0.2-8         | 0.2-8       |                           | 300  | 212   | 58     | 20.6   |
|     | UW-100F | 4"    | 180 | 100 mm  | -5°C ~ 80°C | 0.2-8         | 0.2-8       |                           | 340  | 228   | 58     | 31.5   |

### **UWF-NO Series**





- 1. UWF-NO series is multiplex-drive, diaphragm guide, conductive normal open.
- 2. Valve body made of FC-20.
- 3. Standard voltage: 110VAC / 220VAC / 24VDC
- 4. Other special AC/DC can be made to client's order.
- 5. Flange end: JIS 10K, ANSI 150 LB or PN-16
- 6. The standard product fluid temperature is 80°C(NBR).
- 8. AC Voltage tolerance: ±10%.

  DC Voltage tolerance: ±1%.

|           | MATERAIL                |
|-----------|-------------------------|
| PARTS     | MATERAIL                |
| Body      | FC-20                   |
| Coil      | Special Copper Wire (H) |
| Core      | Stainless Steel         |
| Tube      | Stainless Steel         |
| Spring    | Stainless Steel         |
| Plug      | NBR                     |
| Diaphragm | NBR                     |

|     |            | PIPE  | 0   | ORIFICE | FLUID       | MAX. OPERATII | NG PRESSURE | DIFF. KGF/CM <sup>2</sup> | DIME | WEIGHT |    |      |
|-----|------------|-------|-----|---------|-------------|---------------|-------------|---------------------------|------|--------|----|------|
| DIN | MODEL      | SIZE  | Cv  | ORIFICE | TEMP .°C    | AIR           | WATER       | LIGHT OIL                 | L    | Н      | D  | (kg) |
|     | UW-35F-NO  | 11/4" | 22  | 35 mm   | -5°C ~ 80°C | 0.2-8         | 0.2-8       |                           | 200  | 205    | 58 | 8.9  |
|     | UW-40F-NO  | 11/2" | 30  | 40 mm   | -5°C ~ 80°C | 0.2-8         | 0.2-8       |                           | 200  | 205    | 58 | 9.0  |
|     | UW-50F-NO  | 2"    | 40  | 50 mm   | -5℃ ~ 80℃   | 0.2-8         | 0.2-8       |                           | 210  | 223    | 58 | 11.4 |
|     | UW-65F-NO  | 21/2" | 68  | 65 mm   | -5°C ~ 80°C | 0.2-8         | 0.2-8       |                           | 240  | 218    | 58 | 15.4 |
|     | UW-80F-NO  | 3"    | 102 | 80 mm   | -5°C ~ 80°C | 0.2-8         | 0.2-8       |                           | 300  | 232    | 58 | 20.8 |
|     | UW-100F-NO | 4"    | 180 | 100 mm  | -5℃ ~ 80℃   | 0.2-8         | 0.2-8       |                           | 340  | 248    | 58 | 31.7 |

UWF.UWF-NO Not for Fluid Of :

- 1. Liquid Status When Heat , Solid Status When Cool.
- 3. Corrosive Fluid

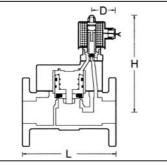
2. Viscosity Over 20 cst.



### **USF. USF-NO Series**

#### **USF Series**





- USF series is multiplex-dirve, piston guide, conductive normal close.
- 2. Valve body made of FC-20.
- 3. Standard voltage: 110VAC/ 220VAC/ 24VDC
- 4. Other special AC/DC can be made to clinet's order.
- 5. Flanged end to: JIS 10K, ANSI 150 LB or PN-16.
- 7. The standard product fluid temperature is 185°C(PTFE).
- 8. AC Voltage tolerance: ±10%.

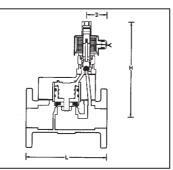
  DC Voltage tolerance: ±1%.

|           | MATERAIL                |
|-----------|-------------------------|
| PARTS     | MATERAIL                |
| Body      | FC-20                   |
| Coil      | Special Copper Wire (H) |
| Core      | Stainless Steel         |
| Tube      | Stainless Steel         |
| Spring    | Stainless Steel         |
| Plug      | PTFE                    |
| Bonne/Nut | PTFE                    |
| Piston    | Bronze                  |

| B.I.I. | MODEL   | PIPE  | <b>C</b> | ORIFICE  | FLUID        | MAX. OPERATIN | IG PRESSURE | DIFF. KGF/CM <sup>2</sup> | DIME | (mm) | WEIGHT |      |
|--------|---------|-------|----------|----------|--------------|---------------|-------------|---------------------------|------|------|--------|------|
| DIN    | MODEL   | SIZE  | Cv       | OKII IOL | TEMP .°C     | STEAM         | WATER       | AIR                       | L    | Н    | D      | (kg) |
|        | US-35F  | 11/4" | 22       | 35 mm    | -5°C ~ 185°C | 0.5-10        | 0.5-10      | 0.5-10                    | 200  | 206  | 58     | 10.5 |
|        | US-40F  | 11/2" | 30       | 40 mm    | -5°C ~ 185°C | 0.5-10        | 0.5-10      | 0.5-10                    | 200  | 206  | 58     | 11.7 |
|        | US-50F  | 2"    | 40       | 50 mm    | -5°C ~ 185°C | 0.5-10        | 0.5-10      | 0.5-10                    | 210  | 223  | 58     | 13.5 |
|        | US-65F  | 21/2" | 68       | 65 mm    | -5°C ~ 185°C | 0.5-10        | 0.5-10      | 0.5-10                    | 240  | 230  | 58     | 19.1 |
|        | US-80F  | 3"    | 100      | 80 mm    | -5°C ~ 185°C | 0.5-10        | 0.5-10      | 0.5-10                    | 300  | 249  | 58     | 27   |
|        | US-100F | 4"    | 175      | 100 mm   | -5°C ~ 185°C | 0.5-10        | 0.5-10      | 0.5-10                    | 340  | 264  | 58     | 39   |

### **USF-NO Series**





- 1. USF-NO series is multiplex-dirve, piston guide, conductive normal open.
- 2. Valve body made of FC-20.
- 3. Standard voltage: 110VAC/ 220VAC/ 24VDC
- 4. Other special AC/DC can be made to clinet`s order.
- 5. Flanged end to: JIS 10K, ANSI 150 LB or PN-16.
- 6. The standard product fluid temperature is 185°C(PTFE).
- 7. AC Voltage tolerance: ±10%.

  DC Voltage tolerance: ±1%.

|           | MATERAIL                |
|-----------|-------------------------|
| PARTS     | MATERAIL                |
| Body      | FC-20                   |
| Coil      | Special Copper Wire (H) |
| Core      | Stainless Steel         |
| Tube      | Stainless Steel         |
| Spring    | Stainless Steel         |
| Plug      | PTFE                    |
| Bonne/Nut | PTFE                    |
| Piston    | Bronze                  |

|     |                                     | PIPE  | ٥            | ODIFICE | FLUID        | JID MAX. OPERATING PRESSURE DIFF. KGF/CM <sup>2</sup> DIMENSION |       |       |     |      |    |        |  |
|-----|-------------------------------------|-------|--------------|---------|--------------|---|-------|-------|-----|------|----|--------|--|
| DIN | MODEL                               | SIZE  | Cv           | ORIFICE | TEMP .°C     | STEAM   | WATER | AIR   | L   | Н    | D  | ( kg ) |  |
|     | US-35F-NO                           | 11/4" | 22           | 35 mm   | -5°C ~ 185°C | 0.5-8   | 0.5-8 | 0.5-8 | 200 | 226  | 58 | 10.7   |  |
|     | US-40F-NO 11/2" 30 40 mm -5°C ~ 185 |       | -5°C ~ 185°C | 0.5-8   | 0.5-8        | 0.5-8   | 200   | 226   | 58  | 11.9 |    |        |  |
|     | US-50F-NO                           | 2"    | 40           | 50 mm   | -5℃ ~ 185℃   | 0.5-8   | 0.5-8 | 0.5-8 | 210 | 243  | 58 | 13.7   |  |
|     | US-65F-NO                           | 21/2" | 68           | 65 mm   | -5℃ ~ 185℃   | 0.5-8   | 0.5-8 | 0.5-8 | 240 | 250  | 58 | 19.3   |  |
|     | US-80F-NO                           | 3"    | 100          | 80 mm   | -5℃ ~ 185℃   | 0.5-8   | 0.5-8 | 0.5-8 | 300 | 269  | 58 | 27.2   |  |
|     | US-100F-NO 4" 175 100 mm -5℃ ~      |       | -5℃ ~ 185℃   | 0.5-8   | 0.5-8        | 0.5-8   | 340   | 284   | 58  | 39.2 |    |        |  |

<u>^</u>

**USF.USF-NO Not for Fluid Of:** 

- 1. Liquid Status When Heat , Solid Status When Cool.
- 3. Corrosive Fluid

2. Viscosity Over 20 cst.

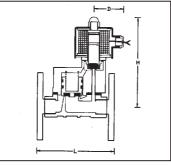
LITI-D SOLENOID VALVE



### SUS-F Series / Appendix 1 - Coil Type

#### **SUS-F Series**





- 1. SUS-F series is multiplex-drive, piston guide, conductive normal close.
- 2. Valve body made of investment casting S/S 316.
- 3. Standard voltage: 110VAC / 220VAC / 24VDC
- 4. Other special AC/DC can be made to client's order.
- 5. Screw end to BSPT, NPT, BSP.
- 6. The standard product fluid temperature is 185°C(PTFE).
- Applicable for working in high frequency movement location
- 8. AC Voltage tolerance: ±10%.

  DC Voltage tolerance: ±1%.

|           | MATERAIL                |
|-----------|-------------------------|
| PARTS     | MATERAIL                |
| Body      | CF8M                    |
| Coil      | Special Copper Wire (H) |
| Core      | Stainless Steel         |
| Tube      | Stainless Steel         |
| Spring    | Stainless Steel         |
| Plug      | PTFE                    |
| Bonne/Nut | PTFE                    |
| Piston    | CF8M                    |

|     |         | PIPE  |     | ODIFICE | FLUID        | MAX. OPE | RATING PI | RESSURE D | IFF. KGF/CM <sup>2</sup> | DIME | NSION | l(mm) | WEIGHT |
|-----|---------|-------|-----|---------|--------------|----------|-----------|-----------|--------------------------|------|-------|-------|--------|
| DIN | MODEL   | SIZE  | Cv  | ORIFICE | TEMP .°C     | WATER    | AIR       | STEAM     | LIGHT OIL                | L    | Н     | D     | ( kg ) |
|     | SUS-15F | 1/2"  | 4.0 | 17 mm   | -5°C ~ 185°C | 0.5-10   | 0.5-10    | 0.5-10    | 0.5-10                   | 120  | 120   | 48    | 2.5    |
| •   | SUS-20F | 3/4"  | 6.0 | 17 mm   | -5°C ~ 185°C | 0.5-10   | 0.5-10    | 0.5-10    | 0.5-10                   | 120  | 120   | 48    | 3      |
|     | SUS-25F | 1"    | 12  | 22 mm   | -5°C ~ 185°C | 0.5-10   | 0.5-10    | 0.5-10    | 0.5-10                   | 150  | 134   | 48    | 4.2    |
| •   | SUS-35F | 11/4" | 18  | 30 mm   | -5°C ~ 185°C | 0.5-10   | 0.5-10    | 0.5-10    | 0.5-10                   | 170  | 138   | 48    | 5.4    |
| •   | SUS-40F | 11/2" | 22  | 30 mm   | -5°C ~ 185°C | 0.5-10   | 0.5-10    | 0.5-10    | 0.5-10                   | 170  | 146   | 48    | 6      |
|     | SUS-50F | 2"    | 48  | 50 mm   | -5°C ~ 185°C | 0.5-10   | 0.5-10    | 0.5-10    | 0.5-10                   | 210  | 173   | 48    | 9.5    |

| Type              |                      | XL T   | ype                      |      |           | L Ty      | /pe    |      |  | M Ty   | /pe   |      |   | S T   | уре   |      |
|-------------------|----------------------|--|--------------------------|------|-----------|-----------|--------|------|--|--------|-------|------|---|-------|-------|------|
| Dimension<br>(mm) |                      | D1 D2 D3   | H                        |      |           | D1 D2 D3  | H      |      | D1   D2   H  |        |       |      | D1<br>D2<br>H   |       |       |      |
|                   | D1                   | D2   | D3                       | Н    | D1        | D2        | D3     | Н    | D1   | D2     | D3    | Н    | D1  | D2    | D3    | Н    |
|                   | Ø60.7                | Ø20.8  | Ø63.2                    | 53.1 | Ø42.3     | Ø 11.6    | Ø44.4  | 42.1 | Ø42.5  | Ø 16.5 | Ø44.4 | 34.4 | Ø37.3   | Ø14.2 | Ø37.5 | 29.2 |
| Model             | UW-35~50<br>UW-35F~1 | / UW-35~50<br>NO / SUW-<br>00F/ US-35<br>US-35~50F | 35~50NO /<br>5~100F / UV |      | UW-25 / U | D-10~15 / | SUW-25 |      | US-10(+NO) / UD-10(+NO) / UD-10H /<br>UW-10~20 (+NO) / SUW-15~25(+NO) /<br>UA-10 / UW-35-1~50 / UPS-15~25(+NO) /<br>SUS-15~50(+NO) / SUS-10(+NO) |        |       |      | UD-8 / UA-8 / UD-8NO / UD-6 / UD-6H /<br>UD-8H / US-8 / US-6 / US-6NO / US-8NO /<br>UD-6NO / SUS-8 / SUS-8NO / SUS-6 /<br>SUS-6NO |       |       |      |

| Type              |                        | Wa     | aterpr    | oof C    | oil  |    |           |   | D         | IN         |          |       |    | NASS  | 6 (EEx m   | II T4) |  |
|-------------------|------------------------|--------|-----------|----------|--|----|-----------|---|-----------|------------|----------|-------|----|-------|--|--------|--|
|                   |                        | S Type |           |          | M Type   |    |           | AC DC                                     |           |            |          |       |    |       |  |        |  |
| Dimension<br>(mm) | an an                  | D      | Н         | uni      | D  | H  | D         | D D D D D D D D D D D D D D D D D D D     |           |            |          |       |    | H     |  |        |  |
|                   | D                      | Г      | Н         | D        | L  | Н  | D         | Г   | Н         | D          | D1       | L     | Н  | D     | L  | Н      |  |
|                   | Ø 14.1                 | 50.5   | 32.4      | Ø 16.6   | 56.6   | 38 | Ø16.3     | 82  | 49.3      | Ø16.3      | Ø55.8    | 97    | 38 | Ø14.6 | 71.1   | 47.2   |  |
| Model             | UD-6 / UD<br>UA-8 / US |        | / UD-8H / | UW-35-1~ | 5(+NO) / UA<br>50(+NO) / U<br>~25(+NO) /<br>60 |    | / SUW-15~ | 0-10 / UD-10<br>25NO / UA-<br>5 / SUS-15~ | 10 / UW-3 | 5-1~50 / U | W-35-1~5 | 0NO / |    |       | Ø 14.6 71.1<br>UW-10~25 / SUW-15~25 / I<br>SUS-15~25 |        |  |



SUS-F Not for Fluid Of:

- 1. Liquid Status When Heat , Solid Status When Cool.
- 3. Corrosive Fluid

2. Viscosity Over 20 cst.

18 UIII-II SOLENOID VALVE

# solenoid Valve Of Explosion Proof

### PKS SKS PKW SKW









**PKW Series** 



SKS Series



**SKW Series** 

### **General Description:**

The **PKW**, **SKW**, **PKS**, **SKS** combination provides reliable explosion-proof for a wide range of applications.

The explosion-proof level is: **EEx mll T4**.

Power Requirement: 110VAC, 220VAC, 24VDC

#### Features:

These coils are approved according to EN 50020, DIN VDE 0170/0171.

#### Fluid:

Steam . Water . Air . Oil . Gas . Vacuum

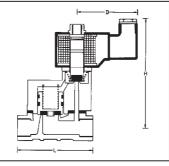




### PKS . SKS Of Explosion Proof Series

### PKS Of Explosion Proof Series(EEx mll T4)





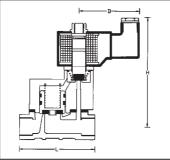
- PKS series is multiplex-drive, piston guide, conductive normal close.
- 2. Valve body made of forge bronze.
- 3. Standard voltage: 110VAC / 220VAC / 24VDC
- 4. Screwed end: BSPT, NPT, BSP.
- 5. The standard product fluid temperature is 185°C(PTFE).
- 6. Applicable for working in high frequency movement location.
- 7. AC Voltage tolerance: ±10%. DC Voltage tolerance: ±1%.

|           | MATERAIL        |
|-----------|-----------------|
| PARTS     | MATERAIL        |
| Body      | Forge Brass     |
| Coil      | EEx mll T4      |
| Core      | Stainless Steel |
| Tube      | Stainless Steel |
| Spring    | Stainless Steel |
| Plug      | PTFE            |
| Bonne/Nut | PTFE            |
| Piston    | Bronze          |

| DIN | MODEL  | PIPE |     | PIPE C.  |              | ORIFICE | FLUID  | MAX. OPERATING PRESSURE DIFF. KGF/CM <sup>2</sup> |        |  |  |  |
|-----|--------|------|-----|----------|--------------|---------|--------|---|--------|--|--|--|
|     |        | SIZE | Cv  | TEMP .°C | AIR          |         | WATER  | LIGHT OIL   | STEAM  |  |  |  |
|     | PKS-15 | 1/2" | 4.0 | 17 mm    | -5°C ~ 185°C | 0.5-10  | 0.5-10 | 0.5-10  | 0.5-10 |  |  |  |
|     | PKS-20 | 3/4" | 6.0 | 17 mm    | -5°C ~ 185°C | 0.5-10  | 0.5-10 | 0.5-10  | 0.5-10 |  |  |  |
|     | PKS-25 | 1"   | 12  | 22 mm    | -5℃ ~ 185℃   | 0.5-10  | 0.5-10 | 0.5-10  | 0.5-10 |  |  |  |

### SKS Of Explosion Proof Series(EEx mll T4)





- 1. SKS series is multiplex-drive, piston guide, conductive normal close.
- 2. Valve body made of investment casting S/S 316.
- 3. Standard voltage: 110VAC / 220VAC / 24VDC
- 4. Screwed end: BSPT, NPT, BSP.
- 5. The standard product fluid temperature is 185°C(PTFE).
- Applicable for working in high frequency movement location.
- 7. AC Voltage tolerance: ±10%. DC Voltage tolerance: ±1%.

|           | MATERAIL        |  |  |
|-----------|-----------------|--|--|
| PARTS     | MATERAIL        |  |  |
| Body      | #316            |  |  |
| Coil      | EEx mll T4      |  |  |
| Core      | Stainless Steel |  |  |
| Tube      | Stainless Steel |  |  |
| Spring    | Stainless Steel |  |  |
| Plug      | PTFE            |  |  |
| Bonne/Nut | PTFE            |  |  |
| Piston    | CF8M            |  |  |

| DIN | MODEL  | PIPE |     | ODIFICE | FLUID        | MAX. OPERATING PRESSURE DIFF. KGF/CM <sup>2</sup> |        |           |        |  |
|-----|--------|------|-----|---------|--------------|---|--------|-----------|--------|--|
|     |        | SIZE | Cv  | ORIFICE | TEMP .°C     | AIR   | WATER  | LIGHT OIL | STEAM  |  |
|     | SKS-15 | 1/2" | 4.0 | 17 mm   | -5°C ~ 185°C | 0.5-10  | 0.5-10 | 0.5-10    | 0.5-10 |  |
|     | SKS-20 | 3/4" | 6.0 | 17 mm   | -5℃ ~ 185℃   | 0.5-10  | 0.5-10 | 0.5-10    | 0.5-10 |  |
|     | SKS-25 | 1"   | 12  | 22 mm   | -5℃ ~ 185℃   | 0.5-10  | 0.5-10 | 0.5-10    | 0.5-10 |  |

<u>^</u>

PKS.SKS Not for Fluid Of:

- 1. Liquid Status When Heat , Solid Status When Cool.
- 3. Corrosive Fluid

2. Viscosity Over 20 cst.

20 UIII-II SOLENOID VALVE

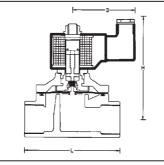




### PKW . SKW Of Explosion Proof Series

### PKW Of Explosion Proof Series(EEx mll T4)





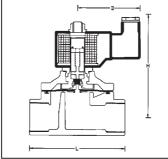
- 1. PKW series is direct multiplex drive, connected to diaphragm, normal close.
- 2. Valve body made of brass or cast bronze.
- 3. PKW cna be operated directly wothout pressure.
- 4. Standard Voltage: 110VAC / 220VAC / 24VDC
- 5. Screwed end: BSPT, NPT, BSP.
- 6. Viton(130°C), Silicon(130°C), NBR(80°C)
- 7. AC Voltage tolerance: ±10%. DC Voltage tolerance: ± 1%.

|           | MATERAIL            |
|-----------|---------------------|
| PARTS     | MATERAIL            |
| Body      | Forge Brass         |
| Coil      | EEx mll T4          |
| Core      | Stainless Steel     |
| Tube      | Stainless Steel     |
| Spring    | Stainless Steel     |
| Plug      | NBR,Viton,Silicon   |
| Diaphragm | NBR, Viton, Silicon |

| DIN MOD |        | PIPE<br>SIZE | Cv  | ORIFICE | FLUID<br>TEMP.°C | MAX. OPERATING PRESSURE DIFF. KGF/CM <sup>2</sup> |       |           |     |        |  |
|---------|--------|--------------|-----|---------|------------------|---|-------|-----------|-----|--------|--|
|         | MODEL  |              |     |         |                  | AIR   | WATER | LIGHT OIL | GAS | VACUUM |  |
|         | PKW-10 | 3/8"         | 2.4 | 15 mm   | -5°C ~ 80°C      | 0-7   | 0-5   | 0-5       | 0-5 |        |  |
|         | PKW-15 | 1/2"         | 4.5 | 15 mm   | -5°C ~ 80°C      | 0-7   | 0-5   | 0-5       | 0-5 |        |  |
|         | PKW-20 | 3/4"         | 8.6 | 20 mm   | -5°C ~ 80°C      | 0-7   | 0-5   | 0-5       | 0-5 |        |  |
|         | PKW-25 | 1"           | 12  | 25 mm   | -5°C ~ 80°C      | 0-7   | 0-5   | 0-5       | 0-5 |        |  |

### SKW Of Explosion Proof Series(EEx mll T4)





- 1. SKW series is direct multiplex-drive, conductive to diaphragm, normal close
- 2. Valve body made of investment casting S/S 316.
- 3. SKW can be operated directly without pressure.
- 4. Standard Voltage: 110VAC / 220VAC / 24VDC
- 5. Screwed end: BSPT, NPT, BSP.
- 6. Viton(130°C), Silicon(130°C), NBR(80°C).
- 7. AC Voltage tolerance: ±10%. DC Voltage tolerance: ± 1%.

|           | MATERAIL          |  |  |  |  |  |
|-----------|-------------------|--|--|--|--|--|
| PARTS     | MATERAIL          |  |  |  |  |  |
| Body      | #316              |  |  |  |  |  |
| Coil      | EEx mll T4        |  |  |  |  |  |
| Core      | Stainless Steel   |  |  |  |  |  |
| Tube      | Stainless Steel   |  |  |  |  |  |
| Spring    | Stainless Steel   |  |  |  |  |  |
| Plug      | NBR,Viton,Silicon |  |  |  |  |  |
| Diaphragm | NBR,Viton,Silicon |  |  |  |  |  |

| BIN | MODEL  | PIPE |     | ODIFIOE | FLUID       | MAX. OPERATING PRESSURE DIFF. KGF/CM <sup>2</sup> |       |           |     |        |  |
|-----|--------|------|-----|---------|-------------|---|-------|-----------|-----|--------|--|
| DIN |        | SIZE | Cv  | ORIFICE | TEMP .°C    | AIR   | WATER | LIGHT OIL | GAS | VACUUM |  |
|     | SKW-15 | 1/2" | 4.5 | 15 mm   | -5℃ ~ 80℃   | 0-7   | 0-5   | 0-5       | 0-5 |        |  |
|     | SKW-20 | 3/4" | 8.6 | 20 mm   | -5°C ~ 80°C | 0-7   | 0-5   | 0-5       | 0-5 |        |  |
|     | SKW-25 | 1"   | 12  | 25 mm   | -5°C ~ 80°C | 0-7   | 0-5   | 0-5       | 0-5 |        |  |

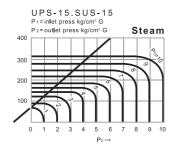
PKW.SKW Not for Fluid Of:

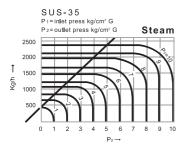
- 1. Liquid Status When Heat, Solid Status When Cool.
- 3. Corrosive Fluid

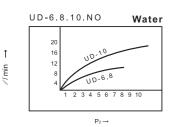
2. Viscosity Over 20 cst.

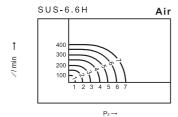


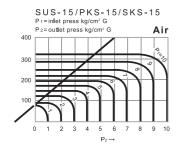
### **Appendix 2 - Flow Chart**

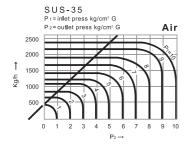


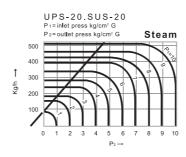


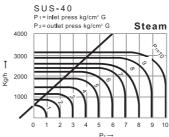


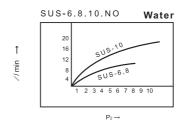


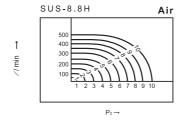


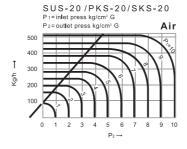


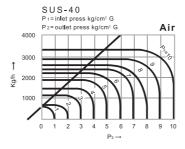


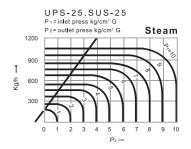


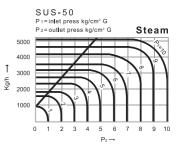


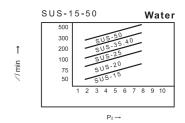


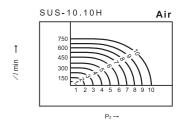


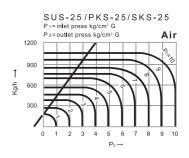


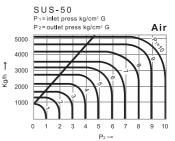






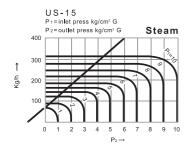


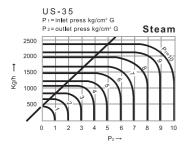


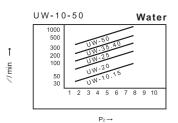


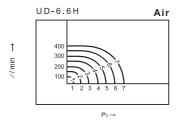


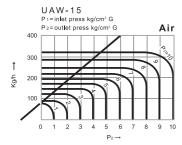
### **Appendix 2 - Flow Chart**

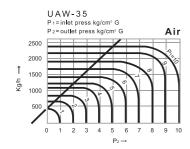


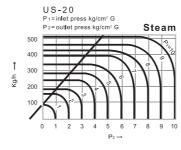


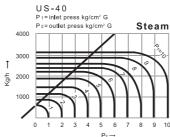


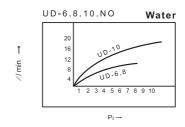


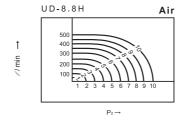


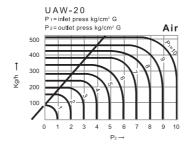


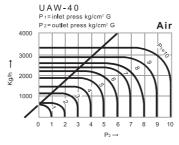


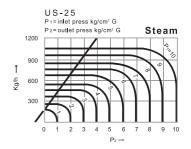


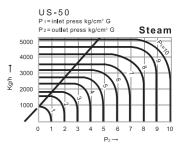


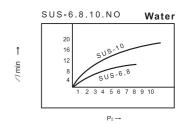


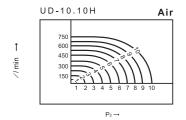


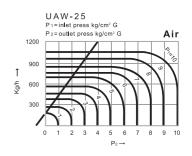


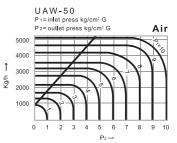












Water: Diff. Press KGF/CM<sup>2</sup>



### **Appendix 2 - Flow Chart**

