



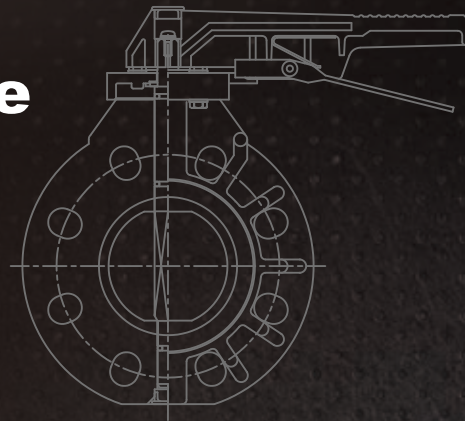
ESLON VALVES CATALOGUE

Manual Operation Valves / Automatic Operation Valves



ESLON VALVE Catalogue

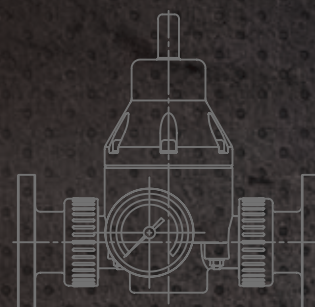
Manual Operation and Automatic Operation Valves



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Manual Operation Valves

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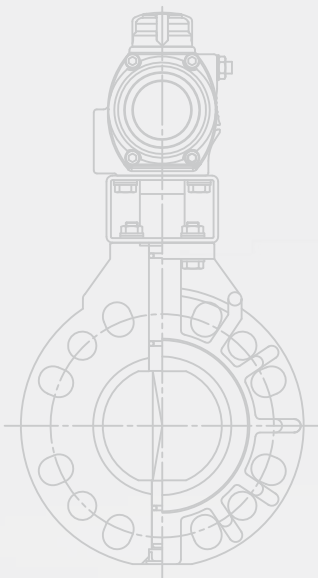
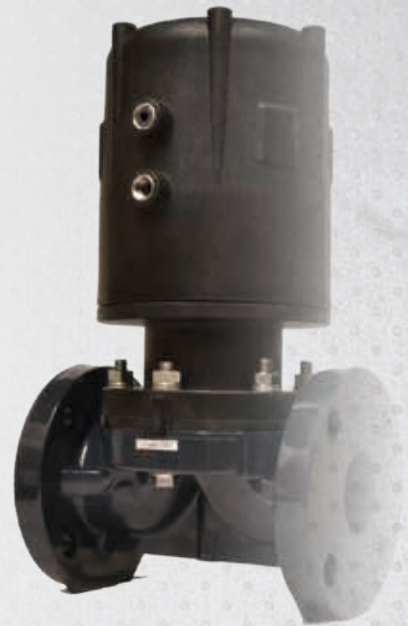
Automatic Operation Valves

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CAUTION IN USE OF ESLON VALVES



ESLON VALVE Product list

Manual Operation Valves

| DIAPHRAGM VALVE | | | | | | | | | | ▶▶▶▶ P13 |
|--------------------|---------------|---------|----|------|---------------|---------|---------------|------|---------------|----------|
| Connection | Flange | | | | TS Socket | | Thread | | Butt Spigot | |
| Body Material | PVC | HT·CPVC | PP | PVDF | PVC | HT·CPVC | PVC | PVDF | PVDF | |
| Diaphragm Material | EPDM/FKM/PTFE | | | | EPDM/FKM/PTFE | | EPDM/FKM/PTFE | | EPDM/FKM/PTFE | |
| O-ring Material | — | | | | EPDM/FKM | | EPDM/FKM | | EPDM/FKM | |
| 15A | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| 20A | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| 25A | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| 32A | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| 40A | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| 50A | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| 65A | ● | ● | ● | ● | — | — | — | — | — | |
| 80A | ● | ● | ● | ● | — | — | — | — | — | |
| 100A | ● | ● | ● | ● | — | — | — | — | — | |
| 125A | ● | — | ● | ● | — | — | — | — | — | |
| 150A | ● | — | ● | ● | — | — | — | — | — | |
| 200A | ● | — | ● | ● | — | — | — | — | — | |
| 250A | ● | — | ● | ● | — | — | — | — | — | |

※Diaphragm Material of FKM:15~150A

| DEAD SPACE FREE TEE-TYPE DIAPHRAGM VALVE | | | | | | ▶▶▶▶ P17 |
|--|--------------------------------------|---------|-------------------|---------|--------|----------|
| Connection | TS Socket × Flange | | TS Socket × Union | | Flange | |
| Body Material | PVC | HT·CPVC | PVC | HT·CPVC | PVDF | |
| Diaphragm Material | EPDM*/PTFE ※Only 20×16, 50×25, 65×40 | | | | | |
| 20A×16A | ● | ● | ● | ● | ● | |
| 25A×25A | ● | ● | ● | ● | ● | |
| 50A×25A | ● | ● | ● | ● | ● | |
| 65A×40A | ● | ● | ● | ● | ● | |

| BALL VALVE | | | | | | | | | | ▶▶▶▶ P19 |
|-----------------|----------|---------|----|------|-----------|---------|----------|------|-------------|----------|
| Connection | Flange | | | | TS Socket | | Thread | | Butt Spigot | |
| Body Material | PVC | HT·CPVC | PP | PVDF | PVC | HT·CPVC | PVC | PVDF | PVDF | |
| O-ring Material | EPDM/FKM | | | | EPDM/FKM | | EPDM/FKM | | EPDM/FKM | |
| 15A | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| 20A | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| 25A | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| 32A | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| 40A | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| 50A | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| 65A | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| 80A | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| 100A | ● | ● | ● | ● | ● | ● | ● | ● | ● | |

※Nominal diameter 15,32,80 can connect with 16,30,75.

Manual Operation Valves

COMPACT BALL VALVE ▶▶▶▶ P23

| Connection | TS Socket | Thread |
|-----------------|-----------|----------|
| O-ring Material | EPDM/FKM | EPDM/FKM |
| 13A | ● | ● |
| 15A | ● | ● |
| 20A | ● | ● |

LOCK BALL VALVE ▶▶▶▶ P24

| Connection | TS Socket | Thread |
|-----------------|-----------|----------|
| O-ring Material | EPDM/FKM | EPDM/FKM |
| 25A | ● | ● |
| 32A | ● | ● |
| 40A | ● | ● |
| 50A | ● | ● |

MINI BALL VALVE ▶▶▶▶ P25

| Connection | Male Thread 3/8, 1/4, 1/2 | Female Thread 3/8, 1/4 | Hose | Straight | Female Thread 1/2 | TS Socket |
|--------------------------------|------------------------------|---------------------------|----------|----------|----------------------|-----------|
| Ball Seat · O-ring Material | EPDM/FKM | EPDM/FKM | EPDM/FKM | EPDM/FKM | EPDM/FKM | EPDM/FKM |
| 6A | ● | ● | ● | ● | — | — |
| 13A | — | — | — | — | — | ● |
| 15A | — | — | — | — | ● | ● |

3-WAY BALL VALVE ▶▶▶▶ P27

| Connection | Flange | TS Socket | Thread |
|-----------------|----------|-----------|--------|
| Body Material | PVC | | |
| O-ring Material | EPDM/FKM | | |
| 15A | ● | ● | ● |
| 20A | ● | ● | ● |
| 25A | ● | ● | ● |
| 40A | ● | ● | ● |
| 50A | ● | ● | ● |

BUTTERFLY VALVE LEVER TYPE ▶▶▶▶ P29

| Connection | Wafer | | |
|-----------------------------|-----------------|-------|-----------|
| Body × Disc Material | PVC×PP | PP×PP | PVDF×PVDF |
| Seat ring · O-ring Material | EPDM/FKM | | |
| Stem Material | SUS420J2/SUS316 | | |
| 40A | ● | ● | ● |
| 50A | ● | ● | ● |
| 65A | ● | ● | ● |
| 80A | ● | ● | ● |
| 100A | ● | ● | ● |
| 125A | ● | ● | ● |
| 150A | ● | ● | ● |
| 200A | ● | ● | ● |

BUTTERFLY VALVE GEAR TYPE ▶▶▶▶ P31

| Connection | Wafer | | |
|-----------------------------|-----------------|-------|-----------|
| Body × Disc Material | PVC×PP | PP×PP | PVDF×PVDF |
| Seat ring · O-ring Material | EPDM/FKM | | |
| Stem Material | SUS420J2/SUS316 | | |
| 40A | ● | ● | ● |
| 50A | ● | ● | ● |
| 65A | ● | ● | ● |
| 80A | ● | ● | ● |
| 100A | ● | ● | ● |
| 125A | ● | ● | ● |
| 150A | ● | ● | ● |
| 200A | ● | ● | ● |
| 250A | ● | ● | ● |
| 300A | ● | ● | ● |
| 350A | ● | ● | ● |
| 400A | ● | ● | ● |
| 450A | ● | ● | ● |
| 500A | ● | ● | ● |
| 600A | ● | ● | ● |

CHECK VALVE SWING TYPE ▶▶▶▶ P33

| Connection | Flange | | |
|-----------------|-----------|----|------|
| Body Material | PVC | PP | PVDF |
| Gasket Material | EPDM/PTFE | | |
| O-ring Material | EPDM/FKM | | |
| 15A | ● | ● | ● |
| 20A | ● | ● | ● |
| 25A | ● | ● | ● |
| 32A | ● | ● | ● |
| 40A | ● | ● | ● |
| 50A | ● | ● | ● |
| 65A | ● | ● | ● |
| 80A | ● | ● | ● |
| 100A | ● | ● | ● |
| 125A | ● | ● | ● |
| 150A | ● | ● | ● |
| 200A | ● | ● | ● |

ESLON VALVE Product list

Manual Operation Valves

| CHECK VALVE BALL TYPE ▶▶▶▶P35 | | | |
|-------------------------------|-------------|-----------|--------|
| Connection | Flange | TS Socket | Thread |
| Body Material | PVC/HT-CPVC | | PVC |
| Seat Material | EPDM/FKM | | |
| 15A | ● | ● | ● |
| 20A | ● | ● | ● |
| 25A | ● | ● | ● |
| 32A | ● | ● | ● |
| 40A | ● | ● | ● |
| 50A | ● | ● | ● |
| 65A | ● | ● | ● |
| 80A | ● | ● | ● |
| 100A | ● | ● | ● |

| CHECK VALVE LIFT TYPE ▶▶▶▶P37 | | | | |
|-------------------------------|----------|-----------|--------|----------|
| Connection | Flange | TS Socket | Thread | Union TS |
| Body Material | PVC | | | |
| O-ring Material | EPDM/FKM | | | |
| 15A | ● | ● | ● | ● |
| 20A | ● | ● | ● | ● |
| 25A | ● | ● | ● | ● |
| 32A | ● | ● | ● | ● |
| 40A | ● | ● | ● | ● |
| 50A | ● | ● | ● | ● |

| GLOBE VALVE ▶▶▶▶P39 | | | |
|---------------------|--------|-----------|--------|
| Connection | Flange | TS Socket | Thread |
| Body Material | PVC | | |
| 15A | ● | ● | ● |
| 20A | ● | ● | ● |
| 25A | ● | ● | ● |
| 32A | ● | — | ● |
| 40A | ● | — | ● |
| 50A | ● | — | ● |
| 65A | ● | — | — |
| 80A | ● | — | — |
| 100A | ● | — | — |

| YP BALL VALVE ▶▶▶▶P41 | | | |
|-----------------------|----------|-----------|--------|
| Connection | Flange | TS Socket | Thread |
| Body Material | PVC | | |
| O-ring Material | EPDM/FKM | | |
| 15A | ● | ● | ● |
| 20A | ● | ● | ● |
| 25A | ● | ● | ● |
| 32A | ● | ● | ● |
| 40A | ● | ● | ● |
| 50A | ● | ● | ● |

| RELIEF VALVE ▶▶▶▶P43 | | | |
|----------------------|-------------|-----------|----------|
| Connection | Flange | TS Socket | Thread |
| Body Material | PVC/PP/PVDF | PVC | PVC/PVDF |
| O-ring Material | EPDM/FKM | | |
| 13A | — | ● | ● |
| 15A | ● | ● | ● |
| 20A | ● | ● | ● |
| 25A | ● | ● | ● |
| 32A | ● | ● | ● |
| 40A | ● | ● | ● |
| 50A | ● | ● | ● |

| PRESSURE REGULATION VALVE ▶▶▶▶P46 | | | |
|-----------------------------------|-------------|-----------|----------|
| Connection | Flange | TS Socket | Thread |
| Body Material | PVC/PP/PVDF | PVC | PVC/PVDF |
| O-ring Material | EPDM/FKM | | |
| 13A | — | ● | ● |
| 15A | ● | ● | ● |
| 20A | ● | ● | ● |
| 25A | ● | ● | ● |
| 32A | ● | ● | ● |
| 40A | ● | ● | ● |
| 50A | ● | ● | ● |

※Nominal diameter 15,32,80 can connect with 16,30,75.

Manual Operation Valves

| FOOT VALVE ▶▶▶▶P49 | | | |
|---------------------------|----------|-----------|--------|
| Connection | Flange | TS Socket | Thread |
| Body Material | PVC/HT | | PVC |
| Seat Material | EPDM/FKM | | |
| 15A | ● | ● | ● |
| 20A | ● | ● | ● |
| 25A | ● | ● | ● |
| 32A | ● | ● | ● |
| 40A | ● | ● | ● |
| 50A | ● | ● | ● |
| 65A | ● | ● | ● |
| 80A | ● | ● | ● |
| 100A | ● | ● | ● |

| STRAINER ▶▶▶▶F51 | | | | |
|-------------------------|----------|-----------|--------|----------|
| Connection | Flange | TS Socket | Thread | Union TS |
| Body Material | PVC | | | |
| O-ring Material | EPDM/FKM | | | |
| 15A | ● | ● | ● | ● |
| 20A | ● | ● | ● | ● |
| 25A | ● | ● | ● | ● |
| 32A | ● | ● | ● | ● |
| 40A | ● | ● | ● | ● |
| 50A | ● | ● | ● | ● |
| 65A | ● | — | — | — |
| 80A | ● | — | — | — |
| 100A | ● | — | — | — |

ESLON VALVE Product list

Automatic Operation Valves

| PNEUMATIC DIAPHRAGM VALVE TYPE F ▶▶▶▶P53 | | | | | | | | | |
|--|--|---------|----|------|-----------|---------|-----------|------|-------------|
| Connection | Flange | | | | TS Socket | | Thread | | Butt Spigot |
| Body Material | PVC | HT·CPVC | PP | PVDF | PVC | HT·CPVC | PVC | PVDF | PVDF |
| Diaphragm Material | EPDM/PTFE | | | | EPDM/PTFE | | EPDM/PTFE | | EPDM/PTFE |
| Operation | Double action/Air to open/Air to close | | | | | | | | |
| 15A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 20A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 25A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 32A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 40A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 50A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 65A | ● | ● | ● | ● | — | — | — | — | — |
| 80A | ● | ● | ● | ● | — | — | — | — | — |
| 100A | ● | ● | ● | ● | — | — | — | — | — |

| PNEUMATIC BALL VALVE TYPE S ▶▶▶▶P56 | | | | | | | | | |
|-------------------------------------|--|---------|----|------|-----------|---------|----------|------|-------------|
| Connection | Flange | | | | TS Socket | | Thread | | Butt Spigot |
| Body Material | PVC | HT·CPVC | PP | PVDF | PVC | HT·CPVC | PVC | PVDF | PVDF |
| O-ring Material | EPDM/FKM | | | | EPDM/FKM | | EPDM/FKM | | EPDM/FKM |
| Operation | Double action/Air to open/Air to close | | | | | | | | |
| 15A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 20A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 25A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 32A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 40A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 50A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 65A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 80A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 100A | ● | ● | ● | ● | ● | ● | ● | ● | ● |

| PNEUMATIC BUTTERFLY VALVE TYPE S ▶▶▶▶P59 | | | |
|--|--|-------|-----------|
| Connection | Wafer | | |
| Body × Disc Material | PVC×PP | PP×PP | PVDF×PVDF |
| Seat ring · O-ring Material | EPDM/FKM | | |
| Stem Material | SUS420J2/SUS316 | | |
| Operation | Double action/Air to open/Air to close | | |
| 40A | ● | ● | ● |
| 50A | ● | ● | ● |
| 65A | ● | ● | ● |
| 80A | ● | ● | ● |
| 100A | ● | ● | ● |
| 125A | ● | ● | ● |
| 150A | ● | ● | ● |
| 200A | ● | ● | ● |
| 250A | ● | ● | ● |
| 300A | ● | ● | ● |
| 350A | ● | ● | ● |
| 400A | ● | ● | ● |

| AIR OPERATION VALVE ▶▶▶▶P61 | |
|-----------------------------|--|
| Connection | TS Socket |
| Body Material | PVC |
| O-ring Material | EPDM/FKM |
| Operation | Double action/Air to open/Air to close |
| 15A | ● |
| 20A | ● |
| 25A | ● |
| 32A | ● |
| 40A | ● |
| 50A | ● |
| 65A | ● |

Automatic Operation Valves

ELECTRIC DIAPHRAGM VALVE TYPE KS

▶▶▶▶P63

| Connection | Flange | | | | TS Socket | | Thread | | Butt Spigot |
|--------------------|---------------|---------|----|------|---------------|---------|---------------|------|---------------|
| Body Material | PVC | HT·CPVC | PP | PVDF | PVC | HT·CPVC | PVC | PVDF | PVDF |
| Diaphragm Material | EPDM/FKM/PTFE | | | | EPDM/FKM/PTFE | | EPDM/FKM/PTFE | | EPDM/FKM/PTFE |
| 15A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 20A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 25A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 32A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 40A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 50A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 65A | ● | ● | ● | ● | — | — | — | — | — |
| 80A | ● | ● | ● | ● | — | — | — | — | — |
| 100A | ● | ● | ● | ● | — | — | — | — | — |
| 125A | ● | — | ● | ● | — | — | — | — | — |
| 150A | ● | — | ● | ● | — | — | — | — | — |

ELECTRIC BALL VALVE TYPE K

▶▶▶▶P65

| Connection | Flange | | | | TS Socket | | Thread | | Butt Spigot |
|-----------------|----------|---------|----|------|-----------|---------|----------|------|-------------|
| Body Material | PVC | HT·CPVC | PP | PVDF | PVC | HT·CPVC | PVC | PVDF | PVDF |
| O-ring Material | EPDM/FKM | | | | EPDM/FKM | | EPDM/FKM | | EPDM/FKM |
| 15A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 20A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 25A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 32A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 40A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 50A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 65A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 80A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 100A | ● | ● | ● | ● | ● | ● | ● | ● | ● |

ELECTRIC BALL VALVE TYPE N · Standard type

▶▶▶▶P67

| Connection | Flange | | | | TS Socket | | Thread | | Butt Spigot |
|-----------------|----------|---------|----|------|-----------|---------|----------|------|-------------|
| Body Material | PVC | HT·CPVC | PP | PVDF | PVC | HT·CPVC | PVC | PVDF | PVDF |
| O-ring Material | EPDM/FKM | | | | EPDM/FKM | | EPDM/FKM | | EPDM/FKM |
| 15A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 20A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 25A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 32A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 40A | ● | ● | ● | ● | ● | ● | ● | ● | ● |

※Nominal diameter 15,32,80 can connect with 16,30,75.

ESLON VALVE Product list

Automatic Operation Valves

| ELECTRIC BALL VALVE TYPE N • High speed type ▶▶▶▶P67 | | | | | | | | | |
|--|----------|---------|----|------|-----------|---------|----------|------|-------------|
| Connection | Flange | | | | TS Socket | | Thread | | Butt Spigot |
| Body Material | PVC | HT·CPVC | PP | PVDF | PVC | HT·CPVC | PVC | PVDF | PVDF |
| O-ring Material | EPDM/FKM | | | | EPDM/FKM | | EPDM/FKM | | EPDM/FKM |
| 15A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 20A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 25A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 32A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 40A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 50A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 65A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 80A | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 100A | ● | ● | ● | ● | ● | ● | ● | ● | ● |

| 3-WAY BALL VALVE ▶▶▶▶P69 | | | |
|--------------------------|----------|-----------|--------|
| Connection | Flange | TS Socket | Thread |
| Body Material | PVC | | |
| O-ring Material | EPDM/FKM | | |
| 15A | ● | ● | ● |
| 20A | ● | ● | ● |
| 25A | ● | ● | ● |
| 40A | ● | ● | ● |
| 50A | ● | ● | ● |

| ELECTRIC BALL VALVE TYPE K ▶▶▶▶P65 | | | |
|------------------------------------|-----------------|-------|-----------|
| Body × Disc Material | PVC×PP | PP×PP | PVDF×PVDF |
| O-ring Material | EPDM/FKM | | |
| Stem Material | SUS420J2/SUS316 | | |
| 40A | ● | ● | ● |
| 50A | ● | ● | ● |
| 65A | ● | ● | ● |
| 80A | ● | ● | ● |
| 100A | ● | ● | ● |
| 125A | ● | ● | ● |
| 150A | ● | ● | ● |
| 200A | ● | ● | ● |
| 250A | ● | ● | ● |
| 300A | ● | ● | ● |

※Nominal diameter 15,32,80 can connect with 16,30,75.

Automatic Operation Valves

ELECTRIC BUTTERFLY VALVE TYPE K ▶▶▶▶P71

| Connection | Wafer | | |
|-----------------------------|-----------------|-------|-----------|
| Body x Disc Material | PVCxPP | PPxPP | PVDFxPVDF |
| Seat ring · O-ring Material | EPDM/FKM | | |
| Stem Material | SUS420J2/SUS316 | | |
| 40A | ● | ● | ● |
| 50A | ● | ● | ● |
| 65A | ● | ● | ● |
| 80A | ● | ● | ● |
| 100A | ● | ● | ● |
| 125A | ● | ● | ● |
| 150A | ● | ● | ● |
| 200A | ● | ● | ● |
| 250A | ● | ● | ● |
| 300A | ● | ● | ● |

ELECTRIC YP BALL VALVE ▶▶▶▶P75

| Connection | Flange | TS Socket | Thread |
|-----------------|----------|-----------|--------|
| Body Material | PVC | | |
| O-ring Material | EPDM/FKM | | |
| 15A | ● | ● | ● |
| 20A | ● | ● | ● |
| 25A | ● | ● | ● |
| 32A | ● | ● | ● |
| 40A | ● | ● | ● |
| 50A | ● | ● | ● |

Accessories for pneumatic valve

| | |
|------------------------------|---|
| Solenoid valve | To open/close the valve with on/off power supply . |
| Limit switch | To output a limit signal when valve is fully opened or fully closed. |
| Filter regulator | To regulate the air pressure and remove dust, water and oil in air. |
| Speed controller | To control the open/close speed of the valve with adjusting air volume to the actuator. |
| Electro-pneumatic positioner | To control the opening degree the valve by current signal. |
| Manual override | To open / close the valve with hand. |

Protection Rating



Classification of First Digit

| Index | Definition |
|-------|--|
| 0 | No protection against contact, solid particles and bodies. |
| 1 | Protection against ingress of solid objects greater than 50 mm in diameter. |
| 2 | Protection against ingress of solid objects greater than 12.5 mm in diameter. |
| 3 | Protection against ingress of solid objects greater than 2.5 mm in diameter, e.g. tip of tool, wire etc. |
| 4 | Protection against ingress of solid objects greater than 1 mm in diameter, e.g. wire & copper band. |
| 5 | Protection from powder dust ingress (prevent malfunction even under presence of powder dust). |
| 6 | Protection from total dust ingress. |

Classification of Second Digit

| Index | Definition |
|-------|---|
| 0 | No protection against water. |
| 1 | Protection against vertical water drops. |
| 2 | Protected against vertically falling water drops when enclosure tilted up to 15°. |
| 3 | Protection against spray water from an angle of 60° to vertical line. |
| 4 | Protection against splash water from all directions. |
| 5 | Protection against water jets from any angle. |
| 6 | Protection against powerful water jets from any angle. |
| 7 | Protection against water dip in certain level of pressure and length of time. |
| 8 | Protection against immersion which the condition is decided between customer & manufacturer (in severe condition comparing to no.7) |

Materials

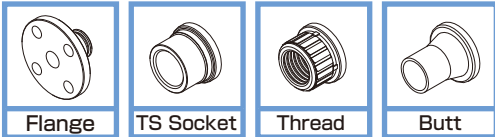
Valve body

| | | Operating temperature |
|----------|---|-----------------------|
| PVC | Polyvinyl chloride | 0°C~60°C |
| HT(CPVC) | High Temp. (chlorinated) polyvinyl chloride | 0°C~90°C |
| PP | Polypropylene | -20°C~90°C |
| PVDF | Polyvinylidene fluoride | -20°C~120°C |
| GF-PP | Glass fiber reinforced polypropylene | -20°C~90°C |

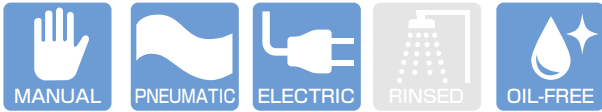
Sealing material

| | |
|--------|--------------------------------------|
| EPDM | Ethylene-propylene-diene ter-polymer |
| FKM | Fluororubber |
| FKM-FB | Acid-proof fluororubber |
| PTFE | Polytetrafluoroethylene |





JIS ANSI/ASME/ASTM DIN/ISO



Operating Temperature(°C)

| | Flange Type | Union Type |
|---------|-------------|------------|
| PVC | 0 ~ 60 | 0 ~ 50 |
| HT-CPVC | 0 ~ 90 | 0 ~ 90 |
| PP | 0 ~ 90 | |
| PVDF | 0 ~ 120 | 0 ~ 100 |



Flange Type

True Union Type
(Thread Type·TS Socket Type and Butt Spigot Type)

ESLON DIAPHRAGM VALVE

Feature

- Excellent sealing performance with optimized diaphragm design even by low handle operating torque.
- Improved diaphragm in compression set steadily prevents leakage.
- Available customized version for the applications in high temperature.
- Visual indicator at the handle top for open-close position and prevention of over tightening.
- Drip-proof and dust-proof mechanism for prevention of entering water and dust in bonnet.
- Flat at the bottom of flange and insert nuts for prevention of tumbling and for better workability in plumbing.

⚠ Important Notes

- Fluid containing slurry, solid, sediment, or crystallized fluid might disable sealing.

Recommended Torque for Fastening Diaphragm

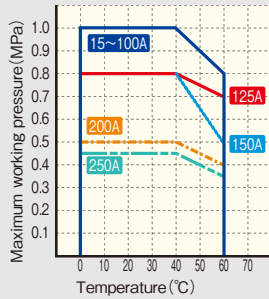
· Please periodically check tightening torque of the bolts for assembling diaphragm as the bolts might be loosen by temperature variation or compression set of diaphragm. Please re-tighten the bolt up to recommended torque shown in the table below in case the bolts loosen, but be careful not to over-tighten.

| | Unit:N·m (kgf·cm) | | | | | | | | | |
|--------------------|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|
| Size (A) | 15~32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 |
| Recommended Torque | 8 {80} | 20 {200} | 25 {250} | 30 {300} | 35 {350} | 50 {500} | 60 {600} | 70 {700} | 80 {800} | 100 {1000} |

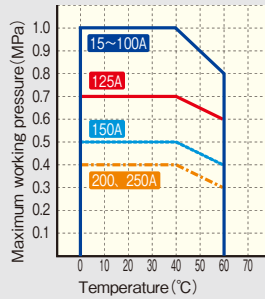
Maximum Working Pressure - Temperature Rating

Body material : PVC

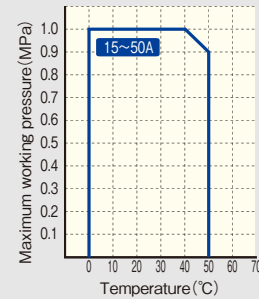
Diaphragm : EPDM · FKM
Connection : Flanged



Diaphragm : PTFE
Connection : Flanged

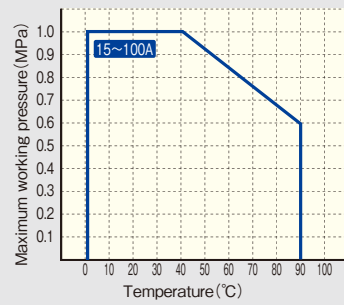


Diaphragm : EPDM · FKM · PTFE
Connection : TS Socket · Threaded

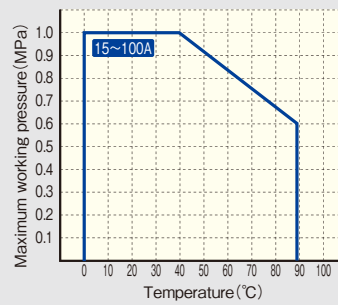


Body material : HT · CPVC

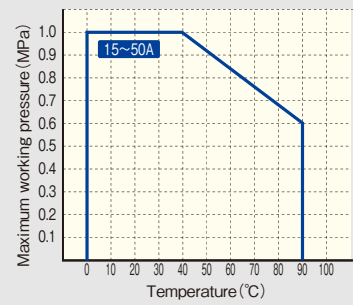
Diaphragm : EPDM · FKM
Connection : Flanged



Diaphragm : PTFE
Connection : Flanged

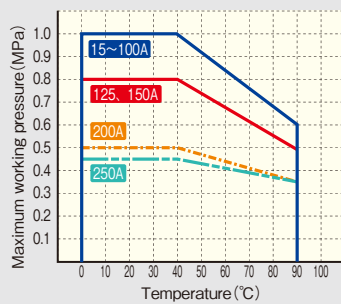


Diaphragm : EPDM · FKM · PTFE
Connection : TS Socket

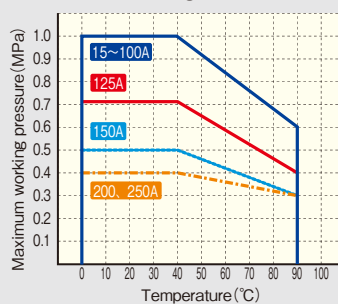


Body material : PP

Diaphragm : EPDM · FKM
Connection : Flanged

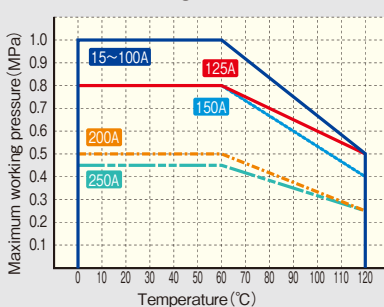


Diaphragm : PTFE
Connection : Flanged

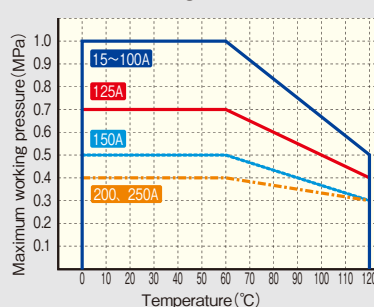


Body material : PVDF

Diaphragm : EPDM · FKM
Connection : Flanged



Diaphragm : PTFE
Connection : Flanged



Diaphragm : EPDM · FKM · PTFE
Connection : Butt Spigot · Threaded

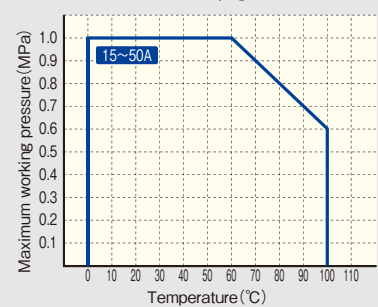
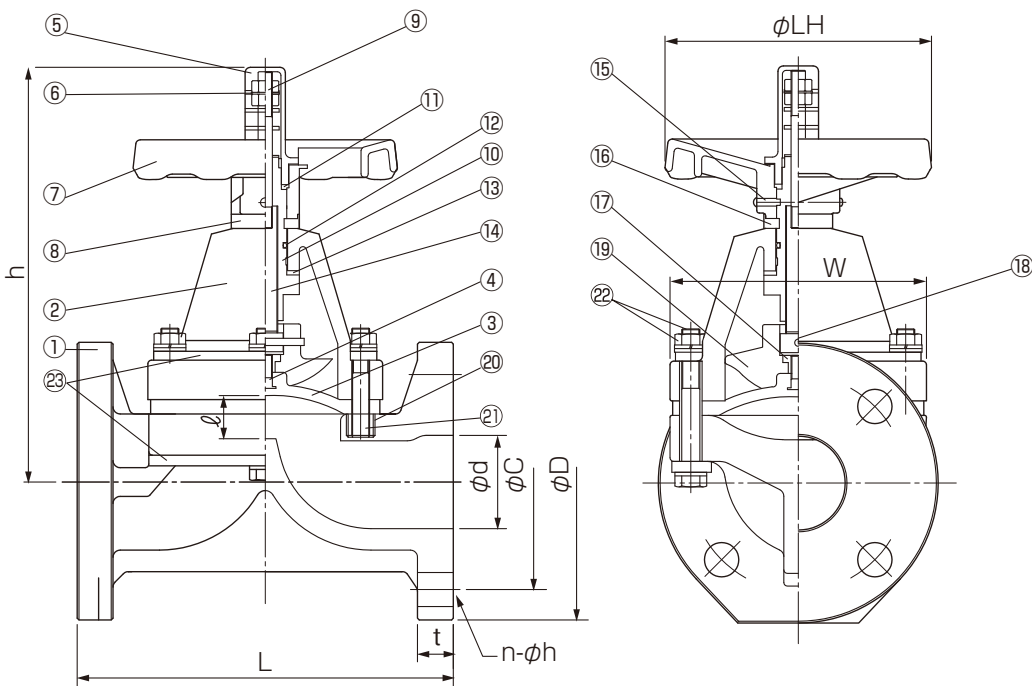


Figure (Flange Type)



Parts List

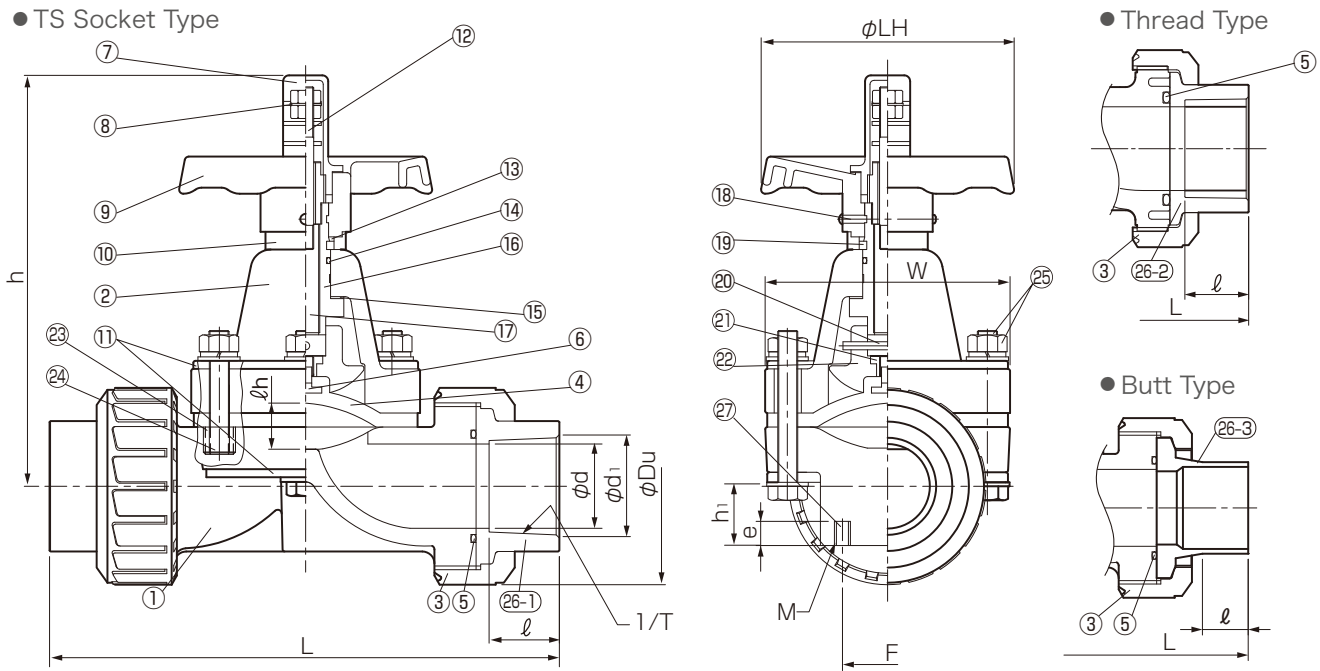
| No. | Part Name | QTY | Material/Color | No. | Part Name | QTY | Material/Color |
|-----|---------------------|-----|----------------------------|-----|---------------------------------|-----|--|
| 1 | Body | 1 | Body/Bonnet | 11 | Stem Packing | 1 | NBR |
| | | | ●PVC/PVC | 12 | O-Ring | 1 | NBR |
| 2 | Bonnet | 1 | ●HT/HT (JIS:Brown) | 13 | Thrust Washer | 1 | (15~80A)PTFE |
| | | | ●CPVC/CPVC (ANSI·DIN:Gray) | 14 | Thrust Bearing | 1 | (100~250A)SUJ |
| 3 | Diaphragm | 1 | ●PP/PP | 15 | Retaining Screw | 2 | SUS304(32~250A) |
| | | | ●PVDF/GFPP | 16 | Retaining Ring | 1 | (~100A)PP,(125~150A)PVC |
| 4 | Diaphragm Stud Bolt | 1 | ●PVDF/PVDF ^{*3} | 17 | Connecting Nut | 1 | C3604 ^{*1} |
| | | | ●EPDM | 18 | Pin | 1 | SUS304 ^{*1} |
| 5 | Indicator Cover | 1 | ●FKM | 19 | Compressor | 1 | (15~150A)GF-PP,(200,250A)FC200 |
| 6 | Indicator | 1 | ●PTFE+EPDM | 20 | Insert Nut | - | C3604(PVDF15-100A:SUS304) |
| 7 | Handle | 1 | ●PTFE+PVDF+EPDM | 21 | Stud Bolt | - | SUS304 |
| 8 | Collar | 1 | | 22 | Hexagonal Bolt, Nut | - | SUS304 |
| 9 | Indicator Stud Bolt | 1 | | 23 | Reinforcing Plate ^{*2} | 1 | (15~50, 200, 250A) SUS304 (65~150A)SS400 Epoxy Resin Coated |
| 10 | Stem Sleeve | 1 | | | | | |

*1 Titanium Palladium is available on request.
*2 Applied to PP, HT, CPVC, and PVDF
*3 15~150A Only

Size

| Size | | φd | L | h | φLH | W | ℓ | FLANGE | | | | | | | | | | | | | | | | Weight(kg/unit) | | | |
|------|-------|-----|-----|-----|-----|-----|-----|--------|-----|-------|----|------|-------|-------|------|-----|-----|-------|----|------|-----------|------|-------|-----------------|--|--|--|
| A | B | | | | | | | JIS10K | | | | ANSI | | | | DIN | | | | PVC | HT (CPVC) | PP | PVDF | | | | |
| | | | | | | | | φD | φC | n-φh | t | φD | φC | n-φh | t | φD | φC | n-φh | t | | | | | | | | |
| 15 | 1/2 | 16 | 110 | 122 | 80 | 76 | 10 | 95 | 70 | 4-15 | 14 | 90 | 60.5 | 4-16 | 11 | 95 | 65 | 4-14 | 14 | 0.9 | 1.1 | 0.8 | 1.1 | | | | |
| 20 | 3/4 | 20 | 120 | 134 | 80 | 82 | 12 | 100 | 75 | 4-15 | 14 | 100 | 70 | 4-16 | 13 | 105 | 75 | 4-14 | 14 | 1.0 | 1.3 | 1.0 | 1.3 | | | | |
| 25 | 1 | 25 | 130 | 145 | 80 | 90 | 15 | 125 | 90 | 4-19 | 14 | 110 | 79.5 | 4-16 | 14 | 115 | 85 | 4-14 | 14 | 1.4 | 1.7 | 1.3 | 1.7 | | | | |
| 32 | 1 1/4 | 32 | 142 | 145 | 80 | 90 | 15 | 135 | 100 | 4-19 | 16 | 117 | 89 | 4-16 | 15.7 | 140 | 100 | 4-18 | 15 | 1.7 | 1.8 | 1.6 | 2.1 | | | | |
| 40 | 1 1/2 | 41 | 180 | 205 | 125 | 122 | 20 | 140 | 105 | 4-19 | 16 | 127 | 98.5 | 4-16 | 17 | 150 | 110 | 4-18 | 16 | 2.6 | 3.3 | 2.5 | 3.4 | | | | |
| 50 | 2 | 52 | 210 | 233 | 148 | 142 | 27 | 155 | 120 | 4-19 | 20 | 155 | 120.5 | 4-20 | 19 | 165 | 125 | 4-18 | 18 | 3.6 | 4.5 | 3.4 | 4.8 | | | | |
| 65 | 2 1/2 | 67 | 250 | 291 | 210 | 170 | 36 | 175 | 140 | 4-19 | 22 | 175 | 139.5 | 4-20 | 22 | 185 | 145 | 4-18 | 18 | 6.2 | 7.7 | 5.9 | 8.4 | | | | |
| 80 | 3 | 80 | 280 | 322 | 210 | 202 | 37 | 185 | 150 | 8-19 | 22 | 190 | 152.5 | 4-20 | 22 | 200 | 160 | 8-18 | 20 | 8.2 | 9.6 | 7.9 | 11.2 | | | | |
| 100 | 4 | 100 | 340 | 392 | 260 | 255 | 61 | 210 | 175 | 8-19 | 24 | 230 | 190.5 | 8-20 | 24 | 220 | 180 | 8-18 | 20 | 13.8 | 18.3 | 15.4 | 21.1 | | | | |
| 125 | 5 | 125 | 410 | 435 | 350 | 320 | 61 | 250 | 210 | 8-23 | 24 | 254 | 216 | 8-23 | 24 | 250 | 210 | 8-18 | 22 | 21.8 | - | 20.0 | 26.0 | | | | |
| 150 | 6 | 150 | 480 | 490 | 350 | 375 | 70 | 280 | 240 | 8-23 | 24 | 280 | 241.5 | 8-23 | 25 | 285 | 240 | 8-22 | 22 | 26.3 | - | 25.5 | 36.0 | | | | |
| 200 | 8 | 198 | 570 | 632 | 410 | 416 | 96 | 330 | 290 | 12-23 | 29 | 343 | 298.5 | 8-23 | 28 | 340 | 295 | 8-22 | 29 | 51.0 | - | 44.0 | 61.0 | | | | |
| 250 | 10 | 248 | 680 | 780 | 555 | 540 | 132 | 400 | 355 | 12-25 | 31 | 406 | 362 | 12-25 | 31 | 395 | 350 | 12-22 | 26 | 93.0 | - | 77.0 | 108.0 | | | | |

Figure (TS Socket Type · Thread Type · Butt Type)



Parts List

| No. | Part Name | QTY | Material/Color | No. | Part Name | QTY | Material/Color |
|-----|---------------------|-----|---|------|---------------------|-----|-------------------|
| 1 | Body | 1 | Body / Bonnet ● PVC / PVC ● HT / HT (JIS : Brown) | 13 | Stem Packing | 1 | NBR |
| 2 | Bonnet | 1 | ● CPVC / CPVC (ANSI·DIN : Gray) | 14 | O-Ring | 1 | NBR |
| 3 | Union Nut | 2 | ● PVDF / GFPP ● PVDF / PVDF | 15 | Thrust Washer | 1 | PTFE |
| 4 | Diaphragm | 1 | ● EPDM ● FKM ● PTFE+EPDM ● PTFE+PVDF+EPDM | 16 | Stem Sleeve | 1 | C3604 |
| 5 | O-Ring | 2 | ● EPDM ● FKM | 17 | Stem Spindle | 1 | C3604 |
| 6 | Diaphragm Stud Bolt | 1 | SUS304 | 18 | Retaining Screw | 2 | SUS304 (32 ~ 50A) |
| 7 | Indicator Cover | 1 | PC | 19 | Retaining Ring | 1 | PP |
| 8 | Indicator | 1 | SUS304 | 20 | Pin | 1 | SUS304 *1 |
| 9 | Handle | 1 | ABS | 21 | Connecting Nut | 1 | C3604 *1 |
| 10 | Collar | 1 | PE | 22 | Compressor | 1 | GF-PP |
| 11 | Reinforcing Plate*2 | 1 | SUS304 | 23 | Insert Nut | - | C3604 |
| 12 | Indicator Stud Bolt | 1 | SUS304 | 24 | Stud Bolt | - | SUS304 |
| | | | | 25 | Hexagonal Bolt, Nut | - | SUS304 |
| | | | | 26-1 | TS Socket | 2 | ● PVC ● HT ● CPVC |
| | | | | 26-2 | Threaded socket | 2 | ● PVC ● PVDF |
| | | | | 26-3 | Butt Spigot Type | 2 | ● PP ● PVDF ● PE |
| | | | | 26-4 | Socket welding | 2 | PP |
| | | | | 27 | Fixing Insert Nut | 2 | C3604 |

*1 Titanium Palladium is available on request. *2 Applied to PP, HT, CPVC, and PVDF

Size

| Size | | ϕd | h | h1 | ϕLH | W | ϕDu | ℓh | Fixing Insert Nut | | Weight(kg/unit) | | | | |
|------|-------|----------|-----|--------|-----------|--------|-----------|----------|-------------------|--------|-----------------|-----|---------|-----|------|
| A | B | | | | | | | | X | Mxe | PVC | | HT,CPVC | | PVDF |
| | | Socket | | Thread | | Socket | | Thread | | Spigot | | | | | |
| 15 | 1/2 | 15 | 123 | 15 | 80 | 76 | 49 | 10 | 25 | M6x12 | 0.7 | 0.7 | 0.8 | 0.9 | 0.9 |
| 20 | 3/4 | 20 | 134 | 18 | 80 | 82 | 59 | 12 | 25 | M6x12 | 0.8 | 0.8 | 1.0 | 1.0 | 1.0 |
| 25 | 1 | 25 | 146 | 23 | 80 | 90 | 67 | 15 | 25 | M6x12 | 1.1 | 1.1 | 1.2 | 1.4 | 1.4 |
| 32 | 1 1/4 | 31 | 146 | 23 | 80 | 90 | 81 | 15 | 25 | M6x12 | 1.2 | 1.2 | 1.3 | 1.6 | 1.5 |
| 40 | 1 1/2 | 40 | 209 | 32 | 125 | 122 | 98 | 20 | 45 | M8x12 | 2.7 | 2.7 | 3.4 | 3.7 | 3.7 |
| 50 | 2 | 50 | 234 | 37 | 148 | 148 | 120 | 27 | 45 | M8x12 | 3.6 | 3.6 | 4.3 | 5.0 | 5.0 |

| Size | | TS Socket | | | | | | | | | | | |
|------|-------|-----------|-----------|------|--------|------|-----------|------|--------|-----|-----------|-------|--------|
| A | B | JIS | | | | ASTM | | | | DIN | | | |
| | | L | $\phi d1$ | 1/T | ℓ | L | $\phi d1$ | 1/T | ℓ | L | $\phi d1$ | 1/T | ℓ |
| 15 | 1/2 | 144 | 22.3 | 1/37 | 22 | 137 | 21.54 | 1/72 | 22.22 | 126 | 20.3 | 1/65 | 16 |
| 20 | 3/4 | 172 | 26.3 | 1/42 | 25 | 158 | 26.87 | 1/85 | 25.4 | 146 | 25.3 | 1/80 | 19 |
| 25 | 1 | 187 | 32.3 | 1/43 | 29 | 177 | 33.65 | 1/75 | 28.58 | 165 | 32.3 | 1/95 | 22 |
| 32 | 1 1/4 | 210 | 38.4 | 1/37 | 32 | 190 | 42.42 | 1/84 | 31.75 | 179 | 40.3 | 1/115 | 26 |
| 40 | 1 1/2 | 262 | 48.5 | 1/38 | 35 | 258 | 48.56 | 1/78 | 34.93 | 247 | 50.3 | 1/140 | 31 |
| 50 | 2 | 298 | 60.6 | 1/34 | 38 | 283 | 60.63 | 1/83 | 38.1 | 284 | 63.3 | 1/175 | 38 |

| Size | | Thread | | | | | | Butt Spigot | | | | Socket welding | | | |
|------|-------|---------|--------|-----------|----------|---------|--------|-------------|--------|-----|--------|----------------|--------|-----|------|
| A | B | JIS(Rc) | | ANSI(NPT) | | DIN(Rp) | | DIN | | DIN | | DIN | | | |
| | | PVC | PVDF | PVC,PVDF | PVC,PVDF | PP,PVDF | PE | PP | PP | | | | | | |
| | | L | ℓ | L | ℓ | L | ℓ | L | ℓ | L | ℓ | L | ℓ | | |
| 15 | 1/2 | 133 | 18 | 134 | 20 | 133 | 18 | 133 | 18 | 176 | 30 | 246 | 65 | 137 | 12 |
| 20 | 3/4 | 157 | 18 | 157 | 22 | 157 | 18 | 157 | 18 | 189 | 24 | 259 | 65 | 153 | 13 |
| 25 | 1 | 173 | 23 | 180 | 25 | 173 | 23 | 173 | 23 | 203 | 24 | 283 | 70 | 171 | 14.5 |
| 32 | 1 1/4 | 188 | 23 | 191 | 25 | 188 | 23 | 188 | 23 | 210 | 25 | 301 | 75 | 183 | 18 |
| 40 | 1 1/2 | 248 | 25 | 254 | 28 | 248 | 25 | 248 | 25 | 272 | 24 | 376 | 80 | 245 | 16 |
| 50 | 2 | 280 | 30 | 290 | 30 | 280 | 30 | 280 | 30 | 306 | 28 | 419 | 90 | 278 | 20 |



JIS ISO*
※Butt spigot type only



Operating Temperature(°C)

| | |
|------|---------|
| PVC | 0 ~ 50 |
| HT | 0 ~ 90 |
| PVDF | 0 ~ 120 |



ESLON DEAD SPACE FREE TEE-TYPE DIAPHRAGM VALVE

Feature

- Uniquely designed compact diaphragm valve with branch flow channel.
- Keep water quality by little obstructed design in flow path.
- Enable optional branch piping and no pressure loss in main pipe.
- Easier pressure control in reverse-turn piping system.

⚠ Important Notes

- Fluid containing slurry, solid, sediment, or crystallized fluid might disable sealing.

Maximum Working Pressure - Temperature Rating

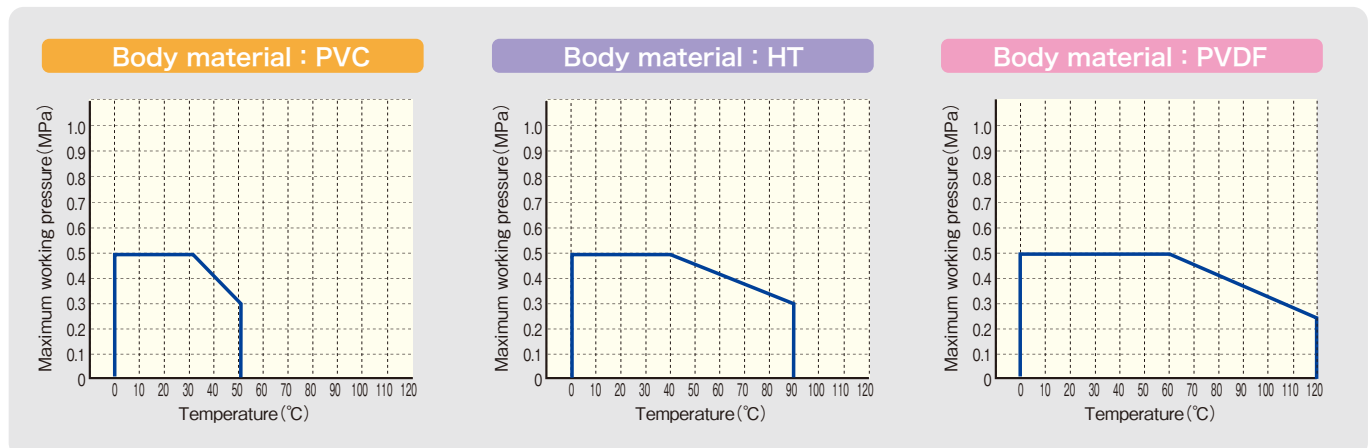
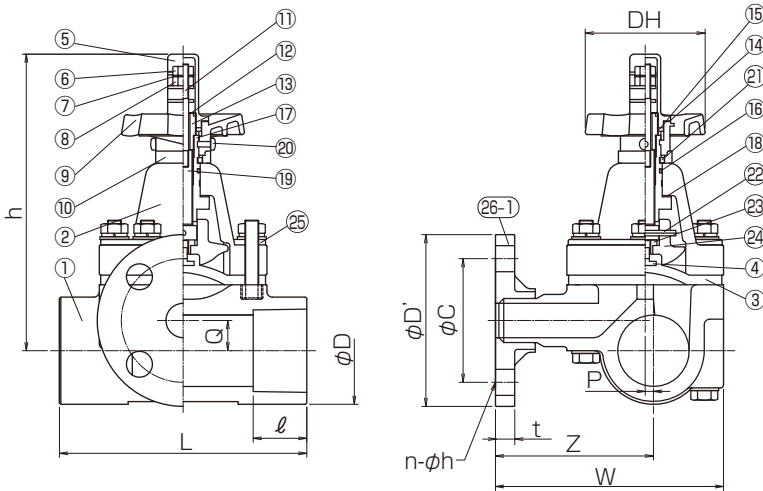
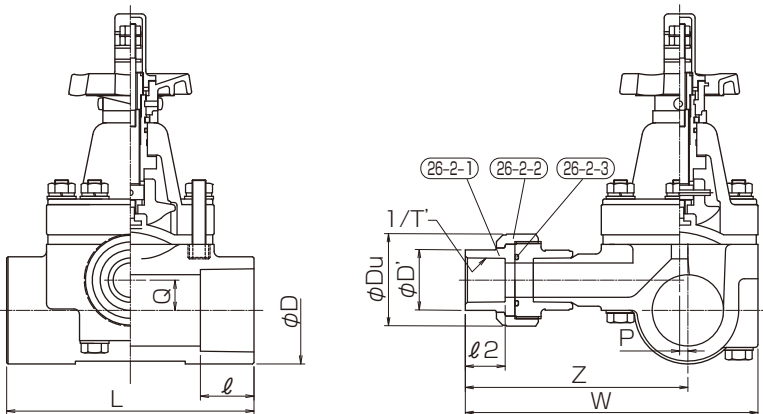


Figure (TS Socket Type)

● Flange Type



● Union Type



Parts List

| No. | Part Name | Q'TY | Material |
|--------|---------------------|------|--|
| 1 | Body | 1 | Body/Bonnet ● PVC/PVC ● HT/HT |
| 2 | Bonnet | 1 | |
| 3 | Diaphragm | 1 | ● EPDM (20×16,50×25,65×40) ● PTFE+EPDM |
| 4 | Diaphragm Stud Bolt | 1 | SUS304 |
| 5 | Indicator Cover | 1 | PC |
| 6 | Lock Nut | 1 | SUS304 |
| 7 | Washer | 1 | SUS304 |
| 8 | Stopper Nut | 1 | SUS304 |
| 9 | Handle | 1 | ABS |
| 10 | Collar | 1 | PE |
| 11 | Indicator Stud Bolt | 1 | SUS304 |
| 12 | Stopper Washer | 1 | POM |
| 13 | Sleeve Head | 1 | C3604 |
| 14 | Handle Sticker | 1 | PVC |
| 15 | Stem Packing | 1 | NBR |
| 16 | O-Ring | 1 | NBR |
| 17 | Stem Sleeve | 1 | C3604 |
| 18 | Thrust Washer | 1 | PTFE |
| 19 | Stem Spindle | 1 | C3604 |
| 20 | Retaining Screw | 2 | SUS304 |
| 21 | Retaining Ring | 1 | PP |
| 22 | Pin | 1 | SUS304 |
| 23 | Connecting Nut | 1 | C3604 |
| 24 | Compressor | 1 | GF-PP |
| 25 | Reinforcing Plate*1 | 1 | SUS304 |
| 26-1 | Flange | 1 | |
| 26-2-1 | TS Socket | 1 | ● PVC ● HT |
| 26-2-2 | Union Nut | 1 | |
| 26-2-3 | O-Ring | 1 | ● EPDM ● FKM |

*1 Applied to HT

*For PVDF parts list, please contact us.

Size

TS Socket × Flange

Unit : mm

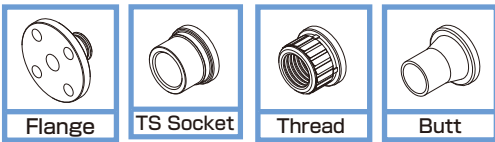
| Size | L | h | DH | P | W | Q | Z | Flange (JIS 10K) | | | | TS Socket | | Weight(kg/Unit) | |
|-------|-----|-----|-----|-----|-----|----|-----|------------------|----------|------------|----|-----------|--------|-----------------|-----|
| | | | | | | | | $\phi D'$ | ϕC | $n-\phi h$ | t | ϕD | ℓ | PVC | HT |
| 20×16 | 120 | 129 | 80 | 1.5 | 119 | 8 | 91 | 95 | 70 | 4-15 | 14 | 35 | 25 | 0.7 | 0.8 |
| 25×25 | 120 | 154 | 80 | 3 | 142 | 8 | 100 | 125 | 90 | 4-19 | 14 | 44 | 29 | 1.1 | 1.2 |
| 50×25 | 180 | 221 | 90 | 6 | 166 | 22 | 115 | 125 | 90 | 4-19 | 14 | 77 | 30 | 2.5 | 2.8 |
| 65×40 | 240 | 265 | 148 | 6 | 203 | 30 | 140 | 140 | 105 | 4-19 | 16 | 96 | 61 | 3.8 | 4.3 |

TS Socket × True Union with TS Socket

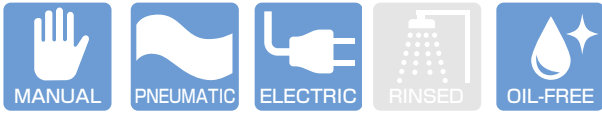
Unit : mm

| Size | L | h | DH | P | W | Q | Z | TS Socket | | True Union Socket | | | Weight(kg/Unit) | |
|-------|-----|-----|-----|-----|-----|----|-----|-----------|--------|-------------------|----------|----|-----------------|-----|
| | | | | | | | | ϕD | ℓ | $\phi D'$ | $\ell 2$ | Du | PVC | HT |
| 20×16 | 120 | 129 | 80 | 1.5 | 142 | 8 | 117 | 35 | 25 | 30 | 22.2 | 49 | 0.7 | 0.8 |
| 25×25 | 120 | 154 | 80 | 3 | 187 | 8 | 144 | 44 | 29 | 44 | 28.6 | 67 | 1.1 | 1.2 |
| 50×25 | 180 | 221 | 90 | 6 | 210 | 22 | 159 | 77 | 30 | 44 | 28.6 | 67 | 2.5 | 2.8 |
| 65×40 | 240 | 265 | 148 | 6 | 257 | 30 | 197 | 96 | 61 | 65 | 35 | 98 | 3.8 | 4.3 |

- H, h, D, L, W and t dimension of PVDF type might differ from the dimension table.
- Due to assembly by welding connection for PVDF type, design and dimension might differ from the approval drawing. Please refer to the approval drawing.
- For special order, please contact us.



JIS ANSI/ASME/ASTM DIN/ISO



6 Colors Handle for Easy Maintenance

Operating Temperature(°C)

| | | | |
|---------|--------|------|------------|
| PVC | 0 ~ 50 | PP | - 20 ~ 80 |
| HT-CPVC | 0 ~ 90 | PVDF | - 20 ~ 100 |

ESLON BALL VALVE

Feature

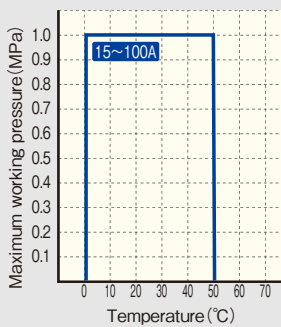
- Left hand screw on ball holder prevents screw loose and ensures perfect sealing of the valve when union nut is loosened.
- Full port in all sizes ensures no pressure loss at valve full opened position.
- Keep water quality by little obstructed design in flow path.
- Six colors of handle for sizes 15~50A enable easier management of application and fluid classification.

⚠ Important Notes

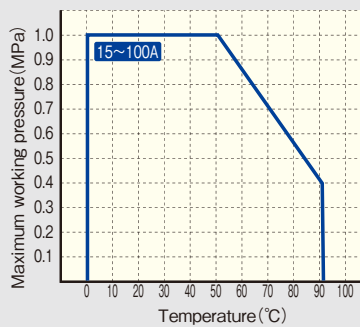
- Gasifying, volatile, or evaporating fluid such as hydrogen peroxide and sodium hypochlorite might rise inner pressure of valve and burst the valve. Please contact us concerning such risk. Gas relief type of customized ball valve which has relief orifice on the ball is available.
- Do not use for the fluid containing slurry, solid, sediment, or crystallized fluid. Or for those kinds of fluid, strainer should be used in upstream.

Maximum Working Pressure - Temperature Rating

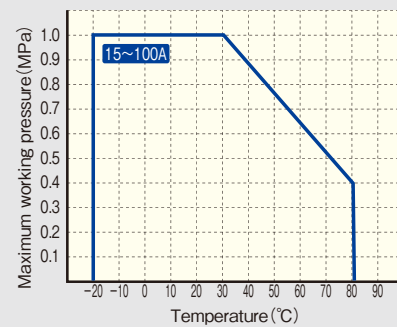
Body material : PVC



Body material : HT · CPVC



Body material : PP



Body material : PVDF

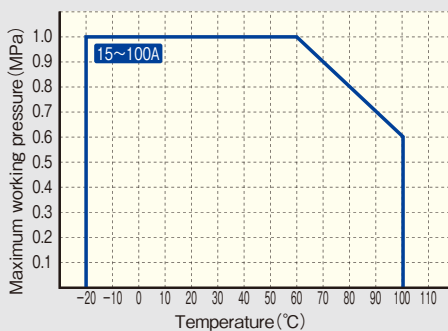
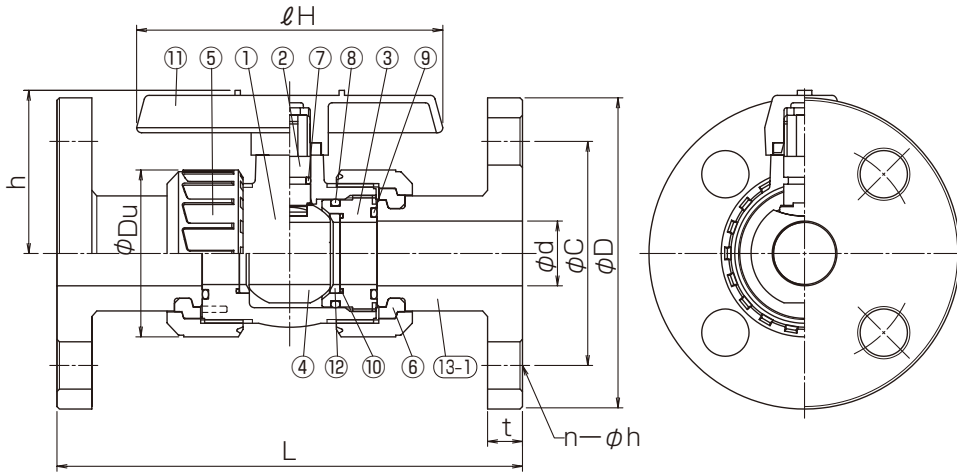
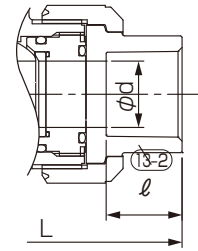


Figure (Flange Type · TS Socket Type · Thread Type · Butt Type)

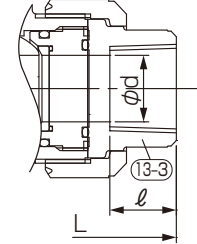
● Flange Type



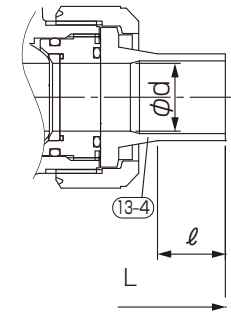
● TS Socket Type (PVC, HT, CPVC)



● Thread Type (PVC, PVDF)



● Butt Type (PP, PVDF, PE)



Parts List

| No. | Part Name | Q'TY | Material/Color | No. | Part Name | Q'TY | Material/Color |
|-----|--------------------|------|------------------|------|------------------|------|--|
| 1 | Body | 1 | ● PVC | 13-1 | Flange | 2 | ● HT (JIS:Brown) ● CPVC (ANSI·DIN:Gray) ● PP ● PVDF |
| 2 | Stem | 1 | ● PVC | | | | |
| 3 | Ball holder | *1 | ● HT (JIS:Brown) | 13-2 | TS Socket | 2 | ● PVC ● HT ● CPVC |
| 4 | Ball | 1 | ● CPVC | | | | |
| 5 | Union nut | 2 | (ANSI·DIN:Gray) | 13-3 | Threaded | 2 | ● PVC ● PVDF |
| 6 | Set ring | 2 | ● PP ● PVDF | | | | |
| 7 | Stem O-ring | *2 | ● EPDM | 13-4 | Butt Spigot Type | 2 | ● PP ● PVDF |
| 8 | Ball holder O-ring | *3 | ● EPDM | | | | |
| 9 | Union O-ring | 2 | ● FKM | 13-5 | Socket welding | 2 | ● PP |
| 10 | Ball seat O-ring | 2 | ● FKM | | | | |
| 11 | Handle | 1 | ABS | | | | |
| 12 | Ball Seat | 2 | PTFE | | | | |

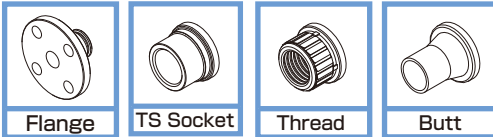
*1 15'50A:1, 65'100A:2 *2 15'32A:1, 40'100A:2 *3 15'50A:1, 65'100A:2

Size

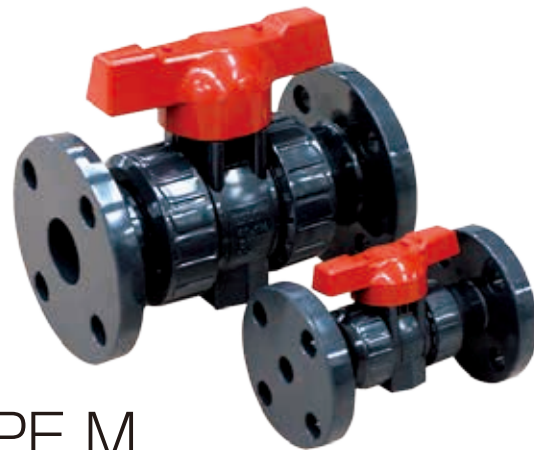
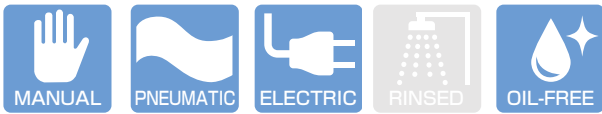
| Size | | φd | h | ℓH | φDu | Flange | | | | | | | | | | | | | |
|------|-------|-----|-----|-----|-----|-------------|---------|--------|-----|------|----|-------|-------|------|------|-----|-----|------|----|
| A | B | | | | | L | | JIS10K | | | | ANSI | | | | DIN | | | |
| | | | | | | PVC,HT,CPVC | PP,PVDF | φD | φC | n-φh | t | φD | φC | n-φh | t | φD | φC | n-φh | t |
| 15 | 1/2 | 15 | 50 | 95 | 49 | 143 | | 95 | 70 | 4-15 | 14 | 89 | 60.5 | 4-16 | 11.5 | 95 | 65 | 4-14 | 11 |
| 20 | 3/4 | 20 | 53 | 95 | 59 | 172 | | 100 | 75 | 4-15 | 14 | 98 | 70.0 | 4-16 | 13.0 | 105 | 75 | 4-14 | 12 |
| 25 | 1 | 25 | 66 | 123 | 67 | 187 | | 125 | 90 | 4-19 | 14 | 108 | 79.5 | 4-16 | 14.5 | 115 | 85 | 4-14 | 14 |
| 32 | 1 1/4 | 32 | 74 | 123 | 81 | 190 | | 135 | 100 | 4-19 | 16 | 117.5 | 89.0 | 4-16 | 16.0 | 140 | 100 | 4-18 | 15 |
| 40 | 1 1/2 | 40 | 100 | 152 | 98 | 212 | | 140 | 105 | 4-19 | 16 | 127 | 98.5 | 4-16 | 17.5 | 150 | 110 | 4-18 | 16 |
| 50 | 2 | 50 | 107 | 152 | 120 | 234 | | 155 | 120 | 4-19 | 20 | 152 | 120.5 | 4-19 | 19.5 | 165 | 125 | 4-18 | 18 |
| 65 | 2 1/2 | 65 | 146 | 188 | 150 | 259 | 257 | 175 | 140 | 4-19 | 22 | 178 | 139.5 | 4-20 | 22.5 | 185 | 145 | 4-18 | 22 |
| 80 | 3 | 80 | 169 | 230 | 186 | 304 | 301 | 185 | 150 | 8-19 | 22 | 191 | 152.5 | 4-20 | 24.0 | 200 | 160 | 8-18 | 23 |
| 100 | 4 | 100 | 203 | 283 | 228 | 372 | 367 | 210 | 175 | 8-19 | 24 | 229 | 190.5 | 8-20 | 24.0 | 220 | 180 | 8-18 | 23 |

| Size | | TS Socket | | | | | | Thread | | | | | | | | | | | |
|------|-------|-------------|----|------|-------|-----|----|-------------|----|------|----|-----------|----|------|-----|---------|----|------|-----|
| A | B | JIS | | ASTM | | DIN | | JIS,DIN(Rc) | | | | ANSI(NPT) | | | | DIN(Rp) | | | |
| | | PVC,HT,CPVC | | | | | | PVC | | PVDF | | PVC | | PVDF | | PVC | | PVDF | |
| | | L | ℓ | L | ℓ | L | ℓ | L | ℓ | L | ℓ | L | ℓ | L | ℓ | L | ℓ | L | ℓ |
| 15 | 1/2 | 109 | 22 | 103 | 22.22 | 92 | 16 | 97 | 18 | 99 | 20 | 97 | 18 | 99 | 99 | 97 | 18 | 99 | 99 |
| 20 | 3/4 | 132 | 25 | 119 | 25.4 | 107 | 19 | 117 | 18 | 116 | 22 | 117 | 18 | 116 | 116 | 117 | 18 | 116 | 116 |
| 25 | 1 | 143 | 29 | 133 | 28.58 | 121 | 22 | 128 | 23 | 136 | 24 | 128 | 23 | 136 | 136 | 128 | 23 | 136 | 136 |
| 32 | 1 1/4 | 166 | 32 | 147 | 31.75 | 137 | 26 | 146 | 23 | 148 | 25 | 146 | 23 | 148 | 148 | 146 | 23 | 148 | 148 |
| 40 | 1 1/2 | 175 | 35 | 171 | 34.93 | 161 | 31 | 163 | 25 | 169 | 28 | 163 | 25 | 169 | 169 | 163 | 25 | 169 | 169 |
| 50 | 2 | 203 | 38 | 188 | 38.1 | 189 | 38 | 188 | 30 | 196 | 30 | 188 | 30 | 196 | 196 | 188 | 30 | 196 | 196 |
| 65 | 2 1/2 | 259 | 61 | 211 | 44.45 | 211 | 44 | 227 | 32 | 227 | 32 | 212 | 32 | 212 | 227 | 212 | 32 | 212 | 227 |
| 80 | 3 | 311 | 64 | 262 | 47.63 | 263 | 51 | 278 | 37 | 278 | 37 | 261 | 37 | 261 | 278 | 261 | 37 | 261 | 278 |
| 100 | 4 | 390 | 84 | 315 | 57.15 | 315 | 61 | 330 | 45 | 330 | 45 | 315 | 45 | 315 | 330 | 315 | 45 | 315 | 330 |

| Size | | Butt Spigot | | | | Socket welding | | Weight(kg/unit) | | | | | | | | | | | |
|------|-------|-------------|----|-----|-----|----------------|------|-----------------|---------|---------|------|--------|---------|--------|------|--------|--|--|--|
| A | B | DIN | | DIN | | DIN | | Flange | | | | Socket | | Thread | | Spigot | | | |
| | | PP,PVDF | | PE | | PP | | PVC | | HT,CPVC | | PP | | PVC | | PVDF | | | |
| | | L | ℓ | L | ℓ | L | ℓ | PVC | HT,CPVC | PP | PVDF | PVC | HT,CPVC | PVC | PVDF | PVDF | | | |
| 15 | 1/2 | 143 | 30 | 210 | 65 | 103 | 12.0 | 0.4 | 0.4 | 0.3 | 0.5 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | | | |
| 20 | 3/4 | 152 | 24 | 220 | 65 | 114 | 13.0 | 0.6 | 0.6 | 0.4 | 0.7 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | | | |
| 25 | 1 | 161 | 24 | 237 | 70 | 126 | 14.5 | 0.9 | 0.9 | 0.5 | 1.0 | 0.4 | 0.4 | 0.4 | 0.5 | 0.5 | | | |
| 32 | 1 1/4 | 167 | 25 | 258 | 75 | 141 | 18.0 | 1.2 | 1.2 | 0.7 | 1.3 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | | | |
| 40 | 1 1/2 | 190 | 24 | 292 | 80 | 162 | 16.0 | 1.7 | 1.7 | 1.1 | 1.9 | 1.1 | 1.1 | 1.1 | 1.2 | 1.2 | | | |
| 50 | 2 | 216 | 28 | 325 | 90 | 185 | 20.0 | 2.6 | 2.6 | 1.6 | 3.0 | 1.6 | 1.7 | 1.6 | 1.9 | 1.9 | | | |
| 65 | 2 1/2 | 208 | 23 | 363 | 100 | 204 | 21.0 | 4.2 | 4.3 | 2.8 | 5.0 | 3.0 | 3.3 | 3.0 | 3.6 | 3.6 | | | |
| 80 | 3 | 301 | 45 | 424 | 105 | 264 | 26.5 | 6.7 | 6.9 | 4.4 | 8.2 | 5.6 | 6.1 | 5.6 | 7.0 | 7.0 | | | |
| 100 | 4 | 340 | 43 | 478 | 110 | 317 | 31.5 | 11.5 | 11.9 | 7.4 | 14.1 | 10.5 | 11.2 | 10.5 | 12.5 | 12.5 | | | |



JIS ANSI/ASME/ASTM DIN/ISO



Operating Temperature(°C)

| | | | |
|---------|--------|------|------------|
| PVC | 0 ~ 50 | PP | - 20 ~ 80 |
| HT-CPVC | 0 ~ 90 | PVDF | - 20 ~ 100 |

ESLON BALL VALVE TYPE M

Feature

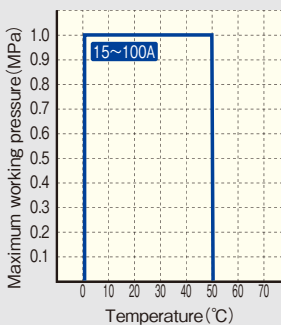
- Left hand screw on ball holder prevents screw loose and ensures perfect sealing of the valve when union nut is loosened.
- Full port in all size. No pressure loss at full opened position by nominal size of inner diameter.
- Keep water quality by little obstructed design in flow path. Compared with the conventional type (non-mount type), light-weight & compactness.
- It's possible to install an actuator on to the valve body directly.

⚠ Important Notes

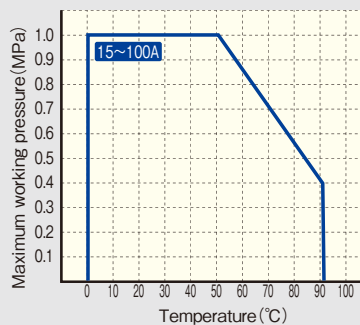
- Gasifying, volatile, or evaporating fluid such as hydrogen peroxide and sodium hypochlorite might rise inner pressure of valve and burst the valve. Please contact us concerning such risk. Gas relief type of customized ball valve which has relief orifice on the ball is available.
- Do not use for the fluid containing slurry, solid, sediment, or crystallized fluid. Or for those kinds of fluid, strainer should be used in upstream.

Maximum Working Pressure - Temperature Rating

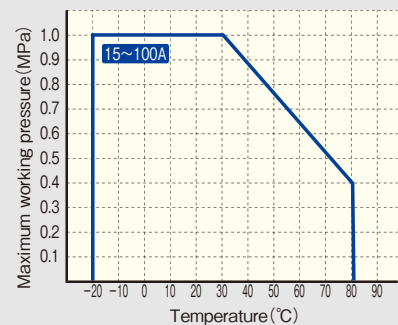
Body material : PVC



Body material : HT · CPVC



Body material : PP



Body material : PVDF

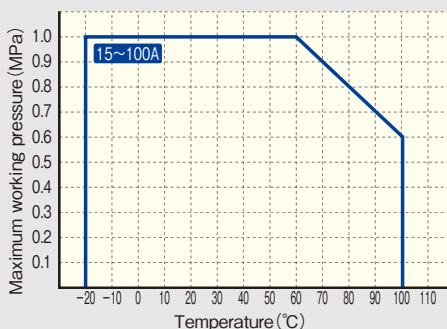
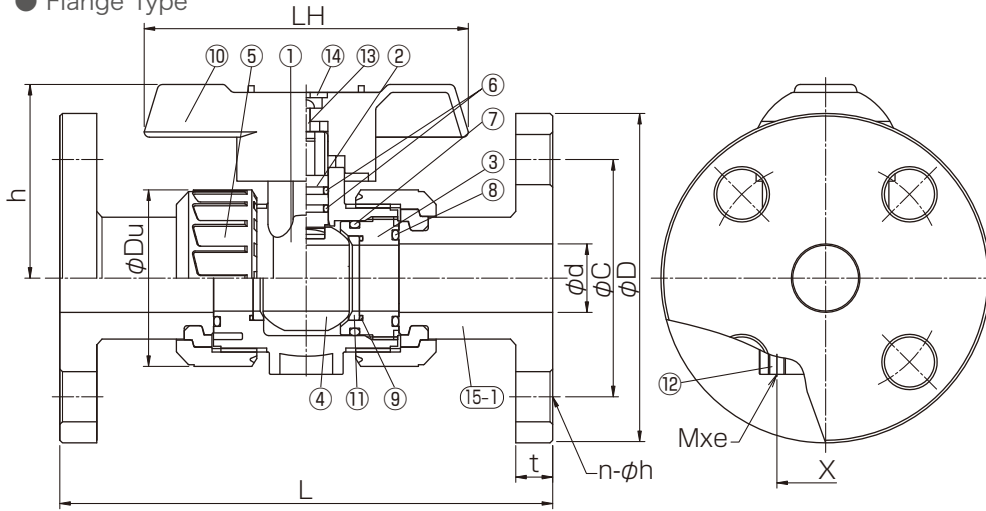
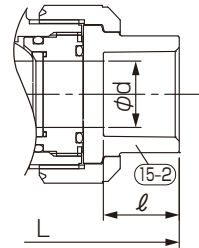


Figure (Flange Type · TS Socket Type · Thread Type · Butt Type)

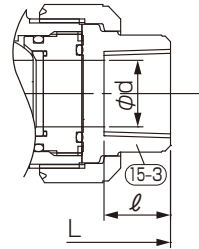
● Flange Type



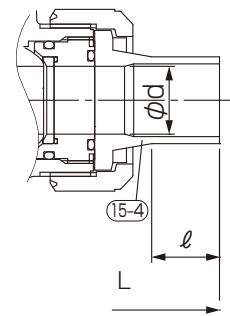
● TS Socket Type (PVC, HT, CPVC)



● Thread Type (PVC, PVDF)



● Butt Type (PVDF)



Parts List

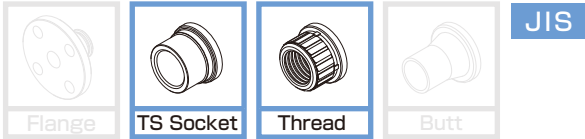
| No. | Part Name | QTY | Material/Color | No. | Part Name | QTY | Material/Color |
|-----|--------------------|-----|------------------|------|------------------|-----|---|
| 1 | Body | 1 | ● PVC | 14 | Handle Cap | 1 | ABS |
| 2 | Stem | 1 | ● HT (JIS:Brown) | 15-1 | Flange | 2 | ● PVC ● HT ● CPVC (ANSI-DIN:Gray) ● PP ● PVDF |
| 3 | Ball holder | 1 | ● CPVC | | | | |
| 4 | Ball | 1 | ● PP ● PVDF | 15-2 | TS Socket | 2 | ● PVC ● HT ● CPVC |
| 5 | Union nut | 2 | ● PP ● PVDF | | | | |
| 6 | Set ring | 2 | | 15-3 | Threaded | 2 | ● PVC ● PVDF |
| 7 | Stem O-ring | 2 | | 15-4 | Butt Spigot Type | 2 | ● PP ● PVDF ● PE |
| 8 | Ball holder O-ring | 1 | ● EPDM | | | | |
| 9 | Union O-ring | 2 | ● FKM | | | | |
| 10 | Ball seat O-ring | 2 | | | | | |
| 11 | Handle | 1 | ABS | | | | |
| 12 | Ball Seat | 2 | PTFE | | | | |
| 13 | Screw | 1 | SUS304 | | | | |

Size

| Size | | FIXING Insert Nut | | | | | Flange | | | | | | | | | | | | | | |
|------|-------|-------------------|-----|-----|-----|-------|--------|--------|-----|---------|------|--------|-------|-------|------|------|-----|------|------|----|--|
| A | B | φd | h | LH | φDu | X | Mxe | PVC,HT | | PP,PVDF | | JIS10K | | | ANSI | | | DIN | | | |
| | | | | | | | | φD | φC | n-φh | t | φD | φC | n-φh | t | φD | φC | n-φh | t | | |
| 15 | 1/2 | 15 | 53 | 95 | 49 | 27 | M5x8 | 143 | 95 | 70 | 4-15 | 14 | 89 | 60.5 | 4-16 | 11.5 | 95 | 65 | 4-14 | 11 | |
| 20 | 3/4 | 20 | 62 | 95 | 59 | 32 | M5x8 | 172 | 100 | 75 | 4-15 | 14 | 98 | 70.0 | 4-16 | 13.0 | 105 | 75 | 4-14 | 12 | |
| 25 | 1 | 25 | 76 | 123 | 67 | 37 | M5x8 | 187 | 125 | 90 | 4-19 | 14 | 108 | 79.5 | 4-16 | 14.5 | 115 | 85 | 4-14 | 14 | |
| 32 | 1 1/4 | 32 | 84 | 123 | 81 | 42 | M5x8 | 190 | 135 | 100 | 4-19 | 16 | 117.5 | 89.0 | 4-16 | 16.0 | 140 | 100 | 4-18 | 15 | |
| 40 | 1 1/2 | 40 | 114 | 158 | 98 | 57 | M6x10 | 212 | 140 | 105 | 4-19 | 16 | 127 | 98.5 | 4-16 | 17.5 | 150 | 110 | 4-18 | 16 | |
| 50 | 2 | 50 | 120 | 158 | 120 | 67 | M6x10 | 234 | 155 | 120 | 4-19 | 20 | 152 | 120.5 | 4-19 | 19.5 | 165 | 125 | 4-18 | 18 | |
| 65 | 2 1/2 | 65 | 153 | 211 | 150 | 81 | M6x10 | 259 | 257 | 175 | 4-19 | 22 | 178 | 139.5 | 4-20 | 22.5 | 185 | 145 | 4-18 | 22 | |
| 80 | 3 | 80 | 171 | 240 | 186 | 99.7 | M8x10 | 304 | 301 | 185 | 8-19 | 22 | 191 | 152.5 | 4-20 | 24.0 | 200 | 160 | 8-18 | 23 | |
| 100 | 4 | 100 | 202 | 290 | 228 | 119.7 | M8x10 | 372 | 367 | 210 | 8-19 | 24 | 229 | 190.5 | 8-20 | 24.0 | 220 | 180 | 8-18 | 23 | |

| Size | | TS Socket | | | | | | Thread | | | | | | | | | | | |
|------|-------|-------------|----|------|-------|-----|----|-------------|----|------|----|-----------|----|------|-----|---------|----|------|-----|
| A | B | JIS | | ASTM | | DIN | | JIS,DIN(Rc) | | | | ANSI(NPT) | | | | DIN(Rp) | | | |
| | | PVC,HT,CPVC | | | | | | PVC | | PVDF | | PVC | | PVDF | | PVC | | PVDF | |
| | | L | ℓ | L | ℓ | L | ℓ | L | ℓ | L | ℓ | L | ℓ | L | ℓ | L | ℓ | L | ℓ |
| 15 | 1/2 | 109 | 22 | 103 | 22.22 | 92 | 16 | 97 | 18 | 99 | 20 | 97 | 18 | 99 | 99 | 97 | 18 | 99 | 99 |
| 20 | 3/4 | 132 | 25 | 119 | 25.4 | 107 | 19 | 117 | 18 | 116 | 22 | 117 | 18 | 116 | 116 | 117 | 18 | 116 | 116 |
| 25 | 1 | 143 | 29 | 133 | 28.58 | 121 | 22 | 128 | 23 | 136 | 24 | 128 | 23 | 136 | 136 | 128 | 23 | 136 | 136 |
| 32 | 1 1/4 | 166 | 32 | 147 | 31.75 | 137 | 26 | 146 | 23 | 148 | 25 | 146 | 23 | 148 | 148 | 146 | 23 | 148 | 148 |
| 40 | 1 1/2 | 175 | 35 | 171 | 34.93 | 161 | 31 | 163 | 25 | 169 | 28 | 163 | 25 | 169 | 169 | 163 | 25 | 169 | 169 |
| 50 | 2 | 203 | 38 | 188 | 38.1 | 189 | 38 | 188 | 30 | 196 | 30 | 188 | 30 | 196 | 196 | 188 | 30 | 196 | 196 |
| 65 | 2 1/2 | 259 | 61 | 211 | 44.45 | 211 | 44 | 227 | 32 | 227 | 32 | 212 | 32 | 212 | 227 | 212 | 32 | 212 | 227 |
| 80 | 3 | 311 | 64 | 262 | 47.63 | 263 | 51 | 278 | 37 | 278 | 37 | 261 | 37 | 261 | 278 | 261 | 37 | 261 | 278 |
| 100 | 4 | 390 | 84 | 315 | 57.15 | 315 | 61 | 330 | 45 | 330 | 45 | 315 | 45 | 315 | 330 | 315 | 45 | 315 | 330 |

| Size | | Butt Spigot | | | | Socket welding | | Weight(kg/unit) | | | | | | | | | | | |
|------|-------|-------------|----|-----|-----|----------------|------|-----------------|---------|---------|------|--------|---------|--------|------|--------|------|------|--|
| A | B | DIN | | DIN | | DIN | | Flange | | | | Socket | | Thread | | Spigot | | | |
| | | PP,PVDF | | PE | | PP | | PVC | | HT,CPVC | | PP | | PVC | | PVDF | | | |
| | | L | ℓ | L | ℓ | L | ℓ | PVC | HT,CPVC | PP | PVDF | PVC | HT,CPVC | PVC | PVDF | PP | PVDF | | |
| 15 | 1/2 | 143 | 30 | 210 | 65 | 103 | 17.5 | 12.0 | 0.4 | 0.4 | 0.3 | 0.5 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | |
| 20 | 3/4 | 152 | 24 | 220 | 65 | 114 | 19.0 | 13.0 | 0.6 | 0.6 | 0.4 | 0.7 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.4 | |
| 25 | 1 | 161 | 24 | 237 | 70 | 126 | 21.0 | 14.5 | 0.9 | 0.9 | 0.5 | 1.0 | 0.4 | 0.4 | 0.4 | 0.5 | 0.3 | 0.5 | |
| 32 | 1 1/4 | 167 | 25 | 258 | 75 | 141 | 23.5 | 18.0 | 1.2 | 1.2 | 0.7 | 1.3 | 0.6 | 0.6 | 0.6 | 0.6 | 0.4 | 0.7 | |
| 40 | 1 1/2 | 190 | 24 | 292 | 80 | 162 | 26.5 | 16.0 | 1.8 | 1.8 | 1.2 | 2.0 | 1.2 | 1.2 | 1.2 | 1.3 | 0.7 | 1.3 | |
| 50 | 2 | 216 | 28 | 325 | 90 | 185 | 30.5 | 20.0 | 2.7 | 2.7 | 1.7 | 3.1 | 1.7 | 1.8 | 1.7 | 2.0 | 1.1 | 1.9 | |
| 65 | 2 1/2 | 208 | 23 | 363 | 100 | 204 | 34.0 | 21.0 | 4.7 | 4.7 | 3.2 | 5.7 | 3.5 | 3.7 | 3.5 | 4.1 | 2.3 | 4.0 | |
| 80 | 3 | 301 | 45 | 424 | 105 | 264 | 37.0 | 26.5 | 7.3 | 7.6 | 5.0 | 9.1 | 6.2 | 6.8 | 6.2 | 7.5 | 4.3 | 7.6 | |
| 100 | 4 | 340 | 43 | 478 | 110 | 317 | 41.0 | 31.5 | 12.5 | 13.0 | 8.1 | 15.5 | 11.5 | 12.3 | 11.5 | 13.5 | 7.2 | 13.3 | |



Operating Temperature(°C)

PVC 0 ~ 50



6 Colors Handle for Easy Maintenance

ESLON COMPACT BALL VALVE

Feature

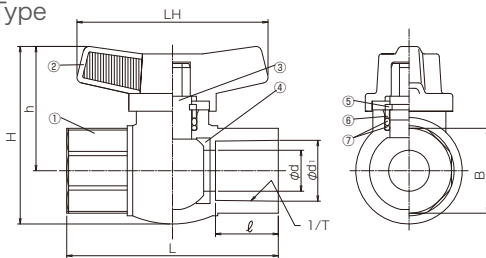
- Compact body and short face to face dimension enable installation even in narrow space.
- Usable even in the condition with vibration or thermal expansion as unified body with connection end.
- Six colors of handle enable easier management of application and fluid classification.

⚠ Important Notes

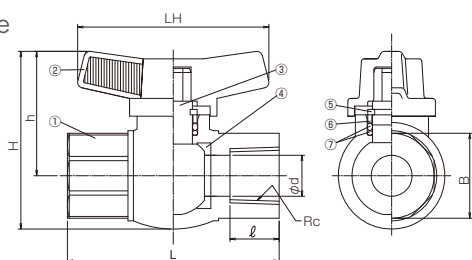
- Gasifying, volatile, or evaporating fluid such as hydrogen peroxide and sodium hypochlorite might rise inner pressure of valve and burst the valve. Please contact us concerning such risk.
- Do not use for the fluid containing slurry, solid, sediment, or crystallized fluid. Or for those kinds of fluid, strainer should be used in upstream.

Figure (TS Socket Type · Thread Type)

● TS Socket Type

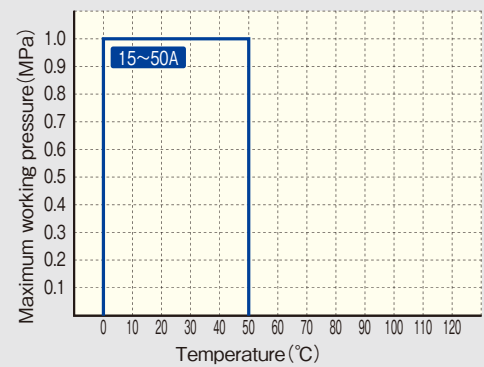


● Thread Type



Maximum Working Pressure -Temperature Rating

Body material : PVC



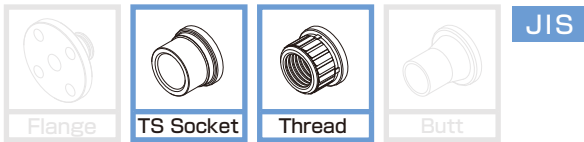
Parts List

| No. | Part Name | QTY | Material |
|-----|-----------|-----|--------------|
| 1 | Body | 1 | PVC |
| 2 | Handle | 1 | ABS |
| 3 | Stem | 1 | CPVC |
| 4 | Ball Seat | 2 | PTFE |
| 5 | Ring | 1 | PVDF |
| 6 | Collar | 1 | PVDF |
| 7 | O-Ring | 2 | ● EPDM ● FKM |

Size

Unit : mm

| Size | | d | L | H | h | LH | B | TS Socket | | | Thread | | Weight(kg/unit) | |
|------|-----|----|------|----|------|----|------|----------------|------|------|--------|----|-----------------|--------|
| A | B | | | | | | | d ¹ | 1/T | ℓ | Rc | ℓ | TS Socket | Thread |
| 13 | 3/8 | 13 | 72.5 | 65 | 45.5 | 70 | 25.4 | 18.3 | 1/30 | 18.0 | Rc 3/8 | 15 | 0.1 | 0.1 |
| 15 | 1/2 | 15 | 77.5 | 65 | 45.5 | 70 | 32.0 | 22.3 | 1/37 | 22.4 | Rc 1/2 | 18 | 0.1 | 0.1 |
| 20 | 3/4 | 20 | 90.0 | 75 | 52.0 | 76 | 36.0 | 26.3 | 1/42 | 25.6 | Rc 3/4 | 18 | 0.2 | 0.2 |



Operating Temperature(°C)

PVC 0 ~ 50



ESLON LOCK BALL VALVE

Feature

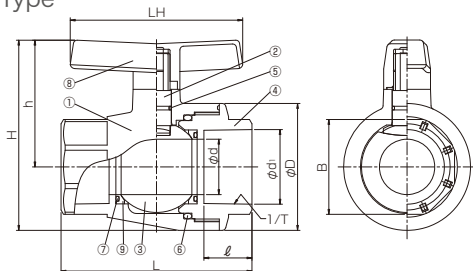
- Usable even in the condition with vibration or thermal expansion as unified body with connection end.
- Six colors of handle enable easier management of application and fluid classification.

⚠ Important Notes

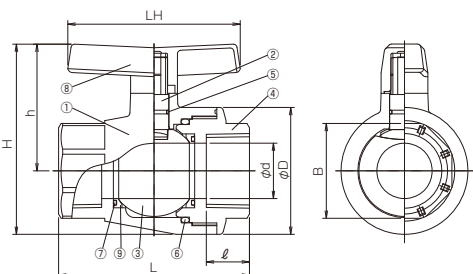
- Gasifying, volatile, or evaporating fluid such as hydrogen peroxide and sodium hypochlorite might rise inner pressure of valve and burst the valve. Please contact us concerning such risk.
- Do not use for the fluid containing slurry, solid, sediment, or crystallized fluid. Or for those kinds of fluid, strainer should be used in upstream.

Figure (TS Socket Type · Thread Type)

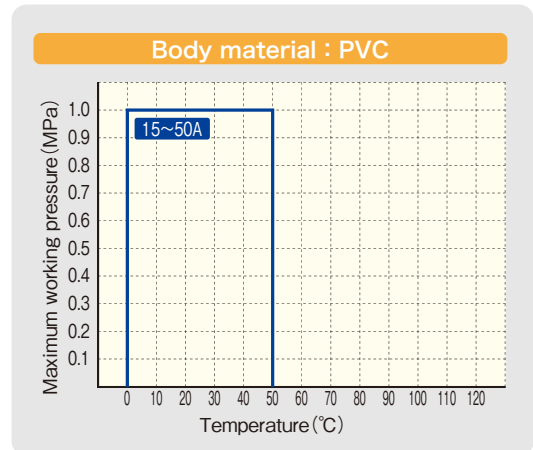
● TS Socket Type



● Thread Type



Maximum Working Pressure -Temperature Rating



Parts List

| No. | Part Name | Q'TY | Material |
|-----|---------------|------|----------|
| 1 | Body | 1 | PVC |
| 2 | Stem | 1 | PVC |
| 3 | Ball | 1 | PVC |
| 4 | Body Cap | 1 | PVC |
| 5 | Stem O-Ring | 1 | ● EPDM |
| 6 | Body O-Ring | 1 | ● FKM |
| 7 | BackUp O-Ring | 2 | ● FKM |
| 8 | Handle | 1 | ABS |
| 9 | Ball Seat | 2 | PTFE |

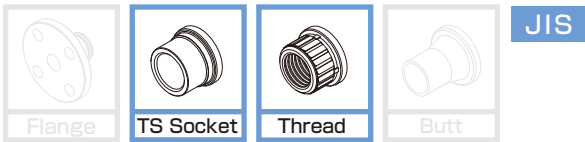
Size

TS Socket · Thread

Unit : mm

| Size | | d | L | H | h | φ D | LH | B | TS Socket | | | Thread | | Weight(kg/unit) | |
|------|-------|----|-------|-----|-------|-------|-----|--------|----------------|------|------|----------|----|-----------------|--------|
| A | B | | | | | | | | d ₁ | 1/T | ℓ | Rc | ℓ | TS Socket | Thread |
| 25 | 1 | 25 | 113.0 | 96 | 64.0 | 66.0 | 95 | 46 | 32.3 | 1/43 | 29.0 | Rc 1 | 23 | 0.3 | 0.3 |
| 32 | 1 1/4 | 29 | 114.0 | 119 | 82.0 | 74.0 | 110 | 60(54) | 38.4 | 1/37 | 32.0 | Rc 1 1/4 | 28 | 0.4 | 0.4 |
| 40 | 1 1/2 | 35 | 130.0 | 133 | 91.0 | 85.0 | 110 | 65 | 48.5 | 1/38 | 35.0 | Rc 1 1/2 | 30 | 0.6 | 0.6 |
| 50 | 2 | 45 | 155.0 | 154 | 103.0 | 103.0 | 140 | 77 | 60.6 | 1/35 | 39.0 | Rc 2 | 35 | 1.0 | 1.0 |

*The octagonal part of 32A differs by the Body and Bodycap side. The value of body side is indicated by () .



Operating Temperature(°C)

PVC 0 ~ 50



13, 15A

6A

ESLON MINI BALL VALVE

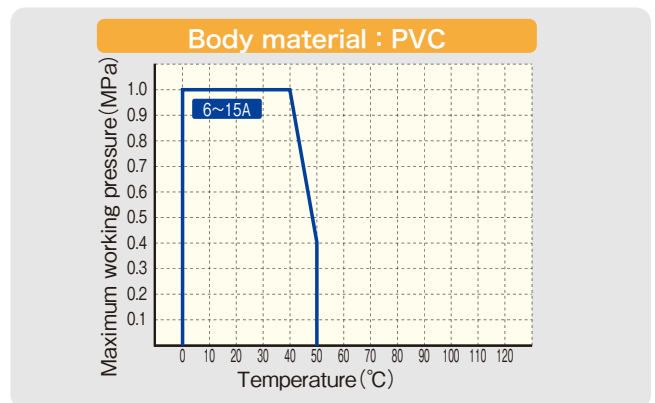
Feature

- Low stem torque and reliable sealing performance.
- Position indicator at handle enable easier flow rate regulation.
- Five types of end connections and their combination of both end connection available.

⚠ Important Notes

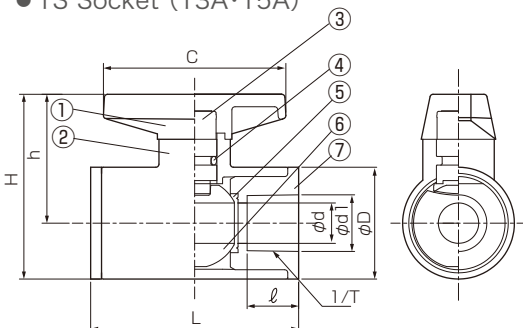
- Gasifying, volatile, or evaporating fluid such as hydrogen peroxide and sodium hypochlorite might rise inner pressure of valve and burst the valve. Please contact us concerning such risk.
- Fluid containing slurry, solid, sediment, or crystallized fluid might disable sealing.

Maximum Working Pressure - Temperature Rating

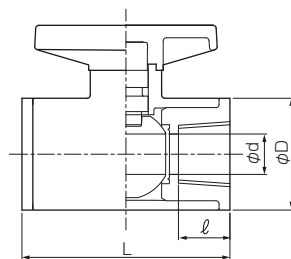


Figure, Parts List, Size (TS Socket Type and Thread Type, 13A · 15A)

● TS Socket (13A·15A)



● Thread (15A)



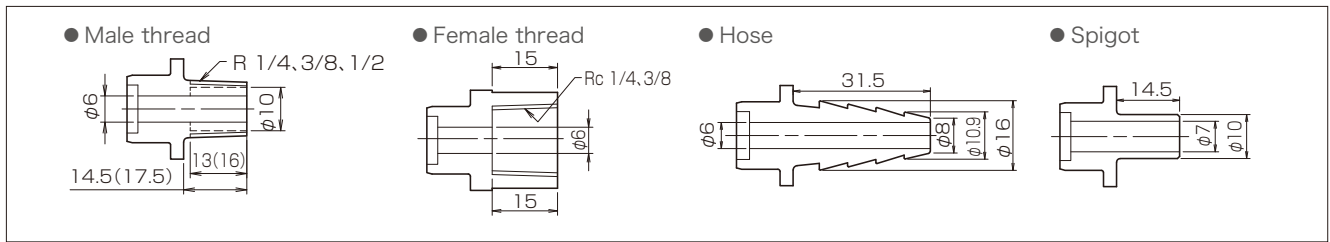
(13A, 15A)

| No. | Part Name | Q'TY | Material |
|-----|-----------|------|--------------|
| 1 | Handle | 1 | ABS |
| 2 | Body | 1 | PVC |
| 3 | Stem | 1 | PVC |
| 4 | O-Ring | 1 | ● EPDM ● FKM |
| 5 | Ball Seat | 2 | PTFE |
| 6 | Ball | 1 | PVC |
| 7 | Socket | 2 | PVC |

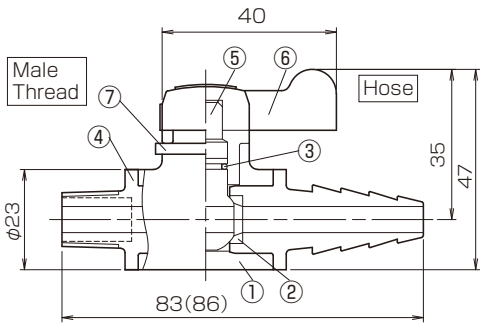
Unit : mm

| Size | | d | L | H | h | D | C | TS Socket | | | | Thread | | |
|------|-----|----|----|----|----|----|----|----------------|------|------|-----------------|--------|----|-----------------|
| A | B | | | | | | | d ₁ | 1/T | ℓ | Weight (g/unit) | Rc | ℓ | Weight (g/unit) |
| 13 | 3/8 | 13 | 67 | 60 | 42 | 35 | 60 | 18.3 | 1/33 | 16.5 | 90 | — | — | — |
| 15 | 1/2 | 13 | 67 | 60 | 42 | 35 | 60 | 22.3 | 1/33 | 16.5 | 80 | Rc1/2 | 16 | 90 |

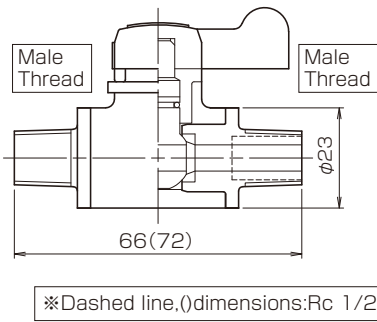
Figure (6A)



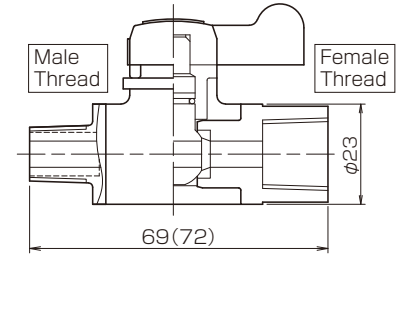
● Male Thread×Hose



● Male Thread×Male Thread

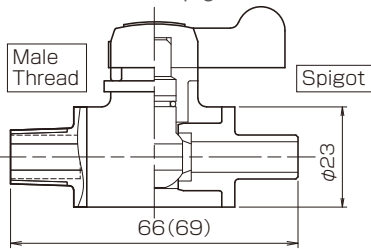


● Male Thread×Female Thread

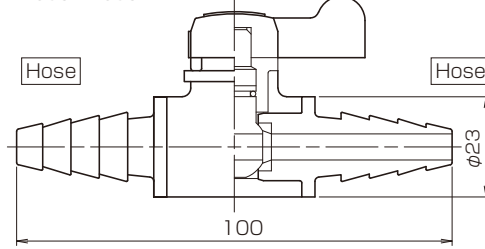


※Dashed line.()dimensions:Rc 1/2

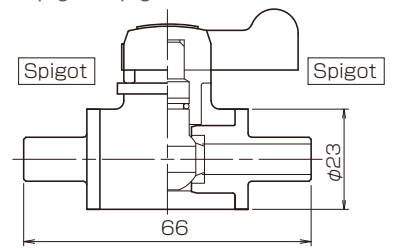
● Male Thread×Spigot



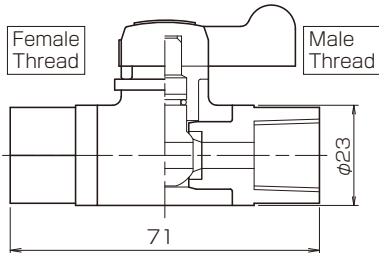
● Hose×Hose



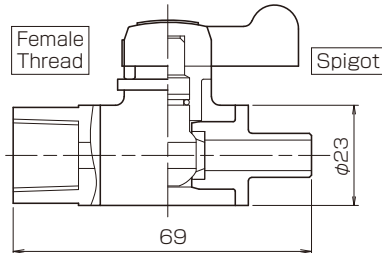
● Spigot×Spigot



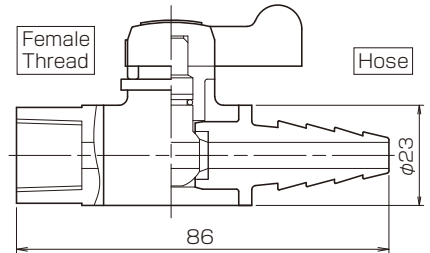
● Female Thread×Female Thread



● Female Thread×Spigot



● Female Thread×Hose

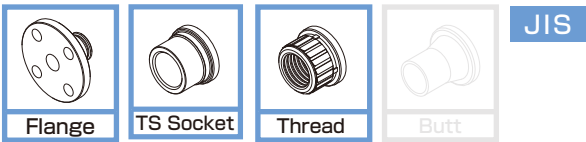


Parts List
(6A)

| No. | Part Name | Q'TY | Material |
|-----|--------------|------|--------------|
| 1 | Body | 1 | PVC |
| 2 | Ball Seat | 2 | ● EPDM ● FKM |
| 3 | O-ring | 1 | ● EPDM ● FKM |
| 4 | Socket | 1 | PVC |
| 5 | Ball | 1 | PVC |
| 6 | Handle | 1 | ABS |
| 7 | Stem Stopper | 1 | PVC |

Combination of End Connection, Weight

| Size | Part Name | Weight(g/unit) |
|------|-----------------------------|----------------|
| 6A | Male Thread×Male Thread | 30 |
| | Male Thread×Female Thread | 40 |
| | Male Thread×Hose | 40 |
| | Male Thread×Spigot | 30 |
| | Female Thread×Female Thread | 40 |
| | Female Thread×Hose | 40 |
| | Female Thread×Spigot | 40 |
| | Hose×Hose | 40 |
| | Spigot×Spigot | 30 |



Operating Temperature(°C)

PVC 0 ~ 50



Flange



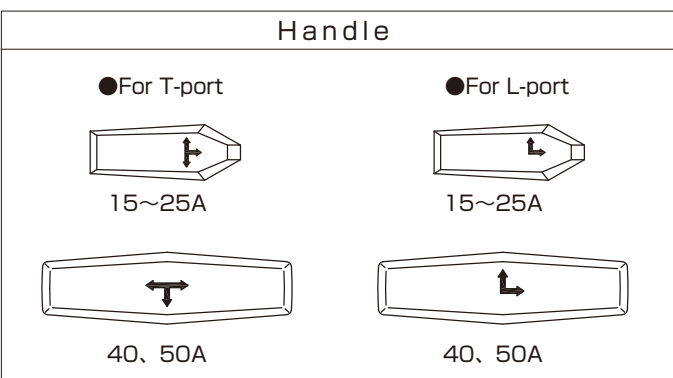
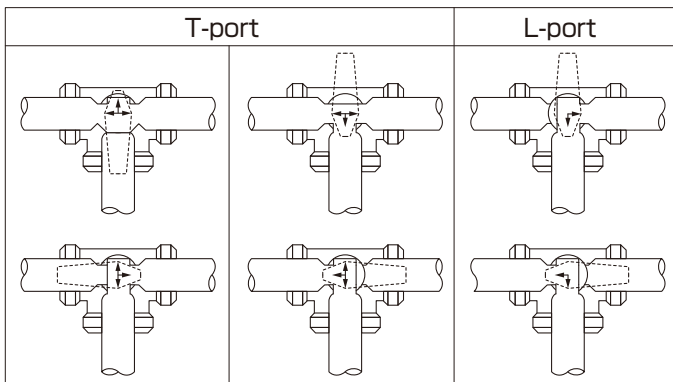
TS Socket·Thread

ESLON 3-WAY BALL VALVE

Feature

- Lock mechanism of ball stopper prevents popping out of the ball when Unit Nut of downstream side is loosened.
- Arrow marks on handle and body ensure flow direction.
- Two patterns of flow directional control available, T-Port and L-Port.

Flow Control Pattern by Handle Position



⚠ Important Notes

- Fluid containing slurry, solid, sediment, or crystallized fluid might disable sealing.

Maximum Working Pressure - Temperature Rating

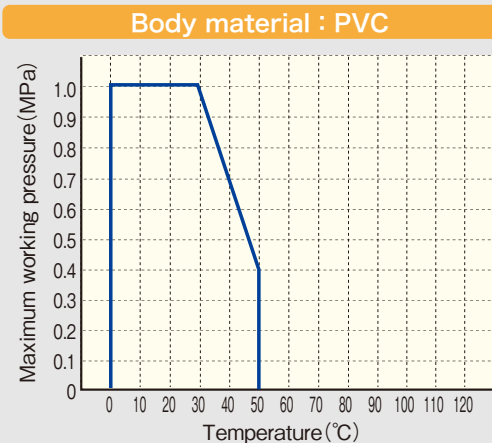
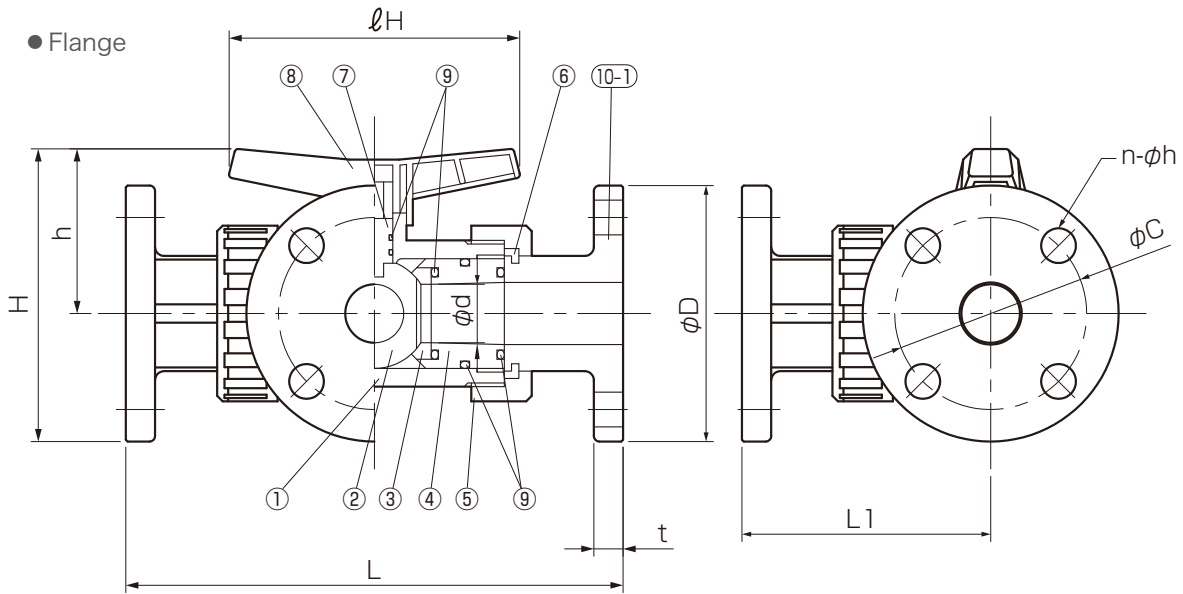


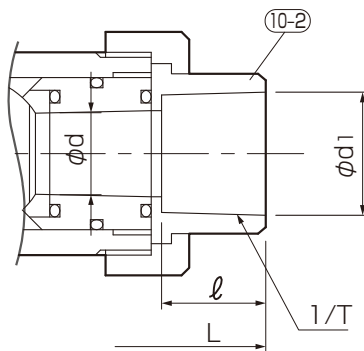
Figure (Flange Type · TS Socket Type · Thread Type)



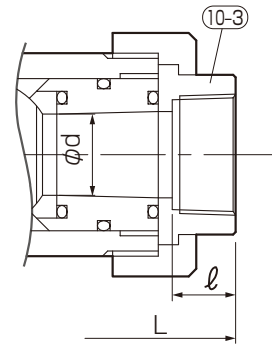
Parts List

| No. | Part Name | QTY | Material |
|------|--------------|-----|--------------|
| 1 | Body | 1 | PVC |
| 2 | Ball | 1 | PVC |
| 3 | Seat | 4 | PTFE |
| 4 | Ball Stopper | 2 | PVC |
| 5 | Union Nut | 3 | PVC |
| 6 | Set Ring | 3 | PVC |
| 7 | Stem | 1 | PVC |
| 8 | Handle | 1 | PVC |
| 9 | O-ring | 11 | ● EPDM ● FKM |
| 10-1 | Flange | 3 | PVC |
| 10-2 | TS socket | 3 | PVC |
| 10-3 | Thread | 3 | PVC |

● TS Socket



● Thread



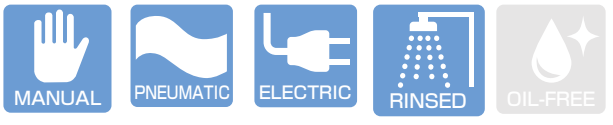
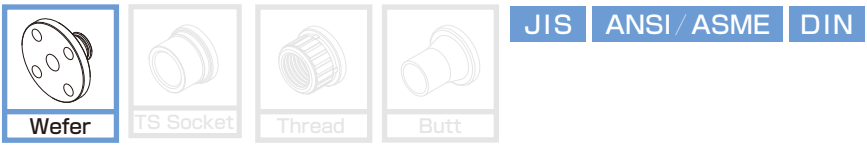
Size

Flange Type

| Size | | d | L | L ₁ | H | h | ℓH | Flange(JIS 10K) | | | | Weight (kg/unit) PVC |
|------|-------|----|-----|----------------|-----|----|----------|-----------------|-----|-------------|----|-------------------------|
| A | B | | | | | | | D | C | n- ϕh | t | |
| 15 | 1/2 | 11 | 163 | 82 | 95 | 48 | 73 | 95 | 70 | 4-15 | 14 | 0.8 |
| 20 | 3/4 | 16 | 200 | 100 | 102 | 52 | 85 | 100 | 75 | 4-15 | 14 | 0.9 |
| 25 | 1 | 20 | 221 | 111 | 126 | 64 | 94 | 125 | 90 | 4-19 | 16 | 1.5 |
| 40 | 1 1/2 | 32 | 272 | 136 | 160 | 90 | 160 | 140 | 105 | 4-19 | 18 | 2.5 |
| 50 | 2 | 38 | 306 | 153 | 176 | 98 | 160 | 155 | 120 | 4-19 | 20 | 4.0 |

TS Socket Type · Thread Type

| Size | | d | L | | L ₁ | | H | h | ℓH | TS Socket | | | Thread | | Weight(kg/unit) | |
|------|-------|----|-----|--------|----------------|--------|-----|----|----------|----------------|------|--------|----------|--------|-----------------|-----|
| A | B | | TS | Thread | TS | Thread | | | | d ₁ | 1/T | ℓ | Size | ℓ | PVC | |
| | | | | | | | | | | | | TS | Thread | | | |
| 15 | 1/2 | 11 | 129 | 118 | 65 | 59 | 73 | 48 | 73 | 22.3 | 1/34 | 24 | Rc 1/2 | 13 | 0.3 | 0.3 |
| 20 | 3/4 | 16 | 151 | 134 | 76 | 67 | 81 | 52 | 85 | 26.3 | 1/34 | 28 | Rc 3/4 | 15 | 0.4 | 0.4 |
| 25 | 1 | 20 | 175 | 156 | 88 | 78 | 98 | 64 | 94 | 32.4 | 1/34 | 32 | Rc 1 | 17 | 0.6 | 0.6 |
| 40 | 1 1/2 | 32 | 232 | 203 | 116 | 102 | 138 | 90 | 160 | 48.5 | 1/37 | 41 | Rc 1 1/2 | 19 | 1.5 | 1.5 |
| 50 | 2 | 38 | 260 | 225 | 130 | 113 | 154 | 98 | 160 | 60.6 | 1/37 | 47 | Rc 2 | 23 | 2.3 | 2.2 |



Operating Temperature(°C)

| | |
|------|---------|
| PVC | 0 ~ 50 |
| PP | 0 ~ 80 |
| PVDF | 0 ~ 120 |



ESLON BUTTERFLY VALVE LEVER TYPE

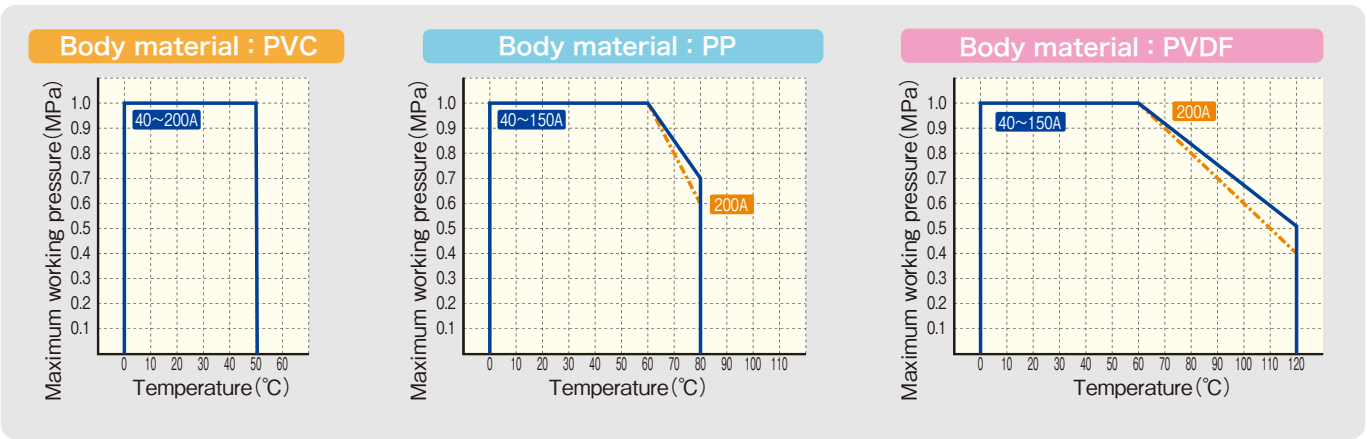
Feature

- Reliable sealing performance as spherical disc and preventive flange design against over-tightening.
- Changeable operating direction of lever handle into opposite even after installation.
- Exchangeable into gear type or automatic type by dismantling lever handle and indicator plate.
- Positioning pin for easy piping work (JIS10K)
- Controllable flow in 12 levels. Lockable lever type which has key hole available.

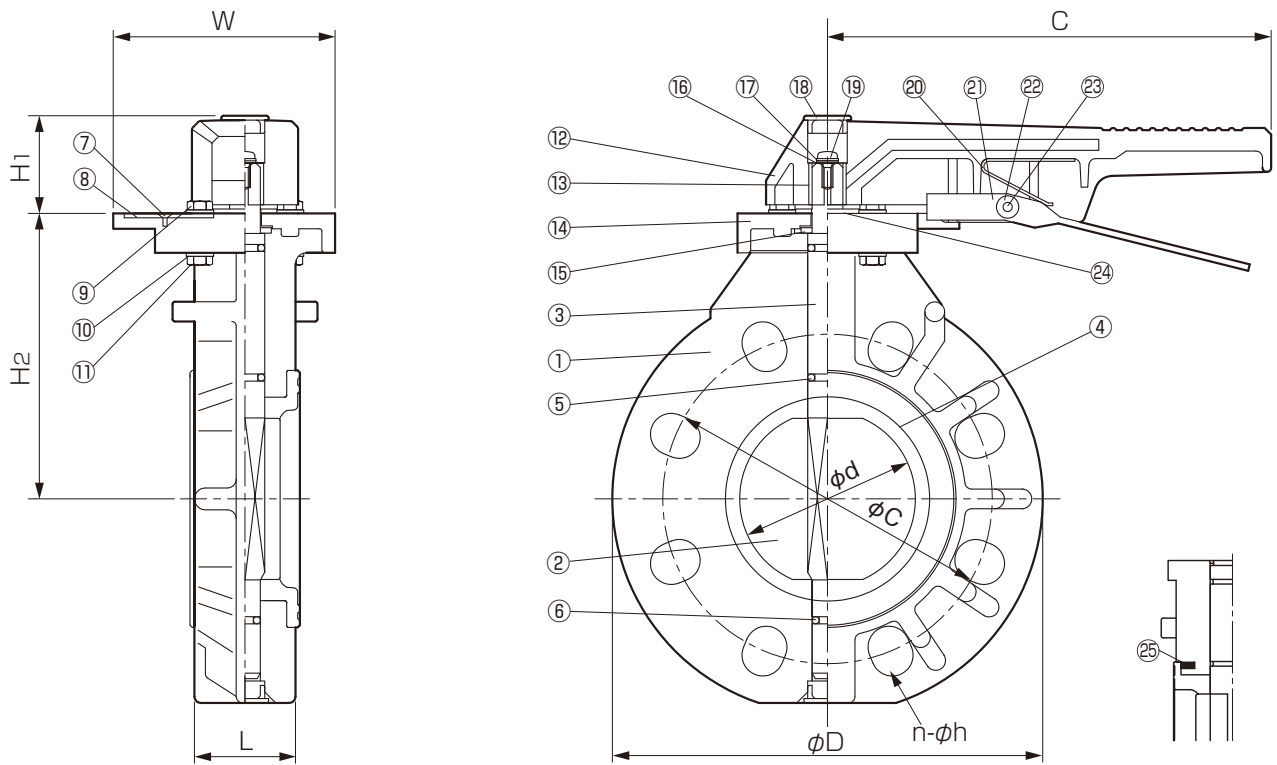
⚠ Important Notes

- Fluid containing slurry, solid, sediment, or crystallized fluid might disable sealing.

Maximum Working Pressure - Temperature Rating



Figure



Parts List

| No. | Part Name | QTY | Material | No. | Part Name | QTY | Material |
|-----|----------------|-----|------------------------|-----|-------------------------------|-----|---------------|
| 1 | Body | 1 | Body/Disc ● PVC/PP | 12 | Handle | 1 | ABS |
| 2 | Disc | 1 | ● PP/PP ● PVDF/PVDF | 13 | Handle insert | 1 | SUS304 |
| 3 | Shaft | 1 | ● SUS420J2 ● SUS316 | 14 | Indicator plate | 1 | PVC |
| 4 | Seat ring | 1 | ● EPDM | 15 | Thrust ring | 1 | SUS304 |
| 5 | O-Ring | 2 | ● FKM | 16 | Washer | 1 | SUS304 |
| 6 | O-Ring | 1 | | 17 | Spring washer | 1 | SUS304 |
| 7 | Tapping screw | 3 | SUS304 | 18 | Cap | 1 | PP |
| 8 | Lock plate | 1 | SUS304 | 19 | Machine screw | 1 | SUS304 |
| 9 | Hexagonal bolt | 2 | SUS304 | 20 | Flat spring | 1 | SUS304-CSP |
| 10 | Washer | 4 | SUS304 | 21 | Lever | 1 | SUS304 |
| 11 | Hexagonal nut | 1 | SUS304 | 22 | Pin cover | 1 | PP |
| | | | | 23 | Spring pin | 1 | SUS304 |
| | | | | 24 | Handle washer | 1 | PP |
| | | | | 25 | Reinforced Ring(200A Body:PP) | 2 | S45C+Painting |

Size

Unit : mm

| Size | | d | L | H ₁ | H ₂ | C | W | D | Flange | | | | | | Weight(kg/unit) | | |
|------|-------|-----|----|----------------|----------------|-----|-----|-----|--------|-------|-------|------|-----|------|-----------------|-----|------|
| A | B | | | | | | | | ANSI | | | | DIN | | PVC | PP | PVDF |
| | | | | | | | | | φ C | n-φh | φ C | n-φh | φ C | n-φh | | | |
| 40 | 1 1/2 | 45 | 33 | 44 | 112 | 202 | 101 | 140 | 105 | 4-19 | 98.5 | 4-16 | 110 | 4-18 | 1.2 | 1.1 | 1.3 |
| 50 | 2 | 57 | 43 | 44 | 119 | 202 | 101 | 155 | 120 | 4-19 | 120.5 | 4-19 | 125 | 4-18 | 1.4 | 1.2 | 1.6 |
| 65 | 2 1/2 | 71 | 46 | 44 | 130 | 202 | 101 | 178 | 140 | 4-19 | 139.5 | 4-19 | 145 | 4-18 | 1.7 | 1.5 | 1.9 |
| 80 | 3 | 80 | 46 | 44 | 137 | 202 | 101 | 196 | 150 | 8-19 | 152.5 | 4-19 | 160 | 8-18 | 2.0 | 1.8 | 2.3 |
| 100 | 4 | 100 | 52 | 44 | 161 | 245 | 123 | 229 | 175 | 8-19 | 190.5 | 8-19 | 180 | 8-18 | 3.0 | 2.7 | 3.4 |
| 125 | 5 | 125 | 56 | 54 | 179 | 310 | 155 | 254 | 210 | 8-23 | 216.0 | 8-22 | 210 | 8-18 | 4.6 | 4.1 | 5.3 |
| 150 | 6 | 150 | 60 | 54 | 188 | 310 | 155 | 286 | 240 | 8-23 | 241.5 | 8-22 | 240 | 8-22 | 5.5 | 4.8 | 6.5 |
| 200 | 8 | 198 | 71 | 68 | 240 | 400 | 200 | 343 | 290 | 12-23 | 298.5 | 8-22 | 295 | 8-22 | 8.9 | 8.0 | 10.5 |



Operating Temperature(°C)

| | |
|------|---------|
| PVC | 0 ~ 50 |
| PP | 0 ~ 80 |
| PVDF | 0 ~ 120 |



40-300A



350-600A

ESLON BUTTERFLY VALVE GEAR TYPE

Feature

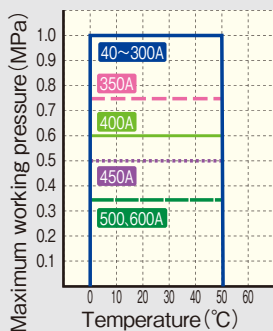
- Reliable sealing performance as spherical disc and preventive flange design against over-tightening.
- Changeable assembled direction of worm gear handle into opposite even after installation.
- Exchangeable into lever type or automatic type by dismounting worm gear.
- Positioning pin for easy piping work (JIS10K)
- Long Spindle Type, Chain Wheel Type, and Lockable handle type available.

⚠ Important Notes

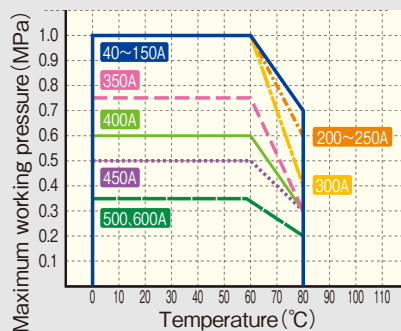
- Fluid containing slurry, solid, sediment, or crystallized fluid might disable sealing.

Maximum Working Pressure - Temperature Rating

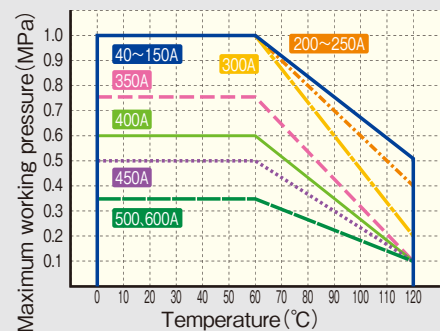
Body material : PVC



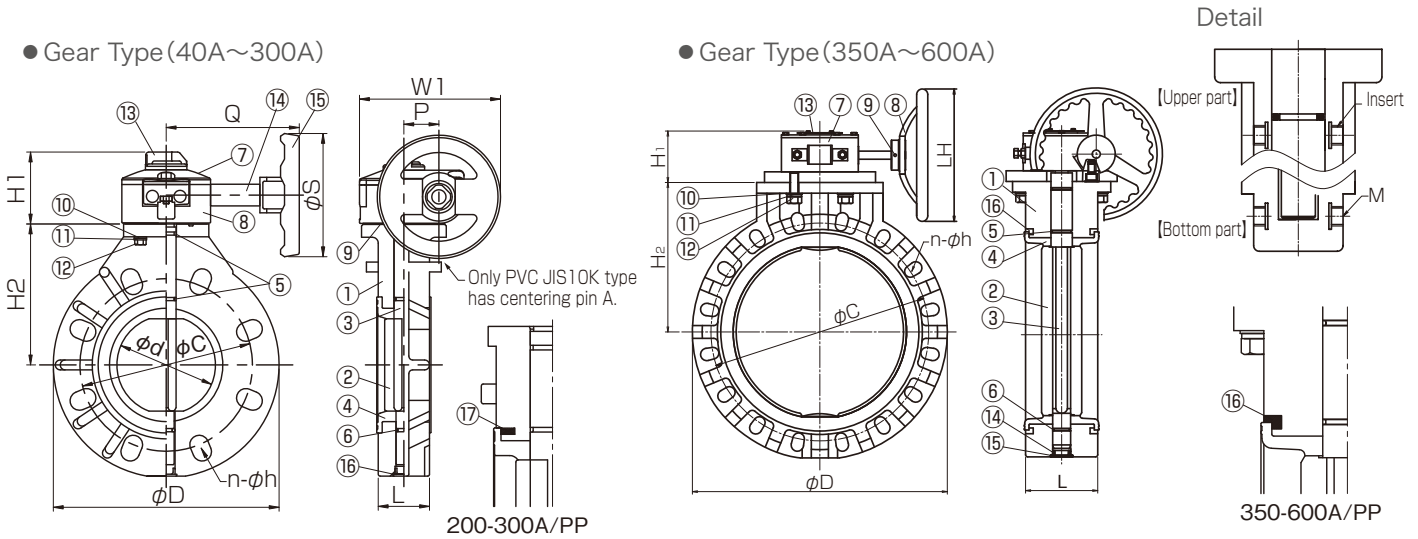
Body material : PP



Body material : PVDF



Figure



Parts List

Gear Type (40A ~ 300A)

| No. | Part Name | QTY | Material | No. | Part Name | QTY | Material |
|-----|---------------|-----|------------------------|-----|------------------------------------|-----|---------------|
| 1 | Body | 1 | ● PVC ● PP ● PVDF | 9 | Packing | 1 | EPDM |
| 2 | Disc | 1 | ● PP ● PVDF | 10 | Washer | 4 | SUS304 |
| 3 | Shaft | 1 | ● SUS420J2 ● SUS316 | 11 | Spring washer | 1 | SUS304 |
| 4 | Seat Ring | 1 | ● EPDM ● FKM | 12 | Hexagonal bolt | 1 | SUS304 |
| 5 | O-Ring | 2 | | 13 | Indicator | 1 | ABS |
| 6 | O-Ring | 1 | | 14 | Shaft Cover | 1 | PVC |
| 7 | Housing Cover | 1 | GFPP | 15 | Handle | 1 | ABS |
| 8 | Housing | 1 | GFPP | 16 | Cap | 1 | PP |
| | | | | 17 | Reinforced Ring (200-300A Body:PP) | 2 | S45C+Painting |

Gear Type (350A ~ 600A)

| No. | Part Name | QTY | Material | No. | Part Name | QTY | Material |
|-----|-----------|-----|------------------------|-----|---------------------------|-----|---------------|
| 1 | Body | 1 | ● PVC ● PP ● PVDF | 9 | Spring Pin | 1 | SUS304 |
| 2 | Disc | 1 | ● PP ● PVDF | 10 | Washer | 4 | SUS304 |
| 3 | Shaft | 1 | ● SUS420J2 ● SUS316 | 11 | Spring Washer | 4 | SUS304 |
| 4 | Seat Ring | 1 | ● EPDM ● FKM | 12 | Hexagonal bolt | 4 | SUS304 |
| 5 | O-Ring | 2 | | 13 | Indicator | 1 | SUS304 |
| 6 | O-Ring | 1 | | 14 | O-Ring | 1 | EPDM |
| 7 | Gear Box | 1 | FC+Painting | 15 | Cap | 1 | PP |
| 8 | Handle | 1 | FC+Painting | 16 | Reinforced Ring (Body:PP) | 2 | S45C+Painting |
| | | | | 17 | Insert (450-600A) | 8 | C3604 |

· For sea water application, the stem material must be SUS316.
Please contact us in advance.

Size

Gear Type (40A ~ 300A)

| Size | | L | φ D | Flange(JIS 10K) | | | | | | H ₁ | H ₂ | W ₁ | P | Q | φ S | Weight(kg/unit) | | |
|------|-------|-----|-----|-----------------|-------|-------|-------|-----|-------|----------------|----------------|----------------|----|-----|-----|-----------------|------|------|
| A | B | | | JIS10K | | ANSI | | DIN | | | | | | | | PVC | PP | PVDF |
| | | | | φ C | n-φ h | φ C | n-φ h | φ C | n-φ h | | | | | | | | | |
| 40 | 1 1/2 | 33 | 140 | 105 | 4-19 | 98.5 | 4-16 | 110 | 4-18 | 72 | 105 | 143 | 36 | 135 | 125 | 2.1 | 2.0 | 2.2 |
| 50 | 2 | 43 | 155 | 120 | 4-19 | 120.5 | 4-19 | 125 | 4-18 | 72 | 112 | 143 | 36 | 135 | 125 | 2.3 | 2.1 | 2.5 |
| 65 | 2 1/2 | 46 | 178 | 140 | 4-19 | 139.5 | 4-19 | 145 | 4-18 | 72 | 123 | 143 | 36 | 135 | 125 | 2.7 | 2.5 | 2.9 |
| 80 | 3 | 46 | 196 | 150 | 8-19 | 152.5 | 4-19 | 160 | 8-18 | 72 | 130 | 143 | 36 | 135 | 125 | 3.0 | 2.8 | 3.3 |
| 100 | 4 | 52 | 229 | 175 | 8-19 | 190.5 | 8-19 | 180 | 8-18 | 72 | 152 | 143 | 36 | 135 | 125 | 3.8 | 3.6 | 4.2 |
| 125 | 5 | 56 | 254 | 210 | 8-23 | 216.0 | 8-22 | 210 | 8-18 | 84 | 169 | 235 | 68 | 178 | 210 | 5.9 | 5.4 | 6.6 |
| 150 | 6 | 60 | 286 | 240 | 8-23 | 241.5 | 8-22 | 240 | 8-22 | 84 | 178 | 235 | 68 | 178 | 210 | 7.5 | 6.8 | 8.5 |
| 200 | 8 | 71 | 343 | 290 | 12-23 | 298.5 | 8-22 | 295 | 8-22 | 84 | 230 | 235 | 68 | 178 | 210 | 9.3 | 8.4 | 10.9 |
| 250 | 10 | 73 | 410 | 355 | 12-25 | 362.0 | 12-25 | 350 | 12-22 | 115 | 250 | 353 | 88 | 270 | 350 | 19.3 | 17.8 | 21.9 |
| 300 | 12 | 114 | 485 | 400 | 16-25 | 432.0 | 12-25 | 400 | 12-22 | 115 | 280 | 353 | 88 | 270 | 350 | 26.4 | 24.5 | 30.8 |

· Only PVC JIS10K type has centering pin A.
· Disc full-open/full close by 5 times of handle rotation for 40-100A, 10 times of handle rotation for 125-300A.
· Valve flange is universal type and bolt holes conform to JIS-10K, ANSI & DIN standards.

Gear Type (350A ~ 600A)

| Size | | L | φ D | H ₁ | H ₂ | LH | Flange | | | | | | Weight(kg/unit) | | | | | | | | |
|------|----|-----|-----|----------------|----------------|-----|--------|-------|------|-------|-------|----------|-----------------|-------|------|-------|-------|-------|-----|-------|-----|
| A | B | | | | | | JIS10K | | ANSI | | DIN | | PVC | PP | PVDF | | | | | | |
| | | | | | | | φ C | n-φ h | φ C | n-φ h | φ C | n-φ h | φ C | n-φ h | φ C | n-φ h | φ C | n-φ h | φ C | n-φ h | φ C |
| 350 | 14 | 129 | 535 | 105 | 325 | 310 | 445 | 16-25 | — | 476.2 | 12-29 | — | 460 | 16-22 | — | 39.0 | 37.0 | 51.3 | | | |
| 400 | 16 | 169 | 597 | 130 | 350 | 310 | 510 | 16-27 | — | 540.0 | 16-29 | — | 515 | 16-26 | — | 46.4 | 44.5 | 61.0 | | | |
| 450 | 18 | 179 | 635 | 155 | 370 | 310 | 565 | 20-27 | M24 | 578.0 | 16-32 | UNC1-1/8 | 565 | 20-26 | M24 | 81.3 | 78.4 | 104.0 | | | |
| 500 | 20 | 190 | 700 | 155 | 410 | 407 | 620 | 20-27 | M24 | 635.0 | 20-32 | UNC1-1/8 | 620 | 20-26 | M24 | 98.1 | 95.0 | 125.0 | | | |
| 600 | 24 | 209 | 815 | 155 | 465 | 407 | 730 | 24-33 | M30 | 749.0 | 20-35 | UNC1-1/4 | 725 | 20-30 | M27 | 144.0 | 140.0 | 181.0 | | | |

· Handle will be full-open/full close by 12.5 times for 350-400A, 16 times for 450-600A.
· Valve flange in sizes 350A & 400A is universal type and bolt holes conform to JIS-10K, ANSI & DIN standards.



JIS ANSI/ASME DIN



Operating Temperature(°C)

| | |
|------|---------|
| PVC | 0 ~ 50 |
| PP | 0 ~ 80 |
| PVDF | 0 ~ 100 |



ESLON CHECK VALVE SWING TYPE

Feature

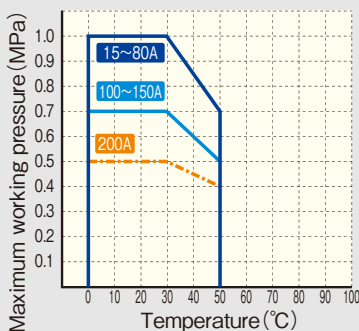
- Low pressure loss and reliable checking performance even with small differential pressure.
- Superior durability and high pressure resistance.
- Superior corrosion & chemical resistance as all plastic component for contact parts with medium.
- Light weight in 1/4 - 1/5 of cast-iron valve provides easier handling and installation.

⚠ Important Notes

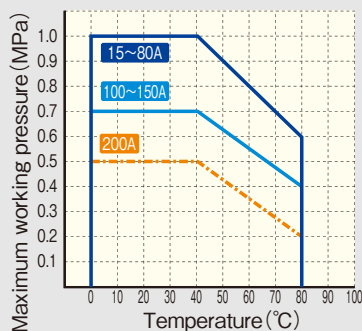
- Fluid containing slurry, solid, sediment, or crystallized fluid might disable sealing.
- Match the arrow on the valve body to the flow direction when install the valve, For horizontal piping, install the valve with bonnet upward

Maximum Working Pressure - Temperature Rating

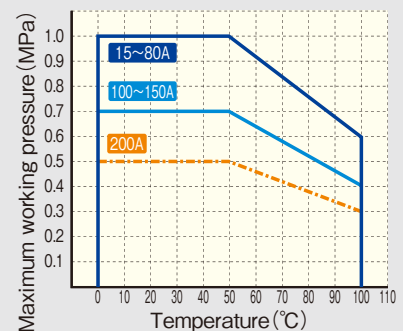
Body material : PVC



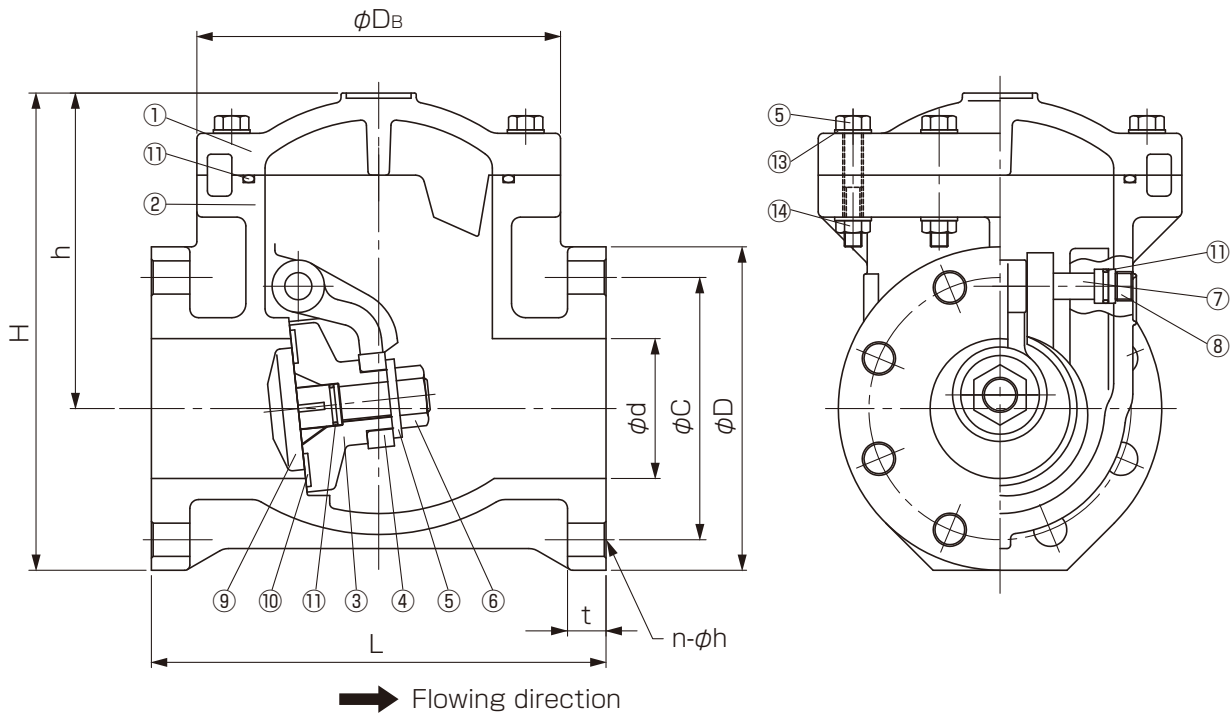
Body material : PP



Body material : PVDF



Figure



Parts List

| No. | Part Name | QTY | Material | No. | Part Name | QTY | Material |
|-----|-------------|-----|---|-----|----------------|-----|---|
| 1 | Cover | 1 | <ul style="list-style-type: none"> ● PVC ● PP ● PVDF | 9 | Gasket Holder* | 1 | <ul style="list-style-type: none"> ● PVC ● PP ● PVDF |
| 2 | Body | 1 | | 10 | Gasket | 1 | <ul style="list-style-type: none"> ● EPDM ● PTFE |
| 3 | Disc | 1 | | 11 | O-Ring | 1 | <ul style="list-style-type: none"> ● EPDM ● FKM |
| 4 | Arm | 1 | | 12 | Hexagon Bolt | 6 | SUS304 |
| 5 | Washer | 1 | | 13 | Washer | 12 | SUS304 |
| 6 | Hexagon Nut | 1 | | 14 | Hexagon Nut | 6 | SUS304 |
| 7 | Shaft | 1 | | | | | |
| 8 | Plug | 1 | | | | | |

* PP body in sizes 15-25A & 150A, 200A; Gasket Holder is PVDF

Size

Unit: mm

| Size | | d | L | H | h | D_B | FLANGE | | | | | | | | | | | | Weight(kg/unit) | | |
|------|-------|-----|-----|-----|-----|-------|----------|----------|-------------|----|----------|----------|-------------|----|----------|----------|-------------|----|-----------------|------|------|
| A | B | | | | | | JIS10K | | | | ANSI | | | | DIN | | | | PVC | PP | PVDF |
| | | | | | | | ϕD | ϕC | n- ϕh | t | ϕD | ϕC | n- ϕh | t | ϕD | ϕC | n- ϕh | t | | | |
| 15 | 1/2 | 21 | 140 | 143 | 93 | 112 | 100 | 70 | 4-15 | 14 | - | - | - | - | - | - | - | - | 1.0 | 0.8 | 1.3 |
| 20 | 3/4 | 21 | 140 | 143 | 93 | 112 | 100 | 75 | 4-15 | 14 | 100.0 | 70.0 | 4-16 | 14 | 105 | 75.0 | 4-14 | 14 | 1.0 | 0.8 | 1.3 |
| 25 | 1 | 25 | 160 | 180 | 118 | 132 | 125 | 90 | 4-19 | 14 | 108.0 | 79.5 | 4-16 | 14 | 115 | 85.0 | 4-14 | 14 | 1.6 | 1.3 | 2.2 |
| 32 | 1 1/4 | 40 | 180 | 206 | 136 | 148 | 140 | 100 | 4-19 | 18 | 127.0 | 89.5 | 4-16 | 18 | 140 | 100.0 | 4-18 | 18 | 2.7 | 1.9 | 3.3 |
| 40 | 1 1/2 | 40 | 180 | 206 | 136 | 148 | 140 | 105 | 4-19 | 18 | 127.0 | 98.5 | 4-16 | 18 | 140 | 110.0 | 4-18 | 18 | 2.7 | 1.9 | 3.3 |
| 50 | 2 | 51 | 200 | 229 | 152 | 180 | 155 | 120 | 4-19 | 20 | 152.0 | 120.5 | 4-19 | 20 | 165 | 125.0 | 4-18 | 20 | 3.6 | 3.0 | 4.5 |
| 65 | 2 1/2 | 67 | 240 | 254 | 166 | 200 | 175 | 140 | 4-19 | 22 | 178.0 | 139.5 | 4-19 | 22 | 185 | 145.0 | 4-18 | 22 | 4.8 | 3.8 | 6.0 |
| 80 | 3 | 80 | 260 | 270 | 178 | 208 | 185 | 150 | 8-19 | 22 | 190.5 | 152.5 | 4-19 | 22 | 200 | 160.0 | 8-18 | 22 | 5.8 | 4.3 | 7.5 |
| 100 | 4 | 100 | 300 | 318 | 213 | 265 | 210 | 175 | 8-19 | 24 | 229.0 | 190.5 | 8-19 | 24 | 220 | 180.0 | 8-18 | 24 | 9.4 | 7.3 | 11.8 |
| 125 | 5 | 125 | 350 | 372 | 247 | 330 | 250 | 210 | 8-23 | 24 | 254.0 | 216.0 | 8-23 | 24 | 250 | 210.0 | 8-18 | 24 | 16.4 | 12.7 | 21.0 |
| 150 | 6 | 150 | 400 | 420 | 280 | 375 | 280 | 240 | 8-23 | 26 | 280.0 | 241.5 | 8-23 | 26 | 285 | 240.7 | 8-22 | 26 | 20.1 | 16.0 | 26.0 |
| 200 | 8 | 200 | 500 | 494 | 329 | 425 | 330 | 290 | 12-23 | 30 | 343.0 | 298.5 | 8-23 | 30 | 340 | 295.0 | 8-22 | 30 | 31.7 | 27.0 | 44.0 |

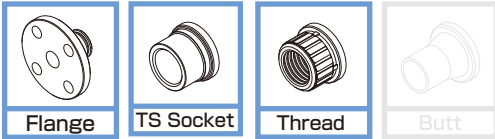
1. Size 15A is same as 20A and Size 32A is same as 40A, it is fabricated to long bolt hole of the flange.

Minimum operating pressure(Gasket:EPDM)

Unit: kPa

| Size(A) | | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 |
|-------------------|---------------------|----|----|----|----|----|----|----|----|-----|-----|-----|-----|
| Vertical piping | Min.opened pressure | 10 | | | | | | | | | | | |
| | Min.closed pressure | 30 | | | | | | | | | | 40 | |
| Horizontal piping | Min.opened pressure | 10 | | | | | | | | | | | |
| | Min.closed pressure | 30 | | | | | | 40 | | | | 50 | |

※ The pressure in the above table has tolerance.



JIS ANSI/ASME/ASTM DIN®

※ DIN:TS/Threaded Socket available



Operating Temperature(°C)

| | |
|---------|--------|
| PVC | 0 ~ 50 |
| HT-CPVC | 0 ~ 80 |



ESLON CHECK VALVE BALL TYPE

Feature

- Low pressure loss and reliable checking performance even with small differential pressure.
- Superior corrosion & chemical resistance as all plastic component for contact parts with medium.
- Easy maintenance by detaching union nut.

⚠ Important Notes

- In the condition of low flow rate or frequent flow rate fluctuation, the ball might vibrate in the body, and might cause sound or damage of valve. Esilon check valve swing type or lift type may be usable in those cases.
- Turbulent flow might disable checking by irregular ball bouncing.
- Fluid containing slurry, solid, sediment, or crystallized fluid might disable checking and sealing.
- Valve can be installed both vertically and horizontally. Match the arrow on the valve body to the flow direction when install the valve with bonnet upward.

Maximum Working Pressure - Temperature Rating

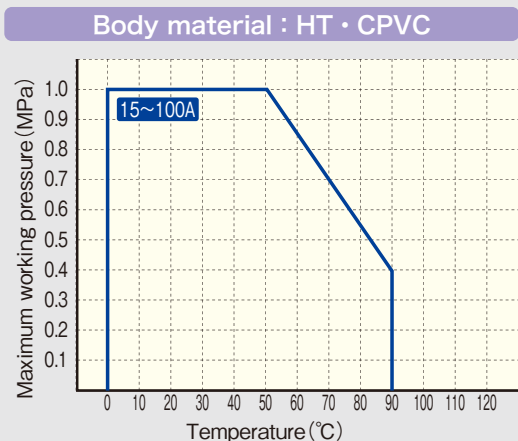
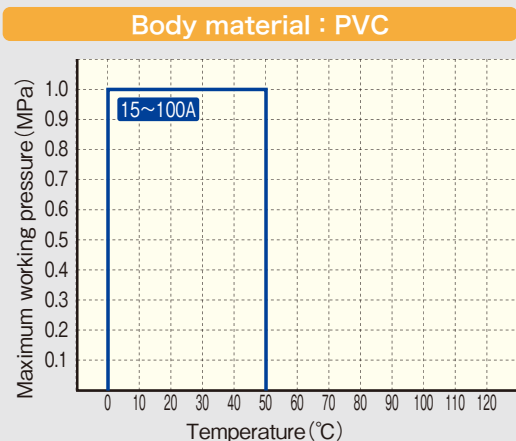
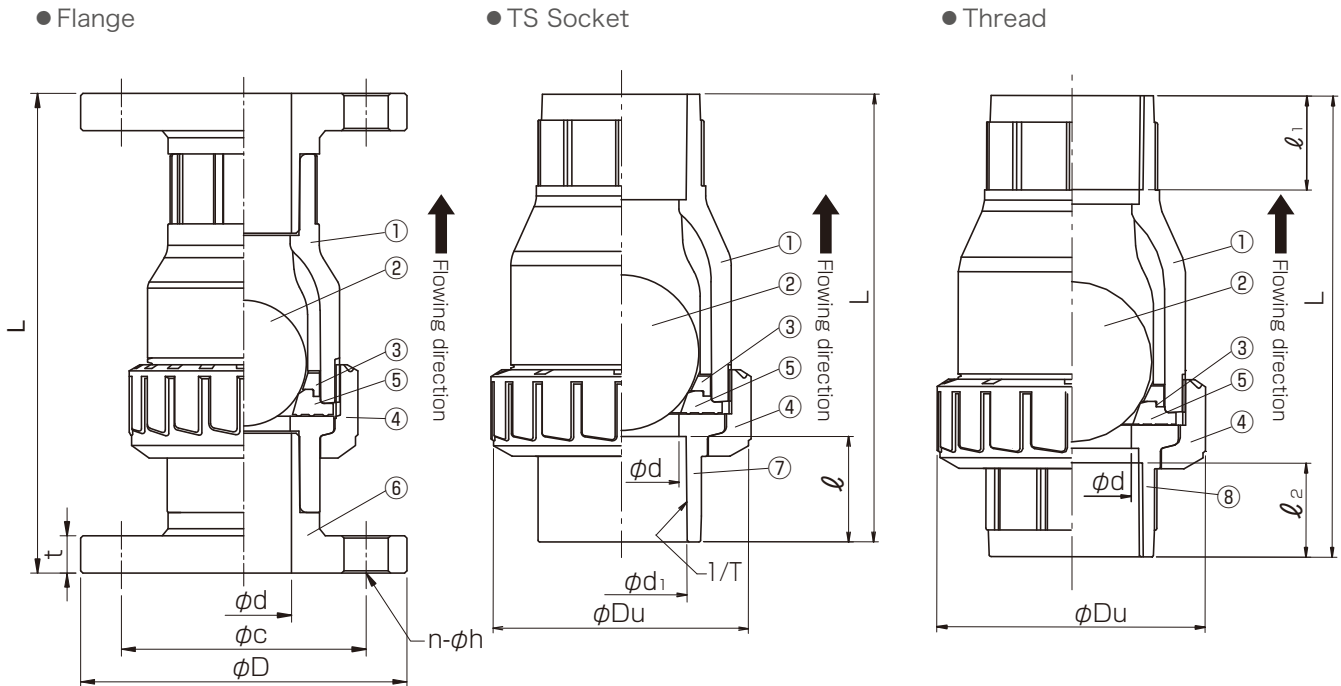


Figure (Flange Type · TS Socket Type · Thread Type)



Parts List

| No. | Part Name | QTY | Material |
|-----|-----------|-----|--|
| 1 | Body | 1 | |
| 2 | Ball | 1 | ●PVC |
| 3 | Ring | 1 | ●HT (JIS:Brown) |
| 4 | Union nut | 1 | ●CPVC (ASTM·DIN:Gray) |
| 5 | Seat | 1 | ● EPDM ● FKM |
| 6 | Flange | 2 | ●PVC ●HT (JIS:Brown) ●CPVC (ASTM·DIN:Gray) |
| 7 | TS socket | 1 | ●PVC ●HT (JIS:Brown) ●CPVC (ASTM·DIN:Gray) |
| 8 | Thread | 1 | ●PVC |

Size

Flange Type · TS Socket Type · Thread Type

Unit : mm

| Size | | | Flange | | | | | | | | | | |
|------|-------|-----|--------|-----|-----|-------|----|-----|------|-------|-------|------|--|
| A | B | d | JIS10K | | | | | | ANSI | | | | |
| | | | L | φ D | φ C | n-φ h | t | L | φ D | φ C | n-φ h | t | |
| 15 | 1/2 | 16 | 135 | 95 | 70 | 4-15 | 14 | 145 | 89 | 60.5 | 4-16 | 11.5 | |
| 20 | 3/4 | 20 | 160 | 100 | 75 | 4-15 | 14 | 169 | 98 | 70.0 | 4-16 | 13.0 | |
| 25 | 1 | 25 | 170 | 125 | 90 | 4-19 | 14 | 183 | 108 | 79.5 | 4-16 | 14.5 | |
| 32 | 1 1/4 | 32 | 205 | 135 | 100 | 4-19 | 16 | 231 | 119 | 89.0 | 4-16 | 17.6 | |
| 40 | 1 1/2 | 40 | 205 | 140 | 105 | 4-19 | 16 | 232 | 127 | 98.5 | 4-16 | 17.5 | |
| 50 | 2 | 50 | 230 | 155 | 120 | 4-19 | 20 | 264 | 152 | 120.5 | 4-19 | 19.5 | |
| 65 | 2 1/2 | 65 | 398 | 175 | 140 | 4-19 | 22 | 319 | 178 | 139.5 | 4-19 | 22.5 | |
| 80 | 3 | 78 | 425 | 185 | 150 | 8-19 | 22 | 352 | 191 | 152.5 | 4-19 | 24.0 | |
| 100 | 4 | 102 | 592 | 210 | 175 | 8-19 | 24 | 469 | 229 | 190.5 | 8-19 | 24.0 | |

Minimum operating pressure (Gasket:EPDM)

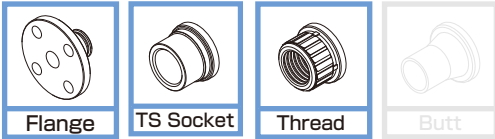
Unit : kPa

| Size(A) | | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | |
|-------------------|---------------------|----|----|----|----|----|----|----|----|-----|--|
| Vertical piping | Min.opened pressure | 5 | | | 10 | | | | | | |
| | Min.closed pressure | 30 | | | | | | 50 | | | |
| Horizontal piping | Min.opened pressure | 1 | | | 2 | | | | | | |
| | Min.closed pressure | 30 | | | | | | 50 | | | |

※ The pressure in the above table has tolerance.

Unit : mm

| TS socket | | | | | | | | | Thread | | | | | | φ Du | Weight(kg/unit) | | | |
|-----------|-------|----|------|--------|------|-----|-------|----|----------|-----|------------|-----|-----------|-----|------|-----------------|------------------------|---------------|-----------------|
| JIS | | | ASTM | | | DIN | | | JIS : Rc | | ANSI : NPT | | DIN:Rc,Rp | | | PVC Flange | HT (CPVC) TS Thread | PVC Flange | HT (CPVC) TS |
| L | φ d1 | ℓ | L | φ d1 | ℓ | L | φ d1 | ℓ | ℓ | L | ℓ | L | ℓ | | | | | | |
| 98 | 22.3 | 22 | 95 | 21.54 | 22.2 | 83 | 20.3 | 16 | 18 | 88 | 16.5 | 88 | 15.0 | 88 | 49 | 0.5 | 0.1 | 0.5 | 0.1 |
| 118 | 26.3 | 25 | 110 | 26.87 | 25.4 | 99 | 25.3 | 19 | 18 | 106 | 17.0 | 106 | 16.5 | 106 | 59 | 0.6 | 0.2 | 0.6 | 0.2 |
| 124 | 32.3 | 29 | 119 | 33.65 | 28.6 | 106 | 32.3 | 22 | 23 | 112 | 21.0 | 112 | 19.0 | 112 | 67 | 1.0 | 0.3 | 1.0 | 0.3 |
| 153 | 38.4 | 32 | 153 | 42.42 | 31.8 | 149 | 40.3 | 26 | 31 | 149 | 22.0 | 149 | 22.0 | 149 | 98 | 1.6 | 0.6 | 1.6 | 0.6 |
| 153 | 48.5 | 35 | 151 | 48.56 | 35 | 142 | 50.3 | 31 | 25 | 144 | 22.0 | 144 | 22.0 | 144 | 98 | 1.6 | 0.5 | 1.6 | 0.5 |
| 180 | 60.6 | 38 | 172 | 60.63 | 38.1 | 173 | 63.3 | 38 | 30 | 172 | 23.0 | 172 | 26.0 | 172 | 120 | 2.4 | 0.8 | 2.4 | 0.8 |
| 259 | 76.6 | 61 | 218 | 73.38 | 44.5 | 218 | 75.3 | 44 | 32 | 226 | 31.0 | 218 | 31.0 | 218 | 150 | 4.6 | 2.2 | 4.6 | 2.2 |
| 281 | 89.6 | 64 | 242 | 89.31 | 47.6 | 243 | 90.3 | 51 | 37 | 251 | 37.0 | 242 | 37.0 | 243 | 150 | 5.0 | 2.4 | 5.0 | 2.5 |
| 408 | 114.7 | 84 | 344 | 114.76 | 57.2 | 348 | 110.4 | 61 | 45 | 349 | 35.0 | 338 | 40.0 | 338 | 228 | 13.0 | 6.8 | 13.0 | 6.8 |



JIS ANSI/ASME/ASTM DIN



Operating Temperature(°C)

PVC 0 ~ 50



ESLON CHECK VALVE LIFT TYPE

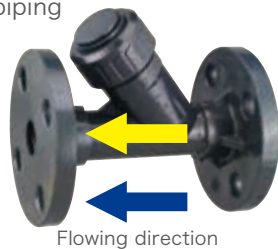
Feature

- Reliable checking performance in both horizontal and vertical direction as angle type.
- Easy maintenance by detaching union nut.
- Superior chemical & pressure resistance and durability.

⚠ Important Notes

- Valve can be installed both vertically and horizontally. Match the arrow on the valve body to the flow direction when install the valve with bonnet upward.

Horizontal piping



Vertical piping



- Fluid containing slurry, solid, sediment, or crystallized fluid might disable sealing.

Maximum Working Pressure - Temperature Rating

Body material : PVC

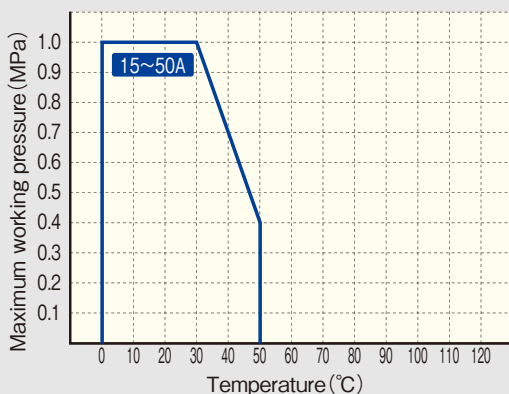
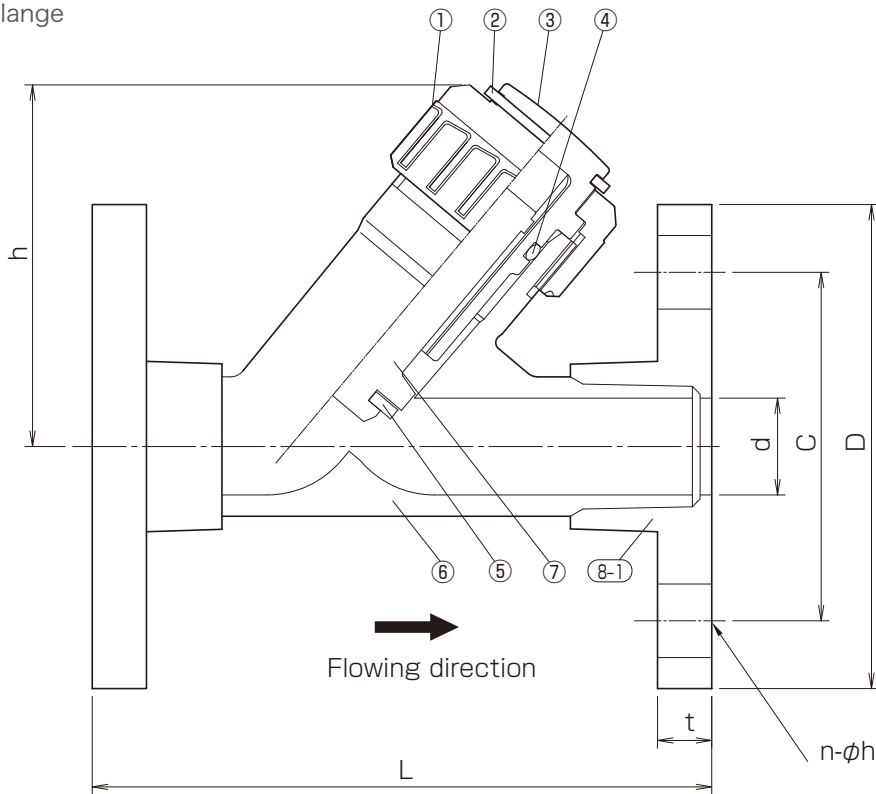
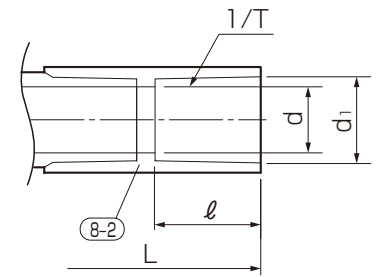


Figure (Flange Type · TS Socket Type · Thread Type)

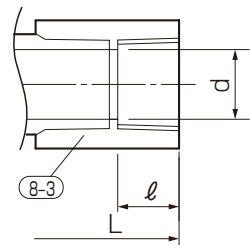
● Flange



● TS Socket



● Thread



※Install the valve as bonnet upward.

Parts List

| No. | Part Name | Q'TY | Material |
|-----|---------------|------|--------------|
| 1 | Union Nut | 1 | PVC |
| 2 | Split Ring | 1 | PVC |
| 3 | Bonnet | 1 | PVC |
| 4 | Piston O-ring | 1 | ● EPDM ● FKM |
| 5 | O-ring | 1 | PVC |
| 6 | Body | 1 | PVC |
| 7 | Piston | 1 | PVC+SS |
| 8-1 | Flange | 2 | PVC |
| 8-2 | TS socket | 2 | PVC |
| 8-3 | Threaded | 2 | PVC |

Size

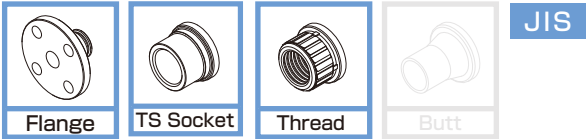
| Size | | d | h | Flange | | | | | | | | | | | | Weight(kg/unit) | | |
|------|-------|-----|-----|--------|--------|-----|------|-----|-------|-------|------|-----|-------|-----|------|-----------------|--------|------------------|
| A | B | | | L | JIS10K | | | | ANSI | | | | DIN | | | | Flange | TS Socket Thread |
| | | φ D | φ C | | n-φ h | t | φ D | φ C | n-φ h | t | φ D | φ C | n-φ h | t | | | | |
| 15 | 1/2 | 15 | 71 | 130 | 95 | 70 | 4-15 | 14 | 89 | 60.5 | 4-16 | 14 | 95 | 65 | 4-14 | 14 | 0.4 | 0.3 |
| 20 | 3/4 | 20 | 81 | 150 | 100 | 75 | 4-15 | 14 | 98 | 69.0 | 4-16 | 14 | 105 | 75 | 4-14 | 14 | 0.5 | 0.5 |
| 25 | 1 | 25 | 94 | 160 | 125 | 90 | 4-19 | 14 | 108 | 79.5 | 4-16 | 14 | 115 | 85 | 4-16 | 14 | 0.8 | 0.8 |
| 32 | 1 1/4 | 32 | 94 | 180 | 135 | 100 | 4-19 | 16 | 117 | 89.0 | 4-16 | 16 | 140 | 100 | 4-18 | 16 | 1.0 | 0.8 |
| 40 | 1 1/2 | 40 | 118 | 200 | 140 | 105 | 4-19 | 16 | 127 | 98.5 | 4-16 | 16 | 150 | 110 | 4-18 | 16 | 1.4 | 1.0 |
| 50 | 2 | 50 | 137 | 234 | 155 | 120 | 4-19 | 20 | 152 | 120.5 | 4-20 | 20 | 165 | 125 | 4-18 | 20 | 2.2 | 1.2 |

| Size | | TS socket | | | | | Thread | | Union | |
|------|-------|-----------|------|------|----|-----|--------|----|-------|----|
| A | B | JIS | | | | | JIS:Rc | | JIS | |
| | | L | φ d1 | 1/T | ℓ | φ D | L | ℓ | L | ℓ |
| 15 | 1/2 | 194 | 22.4 | 1/34 | 30 | 29 | 146 | 16 | 192 | 22 |
| 20 | 3/4 | 219 | 26.5 | 1/34 | 35 | 33 | 169 | 19 | 212 | 25 |
| 25 | 1 | 243 | 32.6 | 1/34 | 40 | 40 | 192 | 22 | 248 | 29 |
| 32 | 1 1/4 | 270 | 38.6 | 1/34 | 44 | 46 | 230 | 26 | 287 | 32 |
| 40 | 1 1/2 | 312 | 48.7 | 1/37 | 55 | 57 | 250 | 27 | 302 | 35 |
| 50 | 2 | 363 | 60.8 | 1/37 | 63 | 70 | 290 | 30 | 364 | 38 |

■ Minimum operating pressure(Gasket:EPDM) Unit : kPa

| | | Size(A) | | | | | |
|-------------------|---------------------|---------|----|----|----|-----|----|
| | | 15 | 20 | 25 | 32 | 40 | 50 |
| Vertical piping | Min.opened pressure | 2.0 | | | | 3.0 | |
| | Min.closed pressure | 50 | | | | | |
| Horizontal piping | Min.opened pressure | 2.0 | | | | 3.0 | |
| | Min.closed pressure | 50 | | | | | |

※ The pressure in the above table has tolerance.



Operating Temperature(°C)

PVC 0 ~ 50



(15A~50A)



(65A~100A)

ESLON GLOBE VALVE

Feature

- Superior chemical resistance and durability as unique plug sealing and non-contact stem with medium.
- Built in indicator for open-close position and preventive mechanism for over-tightening (15~50A)
- Flat at the bottom of flange for prevention of tumbling and for better workability in plumbing.

⚠ Important Notes

- Fluid containing slurry, solid, sediment, or crystallized fluid might disable sealing.

Maximum Working Pressure - Temperature Rating

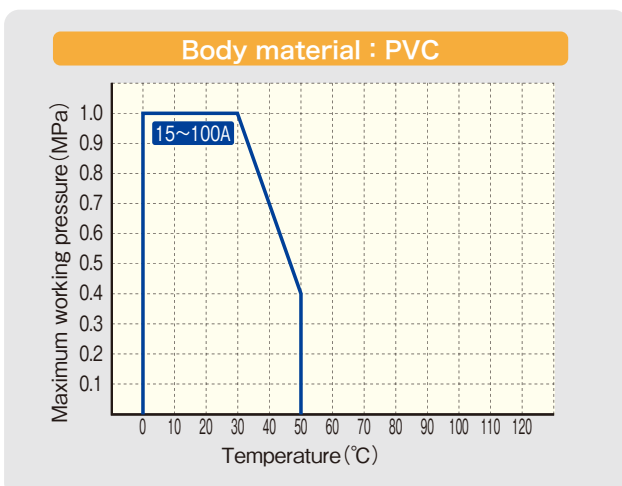
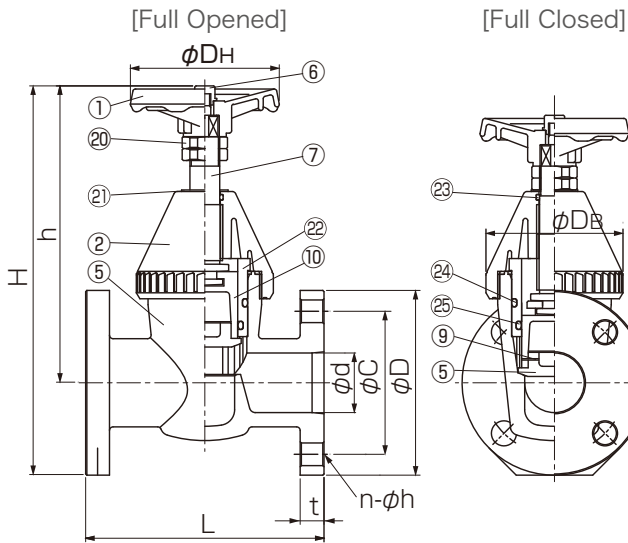
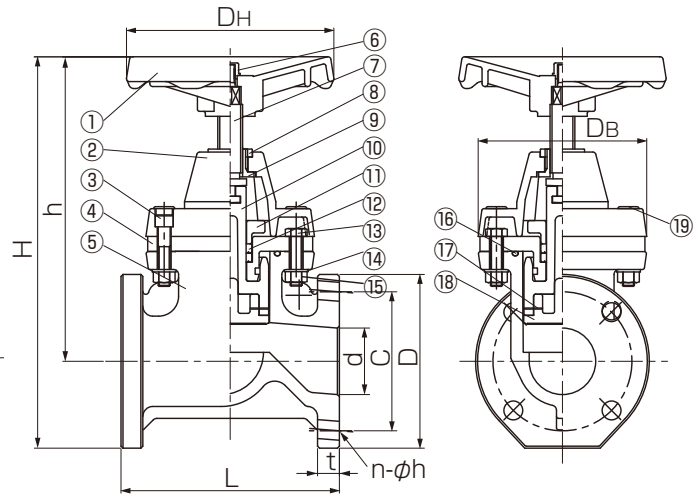


Figure (Flange Type · TS Socket Type · Thread Type)

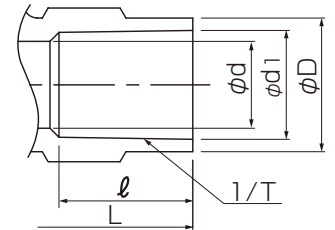
● Flange (15A~50A)



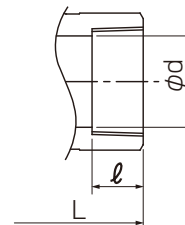
● Flange (65A~100A)



● TS Socket



● Thread



Parts List

| No. | Part Name | QTY | Material | No. | Part Name | QTY | Material |
|-----|----------------|-----|---------------|-------|---------------|-----|---------------|
| 1 | Handle | 1 | ABS | 13 | Hexagon Bolt | 4 | Ni plated SCM |
| 2 | Bonnet | 1 | PVC | 14 | Washer | 8 | SUS304 |
| 3 | Bolt | 4 | Ni plated SCM | 15 | Hexagon Nut | 8 | SUS304 |
| 4 | Bonnet | 1 | PVC | 16 | O-ring | 1 | EPDM |
| 5 | Body | 1 | PVC | 17 | Set Pin | — | PVC |
| 6 | Handle Nut | 1 | PVC | 18 | Disc | 1 | PP |
| 7 | Stem | 1 | C3601 | 19 | Bolt Cap | 1 | PP |
| 8 | Set Nut | 1 | C3601 | 20 | Stopper Nut | 2 | PVC |
| 9 | Sleeve | 1 | C3601 | 21 | Thrust Washer | 1 | PTFE |
| 10 | Disk Holder | 1 | PVC | 22 | Bush | 1 | PVC |
| 11 | Gasket Stopper | 1 | PP | 23 | O-ring | 1 | NBR |
| 12 | Y Gasket | 2 | EPDM | 24,25 | O-ring | 1 | ● EPDM ● FKM |

· Thrust washer is assembled for size 40A and 50A.

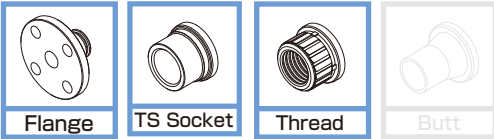
Size

Flange Type

| Size | | d | L | H (max) | h (max) | D _H | D _B | Flange (JIS 10K) | | | | Weight (kg/unit) |
|------|-------|-----|-----|---------|---------|----------------|----------------|------------------|-----|------|----|------------------|
| A | B | | | | | | | D | C | n-φh | t | |
| 15 | 1/2 | 15 | 85 | 199 | 152 | 65 | 52 | 95 | 70 | 4-15 | 14 | 0.5 |
| 20 | 3/4 | 20 | 95 | 215 | 165 | 65 | 62 | 100 | 75 | 4-15 | 14 | 0.6 |
| 25 | 1 | 25 | 110 | 239 | 177 | 80 | 72 | 125 | 90 | 4-19 | 14 | 0.9 |
| 32 | 1 1/4 | 30 | 135 | 272 | 205 | 80 | 83 | 140 | 100 | 4-19 | 16 | 1.3 |
| 40 | 1 1/2 | 40 | 190 | 304 | 234 | 125 | 105 | 140 | 105 | 4-19 | 16 | 1.9 |
| 50 | 2 | 50 | 200 | 327 | 249 | 125 | 115 | 155 | 120 | 4-19 | 20 | 2.6 |
| 65 | 2 1/2 | 65 | 220 | 390 | 303 | 150 | 170 | 175 | 140 | 4-19 | 22 | 5.5 |
| 80 | 3 | 80 | 240 | 442 | 350 | 210 | 189 | 185 | 150 | 8-19 | 22 | 7.5 |
| 100 | 4 | 100 | 290 | 500 | 395 | 210 | 231 | 210 | 175 | 8-19 | 24 | 11.0 |

TS Socket Type · Thread Type

| Size | | d | L | | H (max) | | h (max) | | D _H | D _B | TS Socket | | | Thread | | Weight (kg/unit) | |
|------|-------|----|-----|--------|---------|--------|---------|--------|----------------|----------------|----------------|-----------|----|----------|----|------------------|--------|
| A | B | | TS | Thread | TS | Thread | TS | Thread | | | d _i | 1/T Taper | ℓ | Size | ℓ | TS | Thread |
| 15 | 1/2 | 16 | 110 | 85 | 169 | 169 | 152 | 152 | 65 | 52 | 22.4 | 1/34 | 30 | Rc 1/2 | 15 | 0.3 | 0.3 |
| 20 | 3/4 | 21 | 130 | 95 | 186 | 186 | 165 | 165 | 65 | 62 | 26.5 | 1/34 | 35 | Rc 3/4 | 17 | 0.4 | 0.4 |
| 25 | 1 | 26 | 150 | 110 | 201 | 201 | 177 | 177 | 80 | 72 | 32.6 | 1/34 | 40 | Rc 1 | 20 | 0.5 | 0.5 |
| 32 | 1 1/4 | 32 | — | 135 | — | 234 | — | 205 | 80 | 83 | — | — | — | Rc 1 1/4 | 22 | — | 0.8 |
| 40 | 1 1/2 | 41 | — | 140 | — | 257 | — | 234 | 125 | 105 | — | — | — | Rc 1 1/2 | 25 | — | 1.3 |
| 50 | 2 | 50 | — | 180 | — | 298 | — | 249 | 125 | 115 | — | — | — | Rc 2 | 28 | — | 1.8 |



JIS ANSI / ASME / ASTM DIN



Operating Temperature(°C)

PVC 0 ~ 50



ESLON YP BALL VALVE

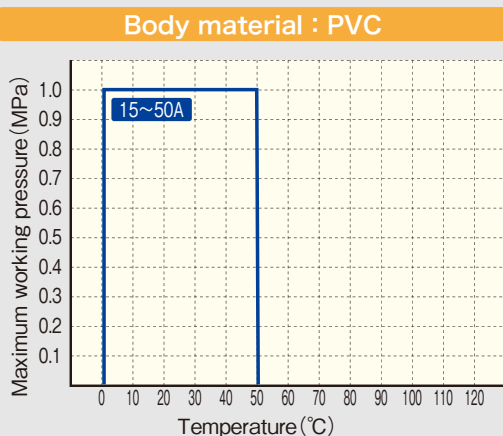
Feature

- Unique flow channel design of the ball enables precise flow rate control.
- High rangeability over 200 and equal percentage flow characteristic.
- Large visual indicator for flow rate control.

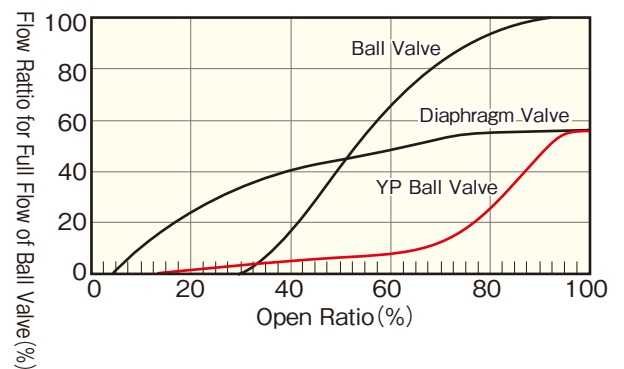
⚠ Important Notes

- Fluid containing slurry, solid, sediment, or crystallized fluid might disable sealing.

Maximum Working Pressure - Temperature Rating

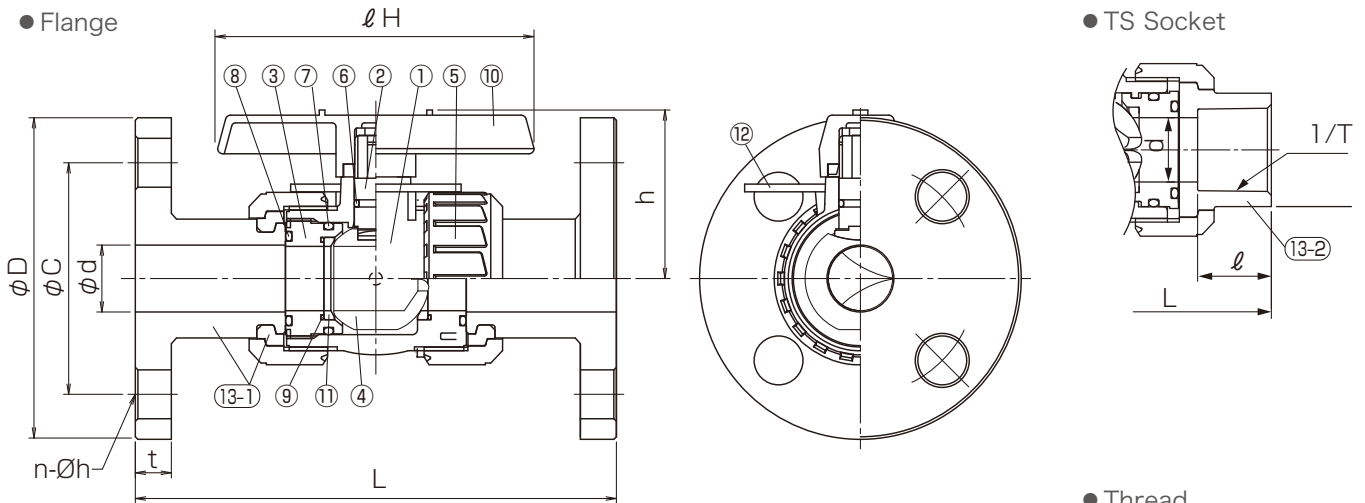


Flow Characteristic of YP Ball Valve



※ Comparison of Cv Values at various opening degree when that of 15A Ball Valve at full opened as 100.

Figure (Flange Type · TS Socket Type · Thread Type)



Parts List

| No. | Part Name | QTY | 材 質 |
|------|-----------------------------|--------|-----------------|
| 1 | Body | 1 | ● PVC |
| 2 | Stem | 1 | |
| 3 | Ball Stopper | 1 | |
| 4 | Ball | 1 | |
| 5 | Union Nut | 2 | |
| 6 | Stem O-Ring | 15-32A | ● EPDM ● FKM |
| | | 40,50A | |
| 7 | Ball Stopper O-Ring | 1 | |
| 8 | Union O-ring | 2 | |
| 9 | Ball Seat O-Ring | 2 | |
| 10 | Handle | 1 | ABS |
| 11 | Ball Seat | 2 | PTFE |
| 12 | Open position display plate | 1 | PVC |
| 13-1 | Flange | 2 | PVC |
| 13-2 | TS socket | 2 | PVC |
| 13-3 | Threaded | 2 | PVC |

Size

Flange Type

Unit : mm

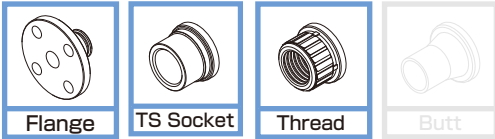
| Size | | ϕd | h | LH | ϕDu | L | Flange | | | | | | | | | | | |
|------|-------|----------|-----|-----|-----------|----------|----------|-------------|------|----------|----------|-------------|------|----------|----------|-------------|------|----|
| A | B | | | | | | JIS10K | | | | ANSI | | | | DIN | | | |
| | | | | | | ϕD | ϕC | n- ϕh | t | ϕD | ϕC | n- ϕh | t | ϕD | ϕC | n- ϕh | t | |
| 15 | 1/2 | 15 | 50 | 95 | 49 | 143 | 95 | 70 | 4-15 | 14 | 89.0 | 60.5 | 4-16 | 11.5 | 95 | 65 | 4-14 | 11 |
| 20 | 3/4 | 20 | 53 | 95 | 59 | 172 | 100 | 75 | 4-15 | 14 | 98.0 | 70.0 | 4-16 | 13.0 | 105 | 75 | 4-14 | 12 |
| 25 | 1 | 25 | 66 | 123 | 67 | 187 | 125 | 90 | 4-19 | 14 | 108.0 | 79.5 | 4-16 | 14.5 | 115 | 85 | 4-14 | 14 |
| 32 | 1 1/4 | 32 | 74 | 123 | 81 | 190 | 135 | 100 | 4-19 | 16 | 117.5 | 89.0 | 4-16 | 16.0 | 140 | 100 | 4-18 | 15 |
| 40 | 1 1/2 | 40 | 100 | 152 | 98 | 212 | 140 | 105 | 4-19 | 16 | 127.0 | 98.5 | 4-16 | 17.5 | 150 | 110 | 4-18 | 16 |
| 50 | 2 | 50 | 107 | 152 | 120 | 234 | 155 | 120 | 4-19 | 20 | 152.0 | 120.5 | 4-19 | 19.5 | 165 | 125 | 4-18 | 18 |

TS Socket Type · Thread Type

Unit : mm

| Size | | TS Socket | | | | | | Female Thread | | | | | | Weight(kg/unit) | |
|------|-------|-----------|--------|------|--------|-----|--------|---------------|--------|-----------|--------|---------|--------|-----------------|---------------|
| A | B | JIS | | ASTM | | DIN | | JIS.DIN(Rc) | | ANSI(NPT) | | DIN(Rp) | | Flange | Socket,Thread |
| | | L | ℓ | L | ℓ | L | ℓ | L | ℓ | L | ℓ | L | ℓ | | |
| 15 | 1/2 | 109 | 22 | 103 | 22.22 | 92 | 16 | 97 | 18 | 97 | 18 | 97 | 18 | 0.4 | 0.2 |
| 20 | 3/4 | 132 | 25 | 119 | 25.40 | 107 | 19 | 117 | 18 | 117 | 18 | 117 | 18 | 0.6 | 0.3 |
| 25 | 1 | 143 | 29 | 133 | 28.58 | 121 | 22 | 128 | 23 | 128 | 23 | 128 | 23 | 0.9 | 0.4 |
| 32 | 1 1/4 | 166 | 32 | 147 | 31.75 | 137 | 26 | 146 | 23 | 146 | 23 | 146 | 23 | 1.2 | 0.6 |
| 40 | 1 1/2 | 175 | 35 | 171 | 34.93 | 161 | 31 | 163 | 25 | 163 | 25 | 163 | 25 | 1.7 | 1.1 |
| 50 | 2 | 203 | 38 | 188 | 38.10 | 189 | 38 | 188 | 30 | 188 | 30 | 188 | 30 | 2.6 | 1.6 |

※ The valve should be installed in correct flow direction according to the arrow marked on open position display plate.



JIS ISO*
*Butt spigot only



Operating Temperature(°C)

| | |
|------|-----------|
| PVC | 0 ~ 50 |
| PP | 10 ~ 70 |
| PVDF | -30 ~ 100 |



ESLON RELIEF VALVE Type712

Feature

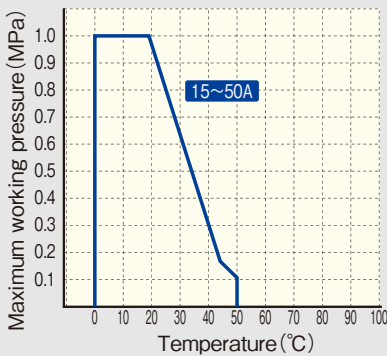
- De-pressure and prevent from the damage of piping line by excess pressure
- Pressure adjustment range of 0.03 - 1.0 MPa
- Reliable relief performance in both horizontal and vertical direction of pipe line
- Superior corrosion & chemical resistance as all plastic component for contact parts with medium.

⚠ Important Notes

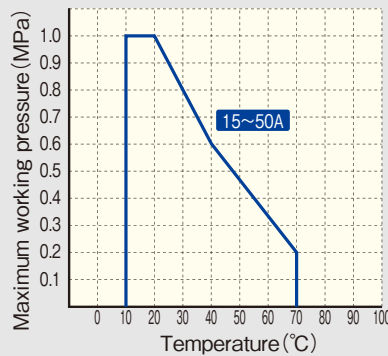
- Fluid containing slurry, solid, sediment, or crystallized fluid might disable sealing.

Maximum Working Pressure - Temperature Rating

Body material : PVC



Body material : PP



Body material : PVDF

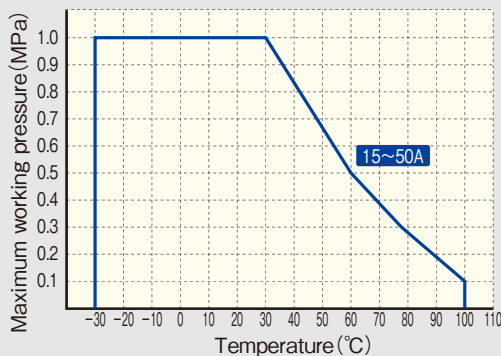
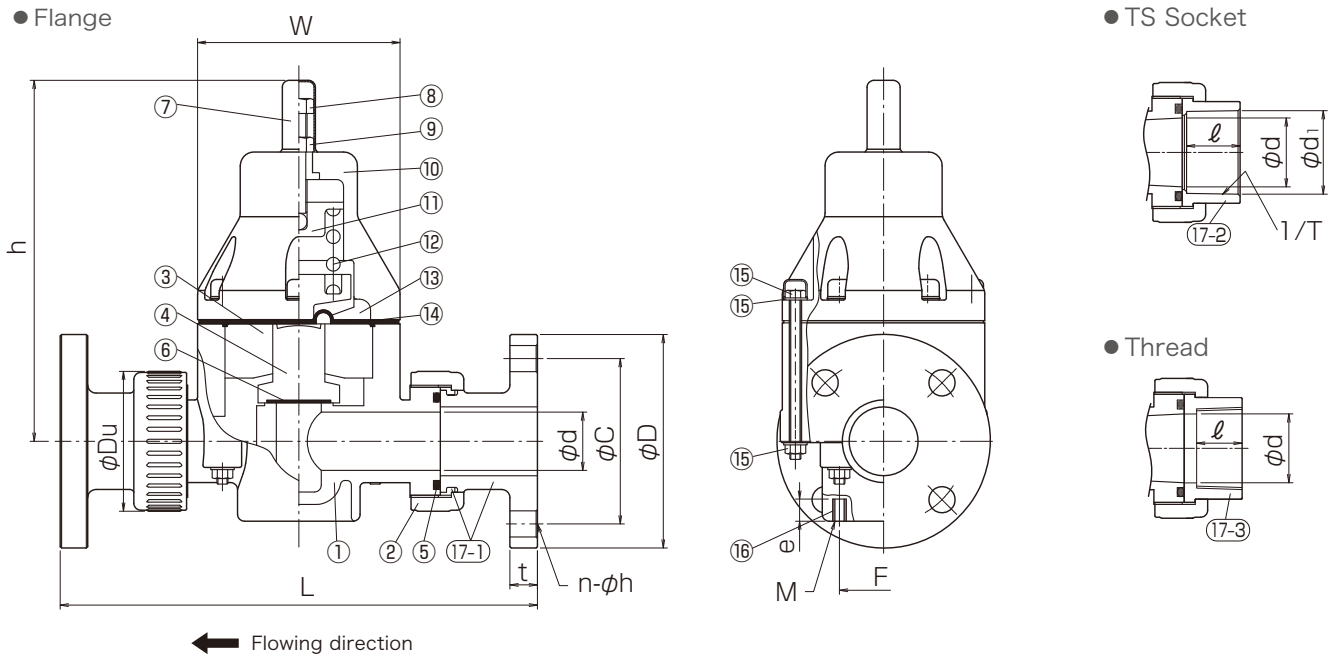


Figure (Flange Type · TS Socket Type · Thread Type)



Parts List

| No. | Part Name | Q'TY | Material | No. | Part Name | Q'TY | Material |
|-----|---------------|------|-------------------------|------|---------------------|------|-------------------|
| 1 | Body | 1 | ● PVC ● PP ● PVDF | 10 | Bonnet | 1 | GF-PP |
| 2 | Union nut | 2 | | 11 | Pressure plate | 1 | SS400+Ni plating |
| 3 | Separate disc | 1 | PVC | 12 | Pressure spring | 1 | Spring steel |
| 4 | Piston | 1 | PVC | 13 | Pressure disc | 1 | SUS304 |
| 5 | O-ring | 2 | ● EPDM ● FKM | 14 | Diaphragm | 1 | PTFE + EPDM |
| 6 | Gasket | 1 | | 15 | Bolt,Nut,Washer | - | SUS304 |
| 7 | Cover | 1 | PE | 16 | Fixing insert nut | 1 | SUS304 |
| 8 | Adjust bolt | 1 | SUS304 | 17-1 | Flange end,Set ring | 2 | ● PVC ● PP ● PVDF |
| 9 | Lock nut | 1 | SUS304 | 17-2 | TS socket | 2 | ● PVC |
| | | | | 17-3 | Threaded | 2 | ● PVC ● PVDF |

·For PVDF body type, sealing material is FKM.
·For PVDF body type, butt spigot is available,too. Contact us for more information.

Size

Flange Type

Unit : mm

| Size | | d | h | W | Fixing Insert Nut | | Flange JIS 10K | | | | | Weight(kg/unit) | | | |
|------|-------|----|-----|-----|-------------------|-------|----------------|-----|-----|-----|------|-----------------|-----|-----|------|
| A | B | | | | F | Mxe | L | φ D | | C | n-φh | t | PVC | PP | PVDF |
| 15 | 1/2 | 15 | 174 | 81 | 40 | M6×16 | 224 | 95 | 92 | 70 | 4-15 | 14 | 1.1 | 1.3 | 1.3 |
| 20 | 3/4 | 20 | 202 | 107 | 46 | M6×16 | 255 | 100 | 97 | 75 | 4-15 | 14 | 1.2 | 1.4 | 1.4 |
| 25 | 1 | 26 | 202 | 107 | 46 | M6×16 | 269 | 125 | 122 | 90 | 4-19 | 14 | 2.4 | 2.8 | 2.8 |
| 32 | 1 1/4 | 32 | 262 | 147 | 65 | M8×16 | 323 | 135 | 132 | 100 | 4-19 | 16 | 5.7 | 6.6 | 6.6 |
| 40 | 1 1/2 | 40 | 262 | 147 | 65 | M8×16 | 338 | 140 | 137 | 105 | 4-19 | 16 | 5.9 | 6.8 | 6.8 |
| 50 | 2 | 50 | 262 | 147 | 65 | M8×16 | 346 | 155 | 152 | 120 | 4-19 | 20 | 6.3 | 7.2 | 7.2 |

*ANSI,DIN:Please contact us

TS Socket Type · Thread Type

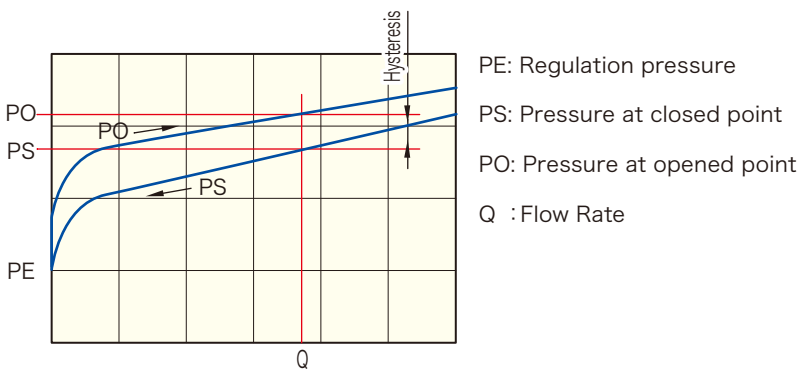
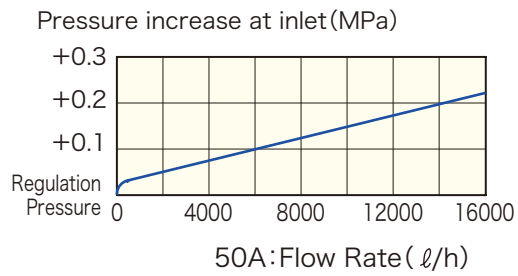
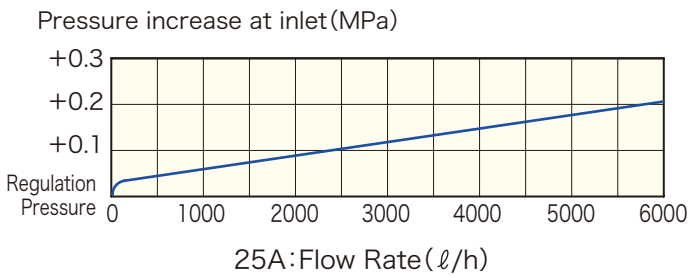
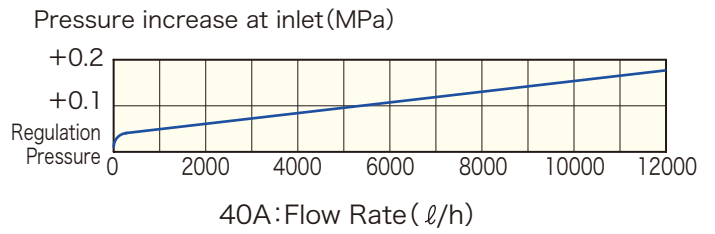
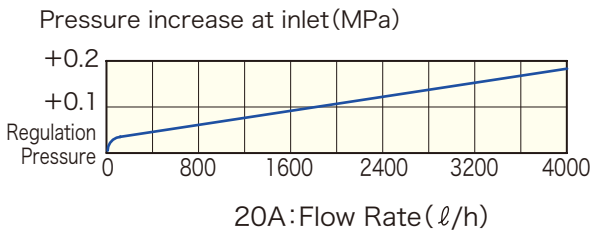
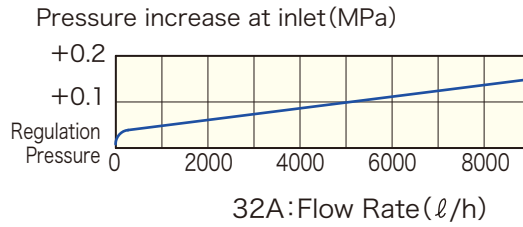
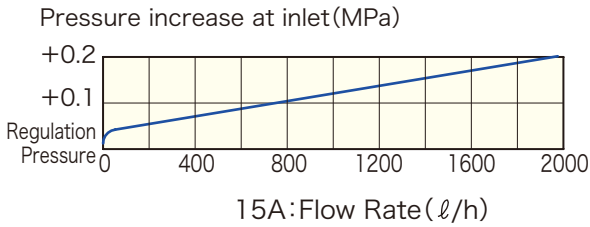
Unit : mm

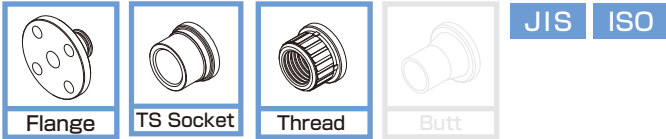
| Size | | d | h | W | Fixing Insert Nut | | TS socket JIS | | | | Thread JIS | | Weight(kg/unit) | | |
|------|-------|-----|-----|-----|-------------------|-------|---------------|------|--------|----|------------|---------|-----------------|-----|------|
| A | B | | | | F | Mxe | L | φ d1 | 1 / T | ℓ | L | Rc | ℓ | PVC | PVDF |
| 13 | 3/8 | 10 | 172 | 81 | 40 | M6×16 | 164 | 18.3 | 1 / 31 | 19 | 164 | Rc3/8 | 14 | 0.8 | 1.0 |
| 15 | 1/2 | 15 | 172 | 81 | 40 | M6×16 | 117 | 22.3 | 1 / 37 | 22 | 172 | Rc1/2 | 16 | 0.9 | 1.1 |
| 20 | 3/4 | 21 | 202 | 107 | 46 | M6×16 | 211 | 26.3 | 1 / 42 | 25 | 209 | Rc3/4 | 20 | 1.9 | 2.1 |
| 25 | 1 | 26 | 202 | 107 | 46 | M6×16 | 220 | 32.3 | 1 / 43 | 29 | 218 | Rc1 | 24 | 1.9 | 2.2 |
| 32 | 1 1/4 | 33 | 262 | 147 | 65 | M8×16 | 276 | 38.4 | 1 / 37 | 32 | 276 | Rc1 1/4 | 28 | 5.0 | 5.5 |
| 40 | 1 1/2 | 40 | 262 | 147 | 65 | M8×16 | 281 | 48.5 | 1 / 38 | 35 | 281 | Rc1 1/2 | 30 | 5.1 | 5.6 |
| 50 | 2 | 50* | 262 | 147 | 65 | M8×16 | 290 | 60.6 | 1 / 34 | 38 | 290 | Rc2 | 33 | 5.2 | 5.7 |

*TS socket:54 *ASTM,ANSI,DIN:Please contact us

Pressure characteristic at Inlet Side

The below diagram show the relation of flow rate and pressure increase at inlet. Pressure at inlet increase with increasing flow rate.





Operating Temperature(°C)

| | |
|------|-----------|
| PVC | 0 ~ 50 |
| PP | 10 ~ 70 |
| PVDF | -30 ~ 100 |



with pressure gauge

ESLON PRESSURE REGULATION VALVE Type 755

Feature

- Diaphragm type of pressure regulation valve adjusts outlet pressure in high accuracy ($\pm 0.02\text{MPa}$)
- Pressure adjustment range of 0.1-0.9 MPa.
- Reliable pressure relief performance in both horizontal and vertical pipe line.
- Superior corrosion & chemical resistance as all plastic component for contact parts with medium.
- Integrated pressure gauge type available.

Pressure gauge(Display/Connection thread)

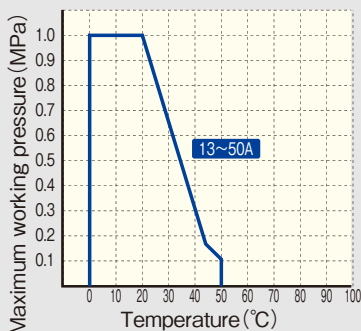
- Standard (SPC/C3604BD)
- Filled with glycerin (SUS304/C3604BD)
- SUS (SPC/SUS304)
- SUS+Glycerin (SUS304/SUS304)

⚠ Important Notes

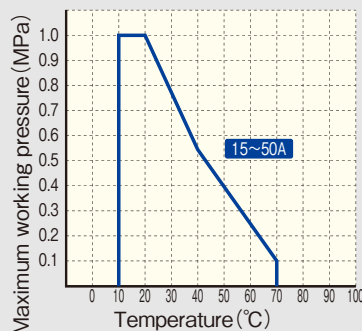
- Fluid containing slurry, solid, sediment, or crystallized fluid might disable sealing.

Maximum Working Pressure - Temperature Rating

Body material : PVC



Body material : PP



Body material : PVDF

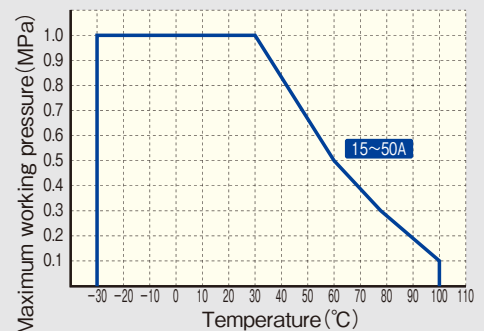
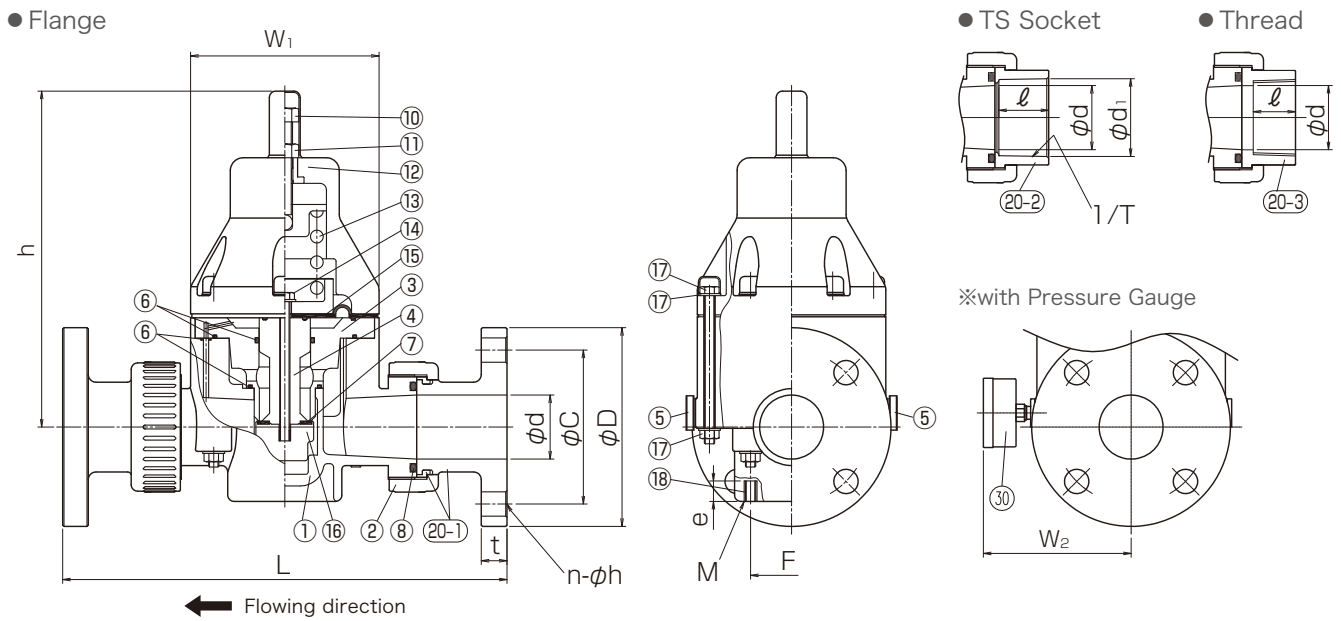


Figure (Flange Type · TS Socket Type · Thread Type)



Parts List

| No. | Part Name | Q'TY | Material | No. | Part Name | Q'TY | Material |
|-----|---------------|------|-------------------------|------|---------------------|------|-------------------|
| 1 | Body | 1 | ● PVC ● PP ● PVDF | 12 | Bonnet | 1 | GF-PP |
| 2 | Union nut | 2 | | 13 | Adjust spring | 1 | Spring steel |
| 3 | Separate disc | 1 | | 14 | Hexagonal bolt | 1 | SUS304 |
| 4 | Piston | 1 | | 15 | Diaphragm | 1 | PTFE + EPDM |
| 5 | Plug | 2 | ● EPDM ● FKM | 16 | Piston head | 1 | PVDF |
| 6 | O-ring | 4 | | 17 | Bolt,Nut,Washer | - | SUS304 |
| 7 | Packing | 1 | ● PVC ● PP ● PVDF | 18 | Fixing insert nut | 2 | SUS304 |
| 8 | Union O-ring | 2 | | 19 | Pressure gauge | 1 | - |
| 9 | Cover | 1 | PE | 20-1 | Flange end,Set ring | 2 | ● PVC ● PP ● PVDF |
| 10 | Adjust bolt | 1 | SUS304 | 20-2 | TS socket | 2 | ● PVC |
| 11 | Lock nut | 1 | SUS304 | 20-3 | Threaded | 2 | ● PVC ● PVDF |

· For PVDF body type, sealing material is FKM.
· For PVDF body type, butt spigot is available, too. Contact us for more information.

Size

Flange Type

Unit : mm

| Size | | d | L | H | h | W ₁ | W ₂ | Fixing Insert Nut | | Flange (JIS10K) | | | | Weight(kg/unit) | | |
|------|-------|----|-----|-----|-----|----------------|----------------|-------------------|-------|-----------------|-----|------|----|-----------------|-----|------|
| A | B | | | | | | | F | M×e | D | φc | n-φh | t | PVC | PP | PVDF |
| 15 | 1/2 | 15 | 224 | 220 | 172 | 81 | 92 | 40 | M6×16 | 95 | 70 | 4-15 | 14 | 1.1 | 1.3 | 1.3 |
| 20 | 3/4 | 20 | 255 | 252 | 202 | 107 | 92 | 46 | M6×16 | 100 | 75 | 4-15 | 14 | 1.2 | 1.4 | 1.4 |
| 25 | 1 | 26 | 269 | 265 | 202 | 107 | 92 | 46 | M6×16 | 125 | 90 | 4-19 | 14 | 2.4 | 2.8 | 2.8 |
| 32 | 1 1/4 | 32 | 323 | 330 | 262 | 147 | 112 | 65 | M8×16 | 135 | 100 | 4-19 | 16 | 5.7 | 6.6 | 6.6 |
| 40 | 1 1/2 | 40 | 338 | 332 | 262 | 147 | 112 | 65 | M8×16 | 140 | 105 | 4-19 | 16 | 5.9 | 6.8 | 6.8 |
| 50 | 2 | 50 | 346 | 340 | 262 | 147 | 112 | 65 | M8×16 | 155 | 120 | 4-19 | 20 | 6.3 | 7.2 | 7.2 |

*ANSI,DIN:Please contact us

TS Socket Type · Thread Type

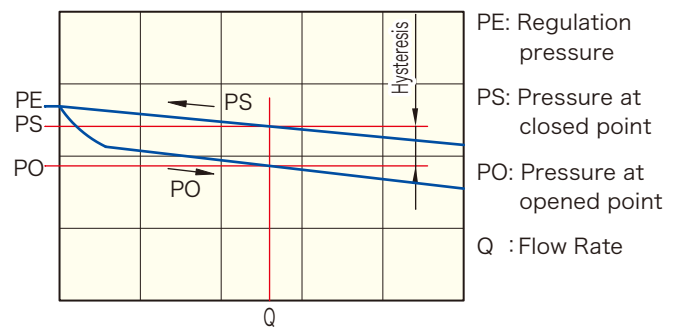
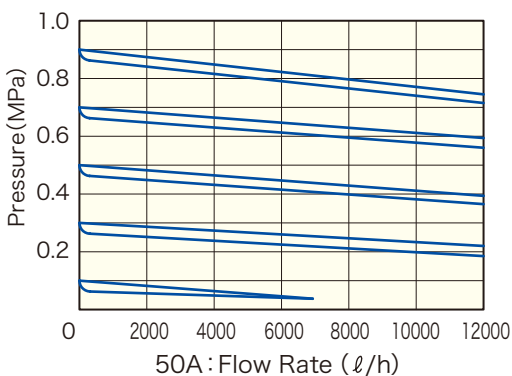
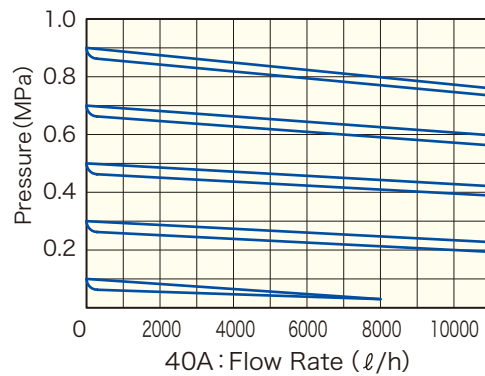
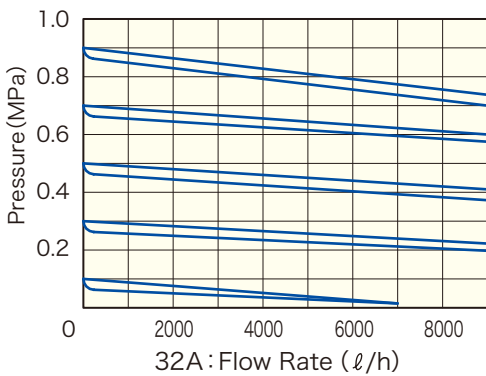
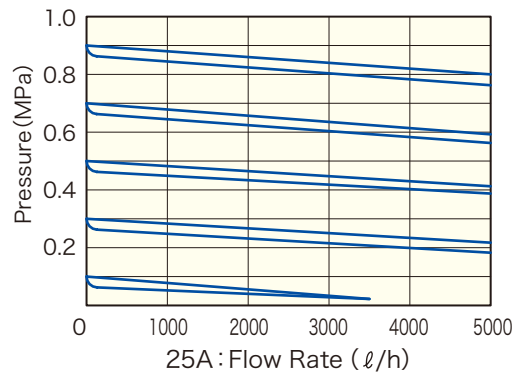
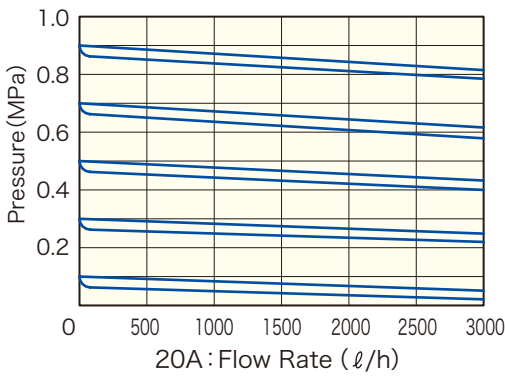
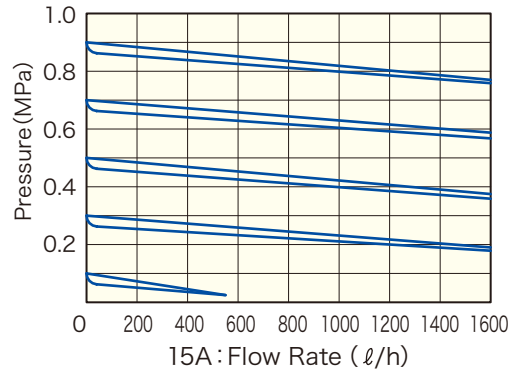
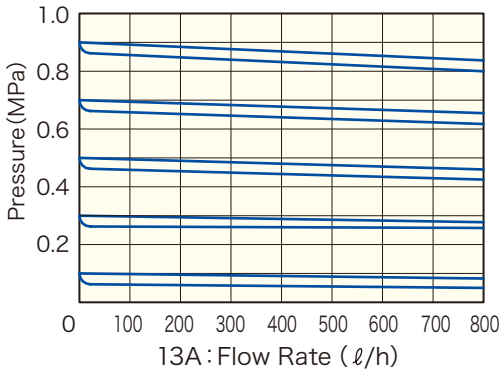
Unit : mm

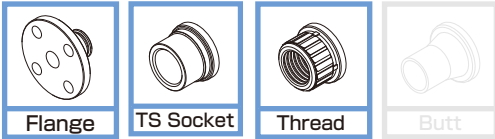
| Size | | d | H | h | W ₁ | W ₂ | Fixing Insert Nut | | TS Socket | | | Thread | | Weight(kg/unit) | | |
|------|-------|----|-----|-----|----------------|----------------|-------------------|-------|-----------|----------------|------|--------|-----|-----------------|----|-----|
| A | B | | | | | | F | M×e | L | JIS | | JIS | | PVC, PVDF | | |
| | | | | | | | | | | d ₁ | 1/T | ℓ | L | | Rp | ℓ |
| 13 | 3/8 | 10 | 197 | 172 | 81 | 77 | 40 | M6×16 | 164 | 18.3 | 1/31 | 19 | 164 | Rp1/4 | 14 | 0.8 |
| 15 | 1/2 | 15 | 197 | 172 | 81 | 92 | 40 | M6×16 | 177 | 22.3 | 1/37 | 22 | 172 | Rp1/2 | 16 | 0.9 |
| 20 | 3/4 | 20 | 240 | 202 | 107 | 92 | 46 | M6×16 | 211 | 26.3 | 1/42 | 25 | 209 | Rp3/4 | 20 | 1.9 |
| 25 | 1 | 26 | 240 | 202 | 107 | 92 | 46 | M6×16 | 220 | 32.3 | 1/43 | 29 | 218 | Rp1 | 24 | 1.9 |
| 32 | 1 1/4 | 32 | 320 | 262 | 147 | 112 | 65 | M8×16 | 276 | 38.4 | 1/37 | 32 | 276 | Rp1·1/4 | 28 | 5.0 |
| 40 | 1 1/2 | 40 | 320 | 262 | 147 | 112 | 65 | M8×16 | 281 | 48.5 | 1/38 | 35 | 281 | Rp1·1/2 | 30 | 5.1 |
| 50 | 2 | 50 | 320 | 262 | 147 | 112 | 65 | M8×16 | 290 | 60.6 | 1/34 | 38 | 290 | Rp2 | 33 | 5.2 |

*ASTM,ANSI,DIN:Please contact us

Pressure characteristic at outlet side

The below diagram show the relation of flow rate and pressure at outlet by each set pressure(0.1 / 0.3 / 0.5 / 0.7 / 0.9MPa). Pressure at outlet decrease with increasing flow rate.





JIS ANSI/ASME/ASTM DIN*

* DIN: Flange type not available.



Operating Temperature(°C)

| | |
|---------|--------|
| PVC | 0 ~ 50 |
| HT-CPVC | 0 ~ 90 |



Flange

TS Socket·Thread

ESLON FOOT VALVE

Feature

- Low pressure loss and reliable checking performance even with small differential pressure.
- Superior corrosion & chemical resistance as all plastic component for contact parts with medium.
- Easy maintenance by detaching union nut.

⚠ Important Notes

- In the condition of low flow rate or frequent flow rate fluctuation, the ball might vibrate in the body, and might cause sound or damage of valve.
- Turbulent flow might disable checking by irregular ball bouncing.
- Fluid containing slurry, solid, sediment, or crystallized fluid might disable sealing.

Maximum Working Pressure - Temperature Rating

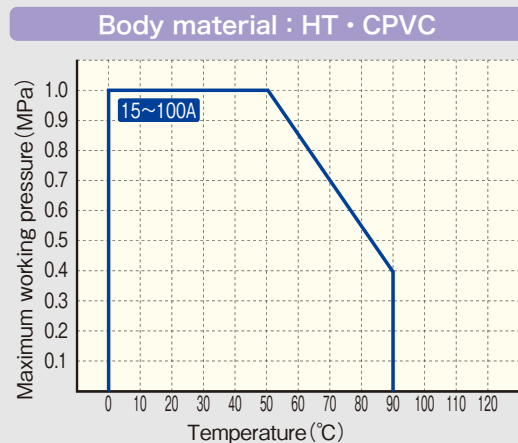
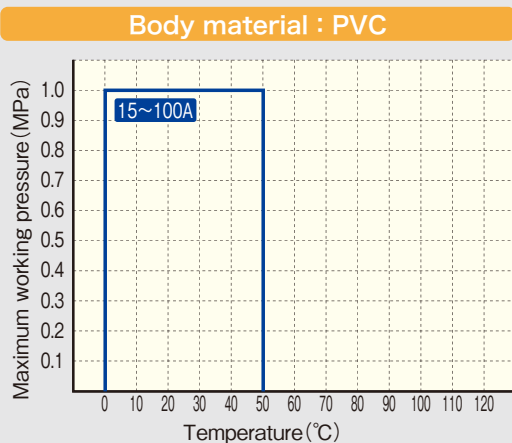
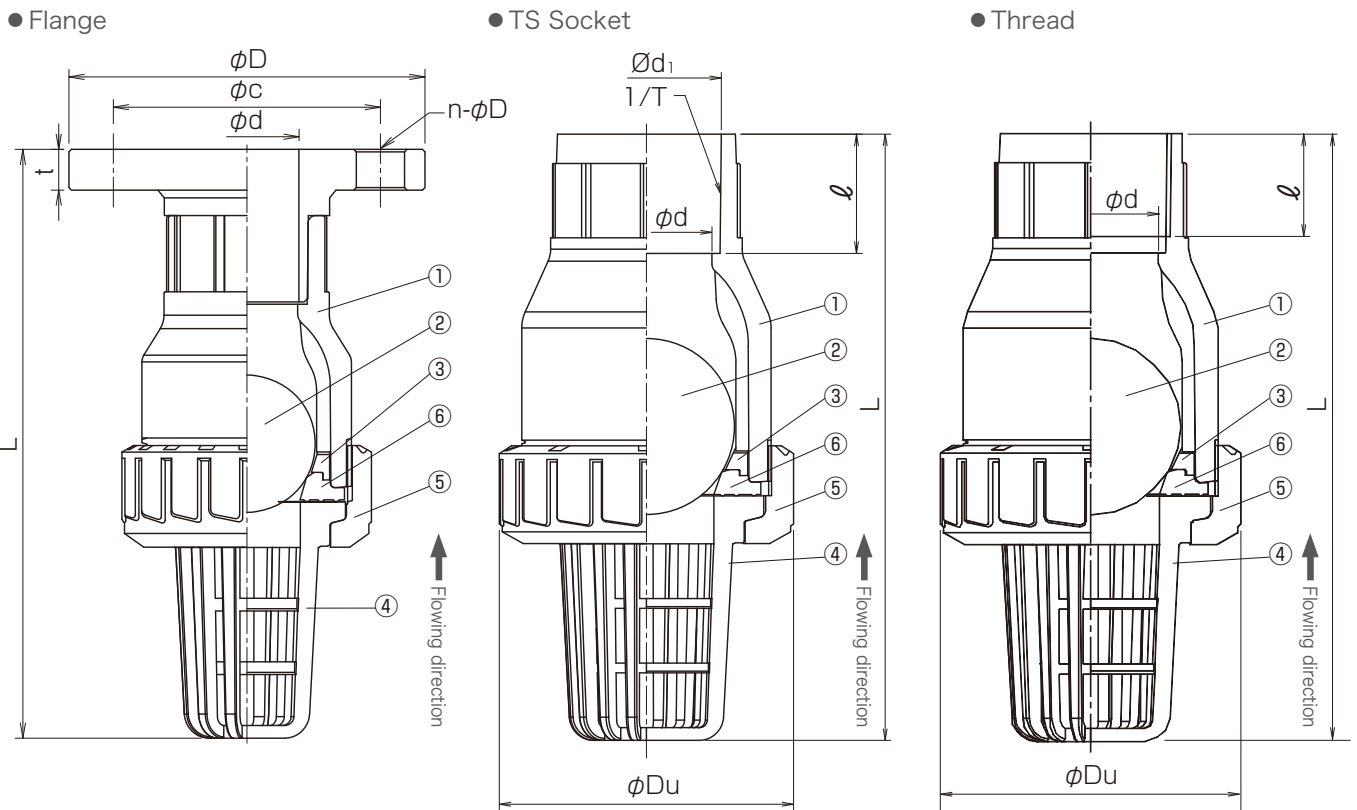


Figure (Flange Type · TS Socket Type · Thread Type)



Parts List

| No. | Part Name | Q'TY | Material |
|-----|-----------|------|--------------|
| 1 | Body | 1 | |
| 2 | Ball | 1 | ● PVC |
| 3 | Ring | 1 | ● HT |
| 4 | Screen | 1 | ● CPVC |
| 5 | Union Nut | 1 | |
| 6 | Seat | 1 | ● EPDM ● FKM |

Size

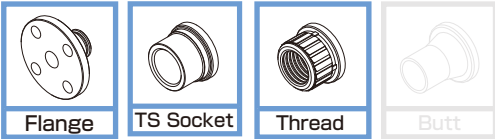
Flange Type · TS Socket Type · Thread Type

| Size | | φd | φDu | Flange | | | | | | | | | | TS socket | | | | | | | | |
|------|-------|-----|-----|--------|-----|-----|------|----|------|-----|-------|------|------|-----------|-------|------|-----|--------|------|-----|-------|----|
| A | B | | | JIS10K | | | | | ANSI | | | | | JIS | | ASTM | | DIN | | | | |
| | | | | L | φD | φC | n-φh | t | L | φD | φC | n-φh | t | L | φd1 | ℓ | L | φd1 | ℓ | L | φd1 | ℓ |
| 15 | 1/2 | 16 | 49 | 139 | 95 | 70 | 4-15 | 14 | 145 | 89 | 60.3 | 4-16 | 11.5 | 119 | 22.3 | 22 | 116 | 21.54 | 22.2 | 104 | 20.3 | 16 |
| 20 | 3/4 | 20 | 59 | 161 | 100 | 75 | 4-15 | 14 | 170 | 99 | 69 | 4-16 | 13 | 140 | 26.3 | 25 | 132 | 26.87 | 25.4 | 121 | 25.3 | 19 |
| 25 | 1 | 25 | 67 | 175 | 125 | 90 | 4-19 | 14 | 183 | 108 | 79.5 | 4-16 | 14.5 | 151 | 32.3 | 29 | 146 | 33.65 | 28.6 | 133 | 32.3 | 22 |
| 32 | 1 1/4 | 32 | 98 | 231 | 135 | 100 | 4-19 | 16 | - | - | - | - | - | 205 | 38.4 | 32 | 205 | 42.42 | 31.8 | 201 | 40.3 | 26 |
| 40 | 1 1/2 | 40 | 98 | 232 | 140 | 105 | 4-19 | 16 | 246 | 128 | 98.4 | 4-16 | 19 | 205 | 48.5 | 35 | 203 | 48.56 | 35.0 | 194 | 50.3 | 31 |
| 50 | 2 | 50 | 120 | 260 | 155 | 120 | 4-19 | 20 | 279 | 152 | 120.6 | 4-19 | 19.5 | 235 | 60.6 | 38 | 227 | 60.63 | 38.1 | 228 | 63.3 | 38 |
| 65 | 2 1/2 | 65 | 150 | 379 | 175 | 140 | 4-19 | 22 | 344 | 177 | 139.5 | 4-19 | 22.5 | 309 | 76.6 | 61 | 272 | 73.38 | 44.5 | 272 | 75.3 | 44 |
| 80 | 3 | 78 | 150 | 407 | 185 | 150 | 8-19 | 22 | 401 | 193 | 152.4 | 4-19 | 27.1 | 335 | 89.6 | 64 | 296 | 89.31 | 47.6 | 297 | 90.3 | 51 |
| 100 | 4 | 102 | 228 | 570 | 210 | 175 | 8-19 | 24 | 524 | 230 | 190.5 | 8-19 | 29.3 | 480 | 114.7 | 84 | 424 | 114.76 | 57.2 | 428 | 110.4 | 61 |

| Thread | | | | | | φDu | Weight(kg/unit) | | | |
|--------|-----|----------|-----|-----------|-----|--------|-----------------|--------|-----------|-----|
| JIS:Rc | | ANSI:NPT | | DIN:Rp,Rc | | | PVC | | HT(CPVC) | |
| ℓ | L | ℓ | L | ℓ | L | Flange | TS Socket | Flange | TS Socket | |
| 13 | 117 | 16.5 | 117 | 15.0 | 117 | 49 | 0.4 | 0.1 | 0.4 | 0.1 |
| 15 | 137 | 17.0 | 137 | 16.5 | 137 | 59 | 0.5 | 0.2 | 0.5 | 0.2 |
| 17 | 148 | 21.0 | 148 | 19.0 | 148 | 67 | 0.7 | 0.3 | 0.8 | 0.3 |
| 19 | 208 | 22.0 | 208 | 22.0 | 208 | 98 | 1.2 | 0.8 | 1.3 | 0.8 |
| 19 | 203 | 22.0 | 203 | 22.0 | 203 | 98 | 1.2 | 0.7 | 1.3 | 0.7 |
| 23 | 237 | 23.0 | 237 | 26.0 | 237 | 120 | 1.9 | 1.2 | 2.0 | 1.2 |
| 27 | 294 | 31.0 | 286 | 31.0 | 286 | 150 | 3.7 | 2.5 | 3.9 | 2.6 |
| 37 | 320 | 37.0 | 319 | 37.0 | 320 | 150 | 3.8 | 2.2 | 4.1 | 2.3 |
| 36 | 458 | 35.0 | 447 | 40.0 | 447 | 228 | 11.0 | 8.3 | 11.7 | 8.6 |

| | | Minimum operating pressure(Gasket:EPDM) | | | | | | | | |
|-------------------|---------------------|---|----|----|----|----|----|----|----|-----|
| | | Unit : kPa | | | | | | | | |
| | | Size(A) | | | | | | | | |
| | | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 |
| Vertical piping | Min.opened pressure | 5 | | | 10 | | | | | |
| | Min.closed pressure | 30 | | | | | | 50 | | |
| Horizontal piping | Min.opened pressure | 1 | | 2 | | | | | | |
| | Min.closed pressure | 30 | | | | | | 50 | | |

※ The pressure in the above table has tolerance.



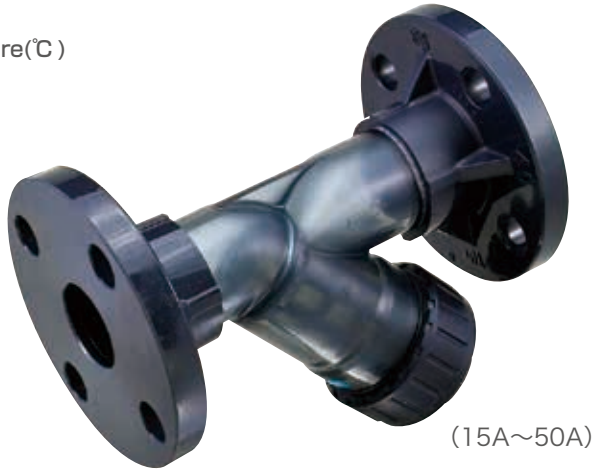
JIS ANSI/ASME/ASTM DIN

※ For size 65-100A, only JIS type is available.



Operating Temperature(°C)

PVC 0 ~ 50



(15A~50A)



(65A~100A)

ESLON STRAINER

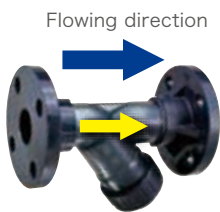
Feature

- Transparency body enables easy monitoring medium and screen (15-50A)
- Easy maintenance such as exchange or cleaning up screen by detaching cap nut.
- Superior chemical & pressure resistance and durability.

⚠ Important Notes

- Install strainer as bonnet down flowing direction and the arrow marking on body in the same direction.

【15~50A】



Horizontal piping



Vertical piping

【65~100A】



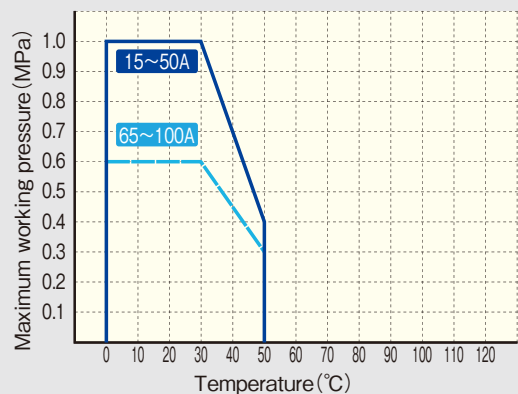
Horizontal piping



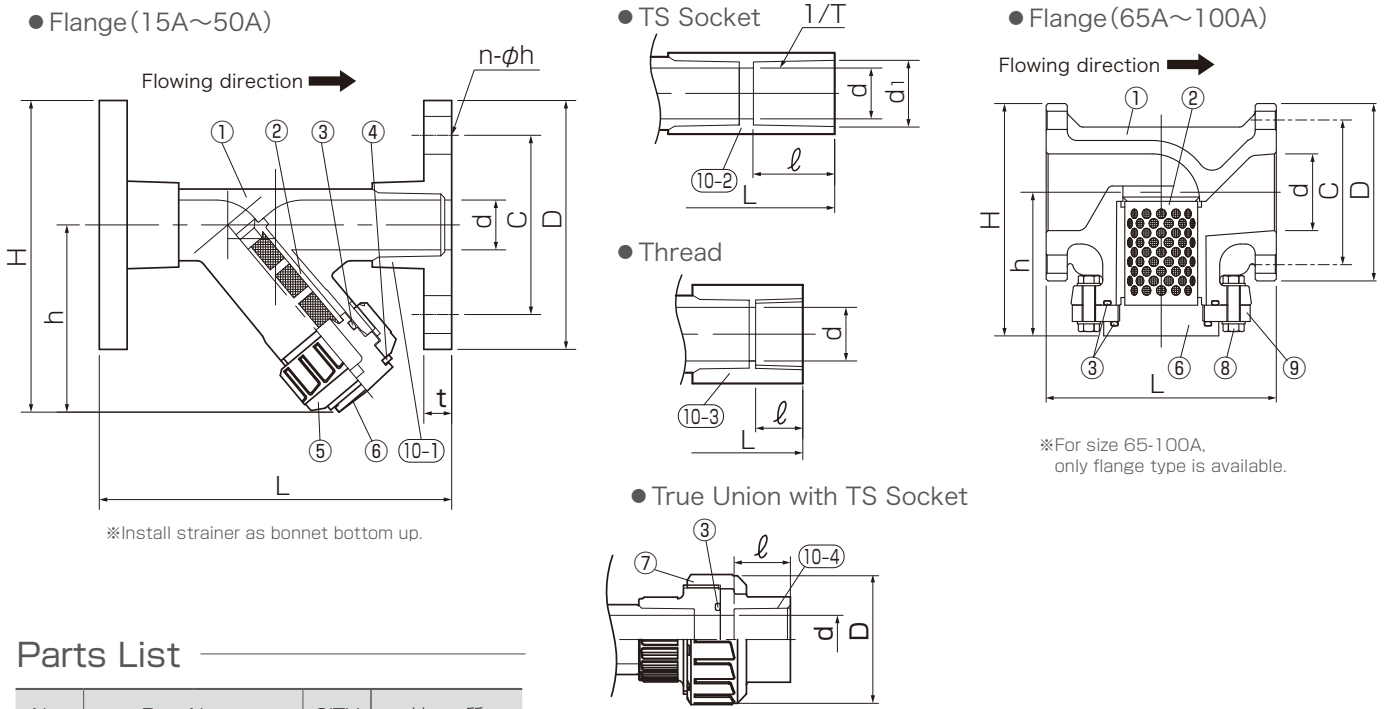
Vertical piping

Maximum Working Pressure - Temperature Rating

Body material : PVC



Figure(Flange Type·TS Socket Type·Thread Type· True Union with TS Socket)



Parts List

| No. | Part Name | QTY | 材 質 |
|------|------------------|-----------|--------|
| 1 | Body | 1 | PVC |
| 2 | Screen holder | 1 | PVC |
| 3 | O-ring | 15~50A | ● EPDM |
| | | Open ring | ● FKM |
| 4 | Open Ring | 1 | PVC |
| 5 | Cap nut | 1 | PVC |
| 6 | Bonnet | 1 | PVC |
| 7 | Union nut | 2 | PVC |
| 8 | Hexagon bolt,nut | 8 | SUS304 |
| 9 | Cover | 1 | PVC |
| 10-1 | Flange end | 2 | PVC |
| 10-2 | TS socket | 2 | PVC |
| 10-3 | Threaded socket | 2 | PVC |
| 10-4 | Union TS Socket | 2 | PVC |

Screen Type and Mesh Size

| Mesh Size | 15A · 20A | | 25A ~ 100A | | | clear opening | | |
|-----------|-----------|--------|------------|------|--------|---------------|------|------|
| | PVDC | SUS304 | SUS316 | PVDC | SUS304 | SUS316 | PVDC | SUS |
| 10 | - | ○ | - | ○ | ○ | - | 1.62 | 2.07 |
| 20 | - | ○ | - | ○ | ○ | - | 0.98 | 0.93 |
| 30 | ○ | ○ | - | ○ | ○ | - | 0.54 | 0.57 |
| 40 | ○ | ○ | - | ○ | ○ | - | 0.42 | 0.42 |
| 50 | ○ | ○ | - | ○ | ○ | - | 0.32 | 0.33 |
| 60 | ○ | ○ | - | ○ | ○ | - | 0.26 | 0.28 |
| 70 | - | ○ | - | - | ○ | - | - | 0.24 |
| 80 | - | ○ | - | - | ○ | - | - | 0.20 |
| 100 | - | ○ | - | - | ○ | - | - | 0.15 |
| 120 | - | - | ○ | - | - | ○ | - | 0.13 |

Size

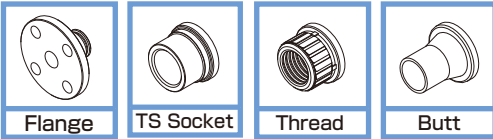
Flange Type

| Size | | d | L | h | Flange | | | | | | | | | | | | Weight (kg/unit) |
|------|-------|-----|-----|-----|--------|-----|------|----|-------|-------|------|----|-----|-----|------|----|------------------|
| A | B | | | | JIS10K | | | | ANSI | | | | DIN | | | | |
| | | | | | φ D | φ C | n-φh | t | φ D | φ C | n-φh | t | φ D | φ C | n-φh | t | |
| 15 | 1/2 | 15 | 150 | 71 | 95 | 70 | 4-15 | 14 | 89.0 | 60.5 | 4-16 | 14 | 95 | 65 | 4-14 | 14 | 0.4 |
| 20 | 3/4 | 20 | 158 | 81 | 100 | 75 | 4-15 | 14 | 98.0 | 70.0 | 4-16 | 14 | 105 | 75 | 4-14 | 14 | 0.5 |
| 25 | 1 | 25 | 177 | 94 | 125 | 90 | 4-19 | 14 | 108.0 | 79.5 | 4-16 | 14 | 115 | 85 | 4-16 | 14 | 0.7 |
| 32 | 1 1/4 | 30 | 197 | 94 | 135 | 100 | 4-19 | 16 | 117.5 | 89.0 | 4-16 | 16 | 140 | 100 | 4-18 | 16 | 1.0 |
| 40 | 1 1/2 | 40 | 220 | 118 | 140 | 105 | 4-19 | 16 | 127.0 | 98.5 | 4-16 | 16 | 150 | 110 | 4-18 | 16 | 1.2 |
| 50 | 2 | 50 | 264 | 137 | 155 | 120 | 4-19 | 20 | 152.0 | 120.5 | 4-20 | 20 | 165 | 125 | 4-18 | 20 | 2.0 |
| 65 | 2 1/2 | 65 | 220 | 153 | 175 | 140 | 4-19 | 22 | - | - | - | - | - | - | - | - | 3.6 |
| 80 | 3 | 80 | 240 | 161 | 185 | 150 | 8-19 | 22 | - | - | - | - | - | - | - | - | 4.4 |
| 100 | 4 | 100 | 290 | 178 | 210 | 175 | 8-19 | 24 | - | - | - | - | - | - | - | - | 6.8 |

TS Socket Type · Thread Type

| Size | | d | h | TS socket | | | Thread | | Union TS Socket | | Weight(kg/unit) | | | |
|------|-------|----|-----|-----------|------|------|--------|-----|-----------------|-----|-----------------|--------|-----------------|-----|
| A | B | | | JIS10K | | | JIS10K | | JIS10K | | TS socket | Thread | Union TS socket | |
| | | | | L | φ d1 | 1/T | ℓ | L | ℓ | L | | | | ℓ |
| 15 | 1/2 | 15 | 71 | 190 | 22.4 | 1/34 | 30 | 153 | 16 | 201 | 22 | 0.2 | 0.2 | 0.3 |
| 20 | 3/4 | 20 | 81 | 210 | 26.5 | 1/34 | 35 | 176 | 19 | 214 | 25 | 0.2 | 0.2 | 0.4 |
| 25 | 1 | 25 | 94 | 243 | 32.6 | 1/34 | 40 | 200 | 22 | 254 | 29 | 0.4 | 0.4 | 0.6 |
| 32 | 1 1/4 | 32 | 94 | 274 | 38.6 | 1/34 | 44 | 232 | 26 | 287 | 32 | 0.6 | 0.6 | 0.8 |
| 40 | 1 1/2 | 40 | 118 | 332 | 48.7 | 1/37 | 55 | 271 | 31 | 301 | 35 | 0.9 | 0.9 | 1.3 |
| 50 | 2 | 50 | 137 | 390 | 60.8 | 1/37 | 63 | 321 | 38 | 370 | 38 | 1.4 | 1.4 | 2.1 |

*ASTM,ANSI,DIN:Please contact us



JIS ANSI/ASME/ASTM DIN/ISO



Operating Temperature(°C)

| | Flange Type | Union Type |
|---------|-------------|------------|
| PVC | 0 ~ 60 | 0 ~ 50 |
| HT-CPVC | 0 ~ 90 | 0 ~ 90 |
| PP | 0 ~ 90 | |
| PVDF | 0 ~ 120 | 0 ~ 100 |



15~50A

65~100A

ESLON PNEUMATIC DIAPHRAGM VALVE TYPE F

Feature

- High pressure rating and excellent sealing performance with optimized diaphragm design.
2 types of maximum working pressure, 1.0MPa / 0.7MPa for Normal Close Action.
- Standard optional accessories available on the top mount on request.
- Excellent chemical and corrosion resistance, light weight, and compact.
- Flat at the bottom of flange and insert nuts for prevention of tumbling and for better workability in plumbing.
※Union type

Max. Working Press. at R.T.

| Size | Air Pressure | |
|---------|-------------------------------|-------------|
| | Double Action Air To Close | Air To Open |
| 15-50A | 1.0 | 7k / 10k |
| 65-100A | 0.7 | — |

Air Supply Port

| | |
|-------------------|--------|
| Double Action | Rc 1/4 |
| Air To Open&Close | Rc 1/4 |

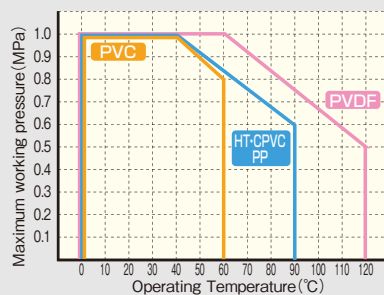
⚠ Important Notes

- Fluid containing slurry, solid, sediment, or crystallized fluid might disable sealing.

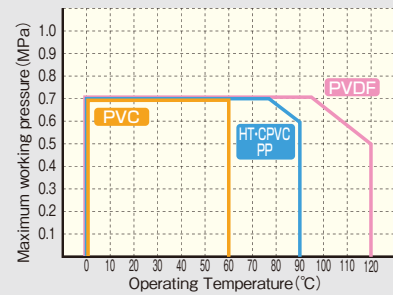
Maximum Working Pressure - Temperature Rating

■ Flange Type
EPDM-FKM-PTFE

● Double Action, Air To Close, Air To Open10K

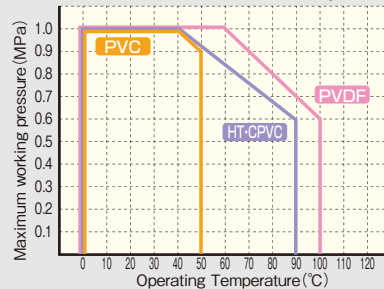


● Air To Open7K



■ Union Type
EPDM-FKM-PTFE

● Double Action, Air To Close, Air To Open10K



● Air To Open7K

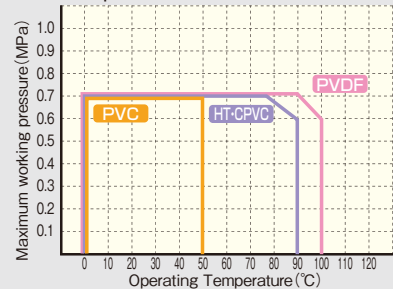
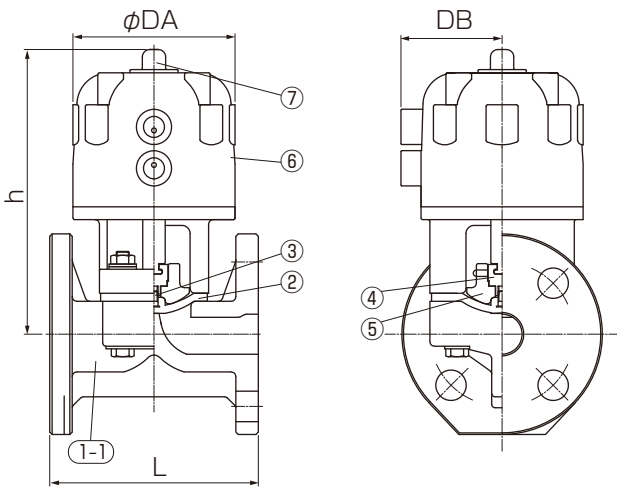
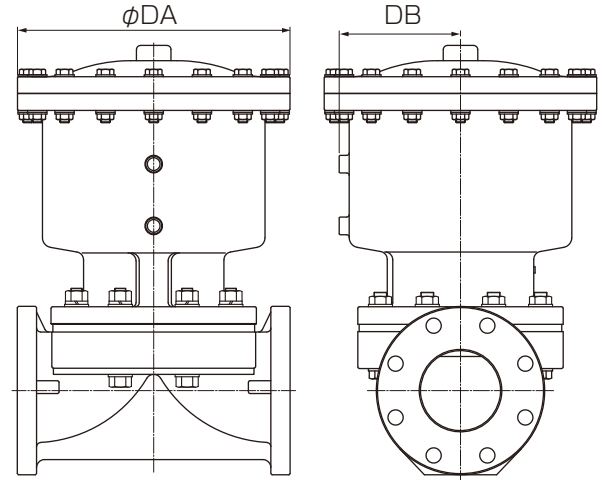


Figure (Flange Type · TS Socket Type · Thread Type · Butt Type)

● Flange Type
15A~50A



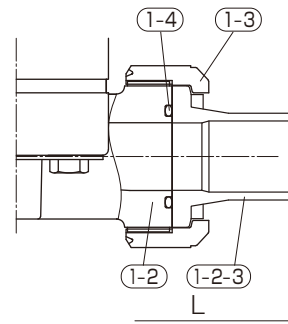
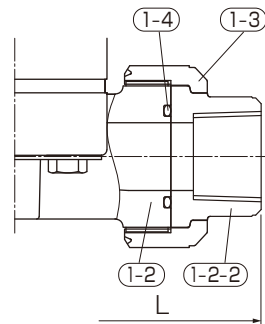
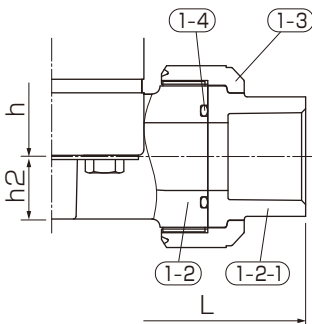
65~100A



● TS Socket Type

● Thread Type

● Butt Type



Option



● Opening control unit



● Closing control unit
(15 ~ 50A)



● Limit switch

Parts List

| No. | Part Name | QTY | Material / Type |
|-------|---------------------|-----|--|
| 1-1 | Body(Flange type) | 1 | ● PVC ● HT (JIS : Brown) ● CPVC (ANSI-DIN : Gray) ● PP ● PVDF |
| 1-2 | Body(Union type) | 1 | ● PVC ● HT (JIS : Brown) ● CPVC (ANSI-DIN : Gray) ● PVDF |
| 1-2-1 | TS Socket | 2 | ● PVC ● HT ● CPVC |
| 1-2-2 | Threaded socket | 2 | ● PVC ● PVDF |
| 1-2-3 | Butt Spigot Type | 2 | ● PP ● PVDF ● PE |
| 1-2-4 | Socket welding | 2 | PP |
| 1-3 | Union nut | 2 | ● PVC ● HT ● CPVC ● PVDF |
| 1-4 | O-ring | 2 | ● EPDM ● FKM |
| 2 | Diaphragm | 1 | ● EPDM ● FKM ● PTFE+EPDM |
| 3 | Diaphragm Stud Bolt | 1 | SUS304 |
| 4 | Connecting Nut | 1 | C3604 |
| 5 | Compressor | 1 | GF-PP |
| 6 | Actuator | 1 | GF-PP |
| 7 | Cap Cover | 1 | PC |



● Solenoid valve



● Electro pneumatic positioner



● Speed controller



● Regulator with filter

※ Other options: Please contact us.

Size

Flange type · Thread type · TS socket type · Butt type

Unit : mm

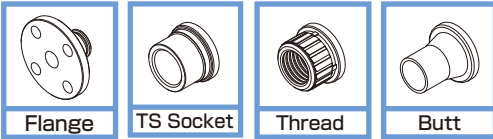
| Size | | h | φ DA | DB | Flange | Weight (kg/unit) |
|------|-------|-----|------|-----|----------------------|---------------------|
| A | B | | | | JIS10K,ANSI,DIN L | |
| 15 | 1/2 | 176 | 101 | 63 | 110 | 1.6 |
| 20 | 3/4 | 176 | 101 | 63 | 120 | 1.7 |
| 25 | 1 | 183 | 101 | 63 | 130 | 1.8 |
| 32 | 1 1/4 | 183 | 101 | 63 | 142 | 2.1 |
| 40 | 1 1/2 | 303 | 155 | 90 | 180 | 8.0 |
| 50 | 2 | 307 | 155 | 90 | 210 | 8.9 |
| 65 | 2 1/2 | 386 | 235 | 124 | 250 | 15.9 |
| 80 | 3 | 392 | 285 | 124 | 280 | 17.5 |
| 100 | 4 | 430 | 340 | 151 | 340 | 27.3 |

Unit : mm

| Size | | h | h2 | TS Socket | | | Thread | | | | Weight (kg/unit) | |
|------|-------|-----|------|-----------|------|------|------------|----------|----------|--------|------------------|--------|
| A | B | | | JIS | ASTM | DIN | JIS/DIN:Rc | | ANSI:NPT | DIN:Rp | TS socket | Thread |
| | | L | L | L | PVC | PVDF | PVC,PVDF | PVC,PVDF | | | | |
| | | L | L | L | L | L | L | L | | | | |
| 15 | 1/2 | 176 | 15.0 | 144 | 137 | 126 | 133 | 134 | 133 | 133 | 1.4 | 1.4 |
| 20 | 3/4 | 176 | 18.0 | 172 | 158 | 146 | 157 | 157 | 157 | 157 | 1.5 | 1.5 |
| 25 | 1 | 183 | 23.0 | 187 | 177 | 165 | 173 | 180 | 173 | 173 | 1.6 | 1.6 |
| 32 | 1 1/4 | 183 | 23.0 | 210 | 190 | 179 | 188 | 181 | 188 | 188 | 1.9 | 1.9 |
| 40 | 1 1/2 | 307 | 32.5 | 262 | 258 | 247 | 248 | 254 | 248 | 248 | 8.0 | 8.0 |
| 50 | 2 | 308 | 37.5 | 298 | 283 | 284 | 280 | 290 | 280 | 280 | 8.9 | 8.9 |

Unit : mm

| Size | | Butt Spigot | | | Socket welding | |
|------|-------|-------------|-----|-----|----------------|------|
| A | B | DIN | | JIS | DIN | |
| | | PP,PVDF | PE | PE | PP | |
| | | L | L | L | L | φ |
| 15 | 1/2 | 176 | 246 | - | 137 | 12.0 |
| 20 | 3/4 | 189 | 259 | - | 153 | 13.0 |
| 25 | 1 | 203 | 283 | 293 | 171 | 14.5 |
| 32 | 1 1/4 | 210 | 301 | - | 183 | 18.0 |
| 40 | 1 1/2 | 272 | 376 | 376 | 245 | 16.0 |
| 50 | 2 | 306 | 419 | 409 | 278 | 20.0 |

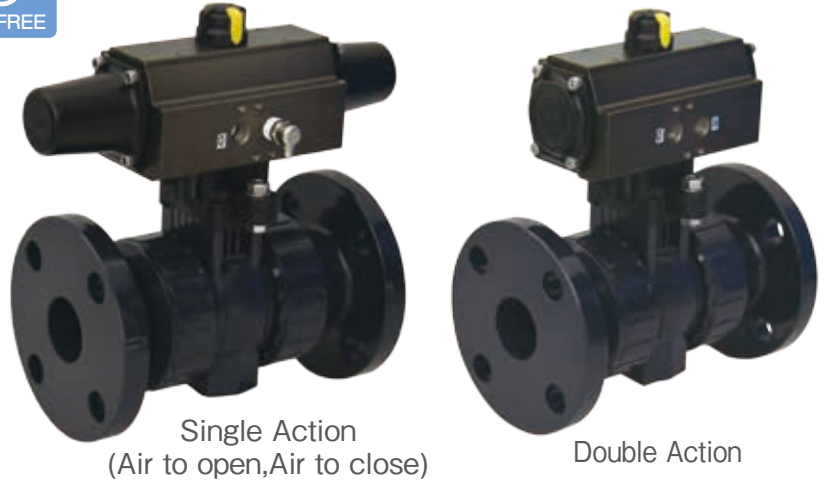


JIS ANSI/ASME/ASTM DIN/ISO



Operating Temperature(°C)

| | | | |
|---------|--------|------|-----------|
| PVC | 0 ~ 50 | PP | -20 ~ 90 |
| HT-CPVC | 0 ~ 90 | PVDF | -20 ~ 100 |



ESLON PNEUMATIC BALL VALVE TYPE S

Feature

- Light weight and compact aluminum actuator.
- Excellent chemical & corrosion resistance.
- High durability.
- Operating air pressure : 0.4MPa.
- Manual override wheel handle for open/close is available.
- Box type of Limit switch is available as an option.
- Conformity with NAMUR standard.

| Operation type | Size | Actuator type | Air Consumption (ℓ /time/unit) |
|-----------------------------|--------|---------------|--------------------------------|
| Double Action | 15-20A | RD32 | 0.15 |
| | 25A | RD40 | 0.20 |
| | 32-50A | AD50 | 0.24 |
| | 65-80A | AD65 | 0.49 |
| | 100A | AD80 | 1.02 |
| Air To Open Air To Close | 15-25A | RS50 | 0.05 |
| | 32-40A | AS50 | 0.11 |
| | 50A | AS65 | 0.24 |
| | 65-80A | AS80 | 0.48 |
| | 100A | AS100 | 0.86 |

Max. Working Press. at R.T.

| | |
|--------------------------|--------|
| Double Action | 0.4MPa |
| Air To Open:Air To Close | 0.4MPa |

Air Supply Port

| Operation type | Size | Air intake port |
|--------------------------|---------|-----------------|
| Double Action | 15-25A | Rc 1/8 |
| | 32-100A | Rc 1/4 |
| Air To Open:Air To Close | 15-100A | Rc 1/4 |

⚠ Important Notes

- Gasifying, volatile, or evaporating fluid such as hydrogen peroxide and sodium hypochlorite might rise inner pressure of valve and burst the valve. Please contact us concerning such risk. Gas relief type of customized ball valve which has relief orifice on the ball is available.
- Do not use for the fluid containing slurry, solid, sediment, or crystallized fluid. Or for those kinds of fluid, strainer should be used in upstream.

Maximum Working Pressure - Temperature Rating

■ Double Action, Air To Close, Air To Open

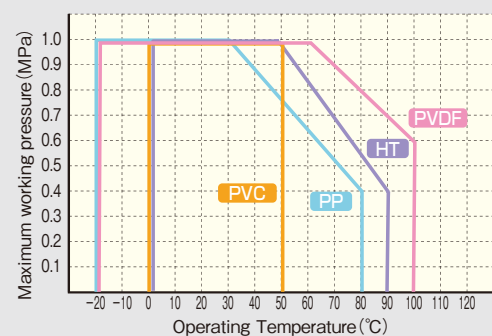
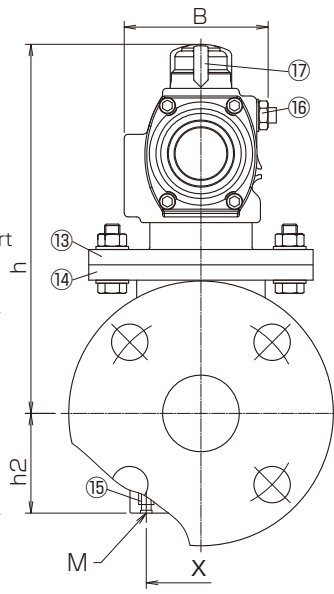
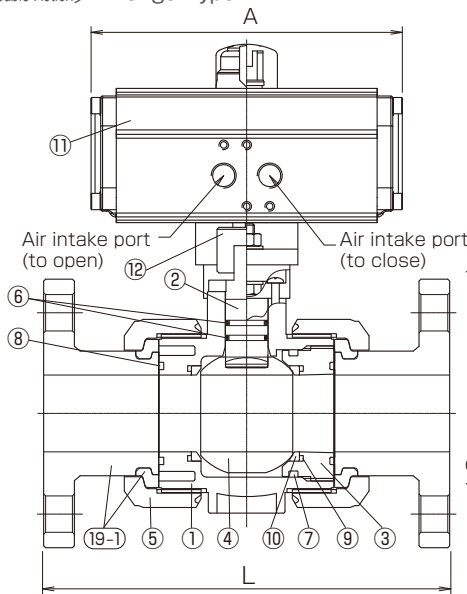
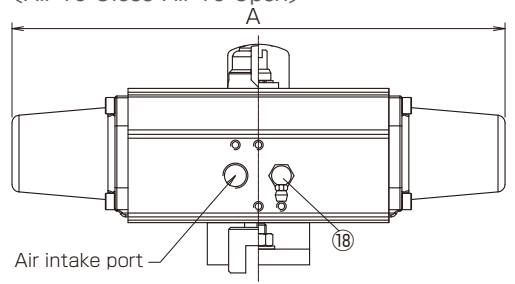


Figure (Flange Type · TS Socket Type · Thread Type · Butt Type)

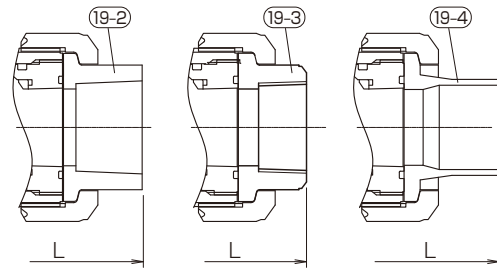
[Double Action] ● Flange Type



[Air To Close·Air To Open]



● TS Socket Type ● Thread Type ● Butt Type



Parts List

| No. | Part Name | QTY | Material / Type |
|-----|--------------------|-----|-------------------------------|
| 1 | Body | 1 | ● PVC |
| 2 | Stem | 1 | ● HT (JIS : Brown) |
| 3 | Ball holder | 1 | ● CPVC (ANSI·DIN : Gray) |
| 4 | Ball | 1 | ● PP |
| 5 | Union nut | 2 | ● PVDF |
| 6 | Stem O-ring* | 2 | |
| 7 | Ball holder O-ring | 1 | ● EPDM |
| 8 | Union O-ring | 2 | ● FKM |
| 9 | Ball seat O-ring | 2 | |
| 10 | Ball Seat | 2 | PTFE |
| 11 | Cylinder | 1 | AL6063 |
| 12 | Connector | 1 | AL6061 |
| 13 | Yoke | 1 | GF-PP |
| 14 | Yoke | 1 | GF-PP |
| 15 | Insert Nut | 2 | C3601 |
| 16 | Adjust Bolt | 2 | SUS304 |
| 17 | Indicator | 1 | PA+PE |
| 18 | Air Exhaust Port | 1 | C3601+Cr Coated |
| 19 | Flange.Set ring | 2 | ● PVC ● HT ● CPVC ● PP ● PVDF |
| 20 | TS Socket | 2 | ● PVC ● HT ● CPVC |
| 21 | Threaded socket | 2 | ● PVC ● PVDF |
| 22 | Butt Spigot Type | 2 | ● PP ● PVDF ● PE |
| 23 | Socket welding | 2 | PP |

Option



* Other options: Please contact us.

Size

Flange type · Thread type · TS socket type · Butt type

Unit : mm

| Size | | φ d | h | A | | B | | Fixing Insert x000D_ Nut | | Flange | |
|------|-------|-----|-----|---------------|-----------------------------|---------------|-----------------------------|-----------------------------|----|-----------------|-----|
| A | B | | | Double Action | Air to open Air to close | Double Action | Air to open Air to close | X | M | JIS10K,ANSI,DIN | |
| 15 | 1/2 | 15 | 147 | 97 | 133 | 60 | 75 | 27.0 | M5 | L | |
| 20 | 3/4 | 20 | 152 | 97 | 133 | 60 | 75 | 32.0 | M5 | 172 | |
| 25 | 1 | 25 | 162 | 97 | 133 | 60 | 75 | 37.0 | M5 | 187 | |
| 32 | 1 1/4 | 32 | 170 | 162 | 257 | 75 | 75 | 42.0 | M5 | 190 | |
| 40 | 1 1/2 | 40 | 193 | 162 | 257 | 75 | 75 | 57.0 | M6 | 212 | |
| 50 | 2 | 50 | 216 | 162 | 314 | 75 | 89 | 67.0 | M6 | 234 | |
| 65 | 2 1/2 | 65 | 264 | 202 | 430 | 89 | 101 | 81.0 | M6 | 259 | 257 |
| 80 | 3 | 80 | 275 | 202 | 430 | 89 | 101 | 99.7 | M8 | 304 | 301 |
| 100 | 4 | 100 | 341 | 262 | 500 | 101 | 129 | 119.7 | M8 | 372 | 367 |

| Size | | TS Socket | | | Thread | | | | | |
|------|-------|-------------|-------------|-------------|--------------|------|------------|------|----------|------|
| A | B | JIS | ASTM | DIN | JIS,DIN (Rc) | | ANSI (NPT) | | DIN (Rp) | |
| | | PVC,HT,CPVC | PVC,HT,CPVC | PVC,HT,CPVC | PVC | PVDF | PVC | PVDF | PVC | PVDF |
| | | L | L | L | L | | L | | L | |
| 15 | 1/2 | 109 | 103 | 92 | 97 | 99 | 97 | 99 | 97 | 99 |
| 20 | 3/4 | 132 | 119 | 107 | 117 | 116 | 117 | 116 | 117 | 116 |
| 25 | 1 | 143 | 133 | 121 | 128 | 136 | 128 | 136 | 128 | 136 |
| 32 | 1 1/4 | 166 | 147 | 137 | 146 | 148 | 146 | 148 | 146 | 148 |
| 40 | 1 1/2 | 175 | 171 | 161 | 163 | 169 | 163 | 169 | 163 | 169 |
| 50 | 2 | 203 | 188 | 189 | 188 | 196 | 188 | 196 | 188 | 196 |
| 65 | 2 1/2 | 259 | 211 | 211 | 227 | 227 | 212 | 212 | 212 | 212 |
| 80 | 3 | 311 | 262 | 263 | 278 | 278 | 261 | 261 | 261 | 261 |
| 100 | 4 | 390 | 315 | 315 | 330 | 330 | 315 | 315 | 315 | 315 |

| Size | | Butt Spigot | | | Socket welding | Ref.Weight Body:PVC (kg/unit) | | | |
|------|-------|-------------|-----|-----|----------------|-------------------------------|--------|-----------------------------|--------|
| A | B | DIN | DIN | JIS | DIN | Double Action | | Air to open Air to close | |
| | | PP,PVDF | PE | PE | PP | Flange | Socket | Flange | Socket |
| | | L | L | L | L | | | | |
| 15 | 1/2 | 143 | 210 | - | 103 | 0.7 | 0.5 | 1.6 | 1.3 |
| 20 | 3/4 | 152 | 220 | - | 114 | 0.9 | 0.6 | 1.7 | 1.4 |
| 25 | 1 | 161 | 237 | 247 | 126 | 1.6 | 1.1 | 2 | 1.6 |
| 32 | 1 1/4 | 167 | 258 | - | 141 | 2.6 | 2.1 | 2.9 | 2.3 |
| 40 | 1 1/2 | 190 | 292 | 291 | 162 | 3.2 | 2.6 | 3.5 | 2.8 |
| 50 | 2 | 216 | 325 | 314 | 185 | 0.9 | 0.6 | 5.6 | 4.7 |
| 65 | 2 1/2 | 208 | 363 | - | 204 | 1.6 | 1.1 | 9.5 | 8.5 |
| 80 | 3 | 301 | 424 | 424 | 264 | 2.6 | 2.1 | 11.9 | 11.0 |
| 100 | 4 | 340 | 478 | 498 | 317 | 18.4 | 17.5 | 21.1 | 20.2 |



JIS ANSI/ASME DIN



Operating Temperature(°C)

| | |
|------|---------|
| PVC | 0 ~ 50 |
| PP | 0 ~ 80 |
| PVDF | 0 ~ 100 |



Single Action
(Air to open,Air to close)

Double Action

ESLON PNEUMATIC BUTTERFLY VALVE TYPE S

Feature

- Light weight and compact of aluminum actuator.
- Excellent corrosion resistance.
- Changeable into automatic/manual operation.
- Operating air pressure : 0.4MPa
- Manual override wheel handle for open/close is available.
- Box type of Limit switch is available as an option.
- Conformity with NAMUR standard.

| Operation type | Size | Actuator type | Air Consumption (ℓ /time/unit) |
|----------------|----------|---------------|--------------------------------|
| Single Action | 40A | AS50 | 0.11 |
| | 50-65A | AS65 | 0.24 |
| | 80A | AS80 | 0.48 |
| | 100A | AS100 | 0.86 |
| | 125A | AS125 | 1.68 |
| | 150A | AS140 | 2.45 |
| | 200-300A | AS160 | 3.74 |
| Double Action | 350-400A | AS210 | 6.19 |
| | 40-65A | AD50 | 0.24 |
| | 80A | AD65 | 0.49 |
| | 100A | AD80 | 1.02 |
| | 125A | AD100 | 1.83 |
| | 150-250A | AD125 | 3.46 |
| | 300A | AD140 | 5.19 |
| 300-400A | AD160 | 7.96 | |

Max. Working Press. at R.T.

| | | |
|--------------|-------------------|--------|
| Air Pressure | Double Action | 0.4MPa |
| | Air To Open&Close | 0.4MPa |

Air Supply Port

| | |
|-------------------|--------|
| Double Action | Rc 1/4 |
| Air To Open&Close | Rc 1/4 |

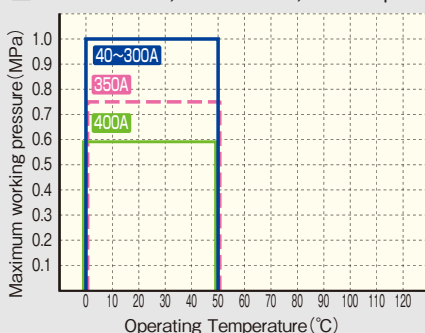
⚠ Important Notes

- Fluid containing slurry, solid, sediment, or crystallized fluid might disable sealing.

Maximum Working Pressure - Temperature Rating

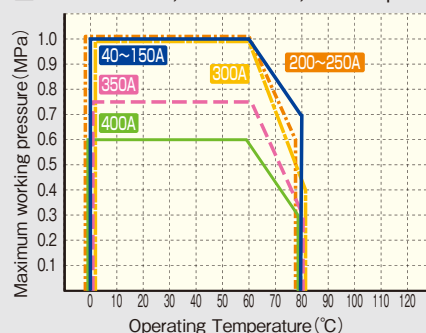
Body material : PVC

■ Double Action,Air To Close,Air To Open



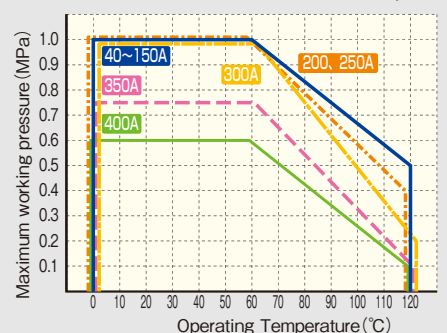
Body material : PP

■ Double Action,Air To Close,Air To Open

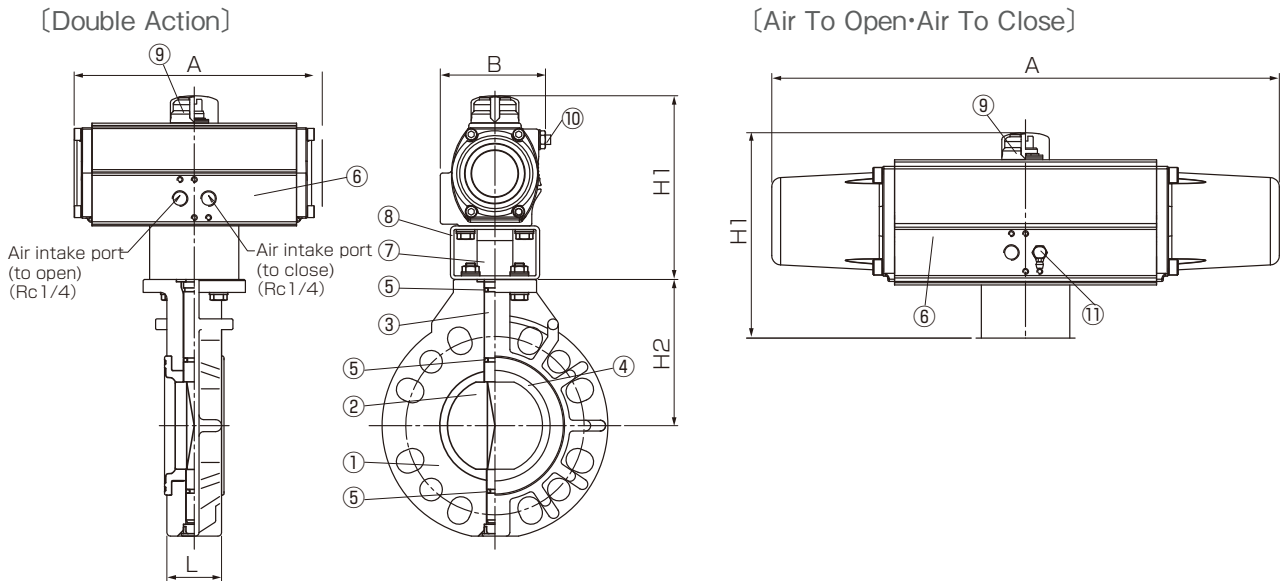


Body material : PVDF

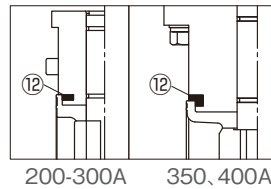
■ Double Action,Air To Close,Air To Open



Figure



200-400A (Body:PP)



Option



Parts List

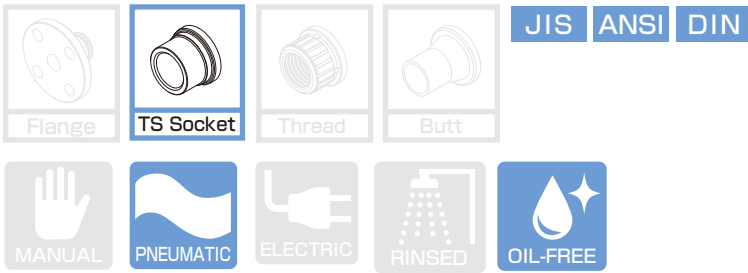
| No. | Part Name | Q'TY | Material / Type |
|-----|------------------------------------|------|---|
| 1 | Body | 1 | Body/Disc ● PVC/PP ● PP/PP ● PVDF/PVDF |
| 2 | Disc | 1 | |
| 3 | Shaft | 1 | ● SUS420J2 ● SUS316 |
| 4 | Seat Ring | 1 | ● EPDM ● FKM |
| 5 | O-Ring | 3 | |
| 6 | Cylinder | 1 | AL6063 |
| 7 | Yoke | 1 | STKR+Resin Coating |
| 8 | Connector | 1 | SUS303 |
| 9 | Indicator | 1 | PA+PE |
| 10 | Adjust Bolt | 2 | SUS304 |
| 11 | Air Exhaust Port | 1 | C3601+Resin Coating |
| 12 | Reinforced Ring (200-400A Body:PP) | 2 | S45C+Plating |

* Other options: Please contact us.

Size

| Size | | L | φ d | Flange | | | | | | H1 | | H2 | Double Action | | Air to open Air to close | | Weight(kg/unit) | |
|------|-------|-----|-----|--------|-------|-------|-------|-----|-------|---------------|-----------------------------|-----|---------------|-----|-----------------------------|-----|-----------------|-----------------------------|
| A | B | | | JIS10K | | ANSI | | DIN | | Double Action | Air to open Air to close | | A | B | A | B | Double Action | Air to open Air to close |
| | | | | φ C | n-φ h | φ C | n-φ h | φ C | n-φ h | | | | | | | | | |
| 40 | 1 1/2 | 33 | 45 | 105 | 4-19 | 98.5 | 4-16 | 110 | 4-18 | 138 | 138 | 105 | 162 | 75 | 257 | 75 | 2.5 | 2.6 |
| 50 | 2 | 43 | 57 | 120 | 4-19 | 120.5 | 4-19 | 125 | 4-18 | 138 | 155 | 112 | 162 | 75 | 314 | 89 | 2.7 | 3.7 |
| 65 | 2 1/2 | 46 | 71 | 140 | 4-19 | 139.5 | 4-19 | 145 | 4-18 | 138 | 155 | 123 | 162 | 75 | 314 | 89 | 3.1 | 4.5 |
| 80 | 3 | 46 | 80 | 150 | 8-19 | 152.5 | 4-19 | 160 | 8-18 | 155 | 174 | 130 | 202 | 89 | 430 | 101 | 4.4 | 7.0 |
| 100 | 4 | 52 | 100 | 175 | 8-19 | 190.5 | 8-19 | 180 | 8-18 | 175 | 197 | 152 | 262 | 101 | 500 | 129 | 6.6 | 12.4 |
| 125 | 5 | 56 | 125 | 210 | 8-23 | 216 | 8-22 | 210 | 8-18 | 228 | 253 | 169 | 311 | 129 | 606 | 151 | 9.9 | 18.9 |
| 150 | 6 | 60 | 150 | 240 | 8-23 | 241.5 | 8-22 | 240 | 8-22 | 252 | 271 | 178 | 390 | 151 | 682 | 164 | 16.6 | 28.6 |
| 200 | 8 | 71 | 198 | 290 | 12-23 | 298.5 | 8-22 | 295 | 8-22 | 252 | 198 | 230 | 390 | 151 | 781 | 188 | 18.2 | 41.3 |
| 250 | 10 | 73 | 246 | 355 | 12-25 | 362 | 12-25 | 350 | 12-22 | 277 | 323 | 250 | 390 | 151 | 781 | 188 | 27.0 | 47.9 |
| 300 | 12 | 114 | 299 | 400 | 16-25 | 432 | 12-25 | 400 | 12-22 | 295 | 323 | 280 | 431 | 164 | 781 | 188 | 41.1 | 54.9 |
| 350 | 14 | 129 | 348 | 445 | 16-25 | 476.2 | 12-29 | 460 | 16-22 | 323 | 387 | 325 | 506 | 188 | 982 | 231 | 55.0 | 97.4 |
| 400 | 16 | 169 | 406 | 510 | 16-27 | 540.0 | 16-29 | 515 | 16-26 | 323 | 387 | 350 | 506 | 188 | 982 | 231 | 62.3 | 105.0 |

Unit : mm



Operating Temperature(°C)
PVC 0 ~ 50



ESLON AIR OPERATION VALVE

Feature

- Light weight and compact of plastic actuator.
- Excellent chemical and corrosion resistance.
- Excellent open-close durability.
- Water hammer prevention with optimized diaphragm design.
- By-pass on the valve body to avoid dead water while valve is shut is available as an option.

Max. Working Press. at R.T.

| | | |
|--------------|-------------------|--------|
| Air Pressure | Double Action | 0.4MPa |
| | Air To Open&Close | 0.5MPa |

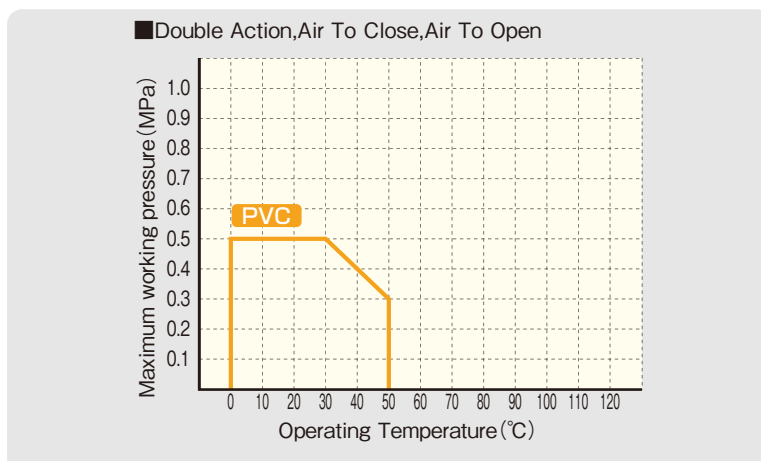
Air Supply Port

| | |
|-------------------|--------|
| Double Action | Rc 1/8 |
| Air To Open&Close | Rc 1/8 |

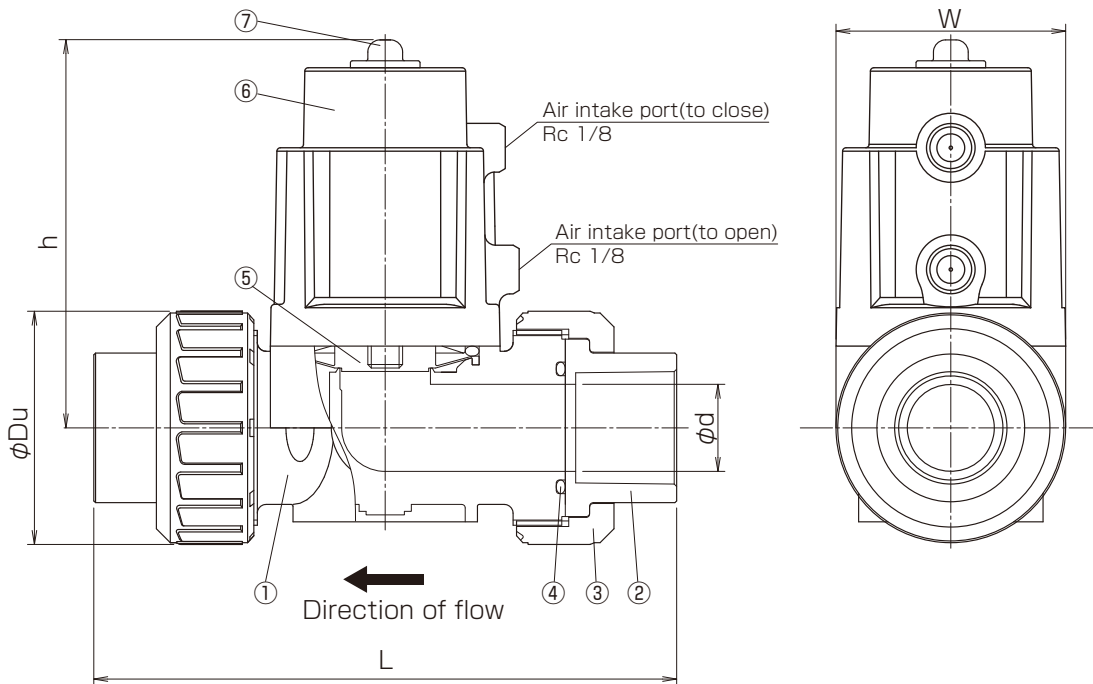
⚠ Important Notes

- Union nut is compatible only with Eslon True Union Fitting compact type. (Incompatible with Eslon Ball Valve, Diaphragm Valve, and True Union Fitting which is compatible with Ball Valve)

Maximum Working Pressure - Temperature Rating



Figure



Parts List

| No. | Part Name | Q'TY | Material / Type |
|-----|-----------|------|-----------------|
| 1 | Body | 1 | PVC |
| 2 | TS Socket | 2 | PVC |
| 3 | Union nut | 2 | PVC |
| 4 | O-ring | 2 | ●EPDM ●FKM |
| 5 | Diaphragm | 1 | PTFE |
| 6 | Actuator | 1 | PPS-GF |
| 7 | Indicator | 1 | PC |

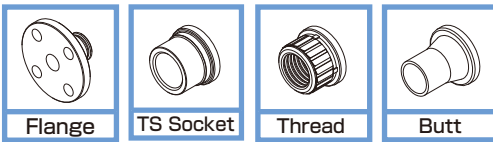
Option



Size

Unit : mm

| Size | | d | L | h | W | Du | Air consumption(ℓ /time/unit) | | | Ref. Weight (kg/unit) | | |
|------|-------|----|-----|-----|-----|-----|-------------------------------|--------------|-------------|-----------------------|--------------|-------------|
| A | B | | | | | | Double Action | Air to close | Air to open | Double Action | Air to close | Air to open |
| 15 | 1/2 | 15 | 145 | 113 | 66 | 54 | 0.06 | 0.04 | 0.02 | 0.6 | 0.6 | 0.7 |
| 20 | 3/4 | 20 | 149 | 113 | 66 | 54 | 0.06 | 0.04 | 0.02 | 0.6 | 0.6 | 0.7 |
| 25 | 1 | 25 | 168 | 113 | 66 | 67 | 0.06 | 0.04 | 0.02 | 0.7 | 0.8 | 0.8 |
| 32 | 1 1/4 | 31 | 242 | 149 | 97 | 87 | 0.23 | 0.13 | 0.05 | 1.9 | 2.1 | 2.3 |
| 40 | 1 1/2 | 40 | 238 | 149 | 97 | 87 | 0.23 | 0.13 | 0.05 | 1.9 | 2.1 | 2.3 |
| 50 | 2 | 51 | 275 | 200 | 117 | 107 | 0.45 | 0.26 | 0.09 | 3.3 | 3.6 | 4.1 |
| 65 | 2 1/2 | 65 | 321 | 246 | 149 | 128 | 1.03 | 0.65 | 0.21 | 6.0 | 6.6 | 8.4 |



JIS ANSI/ASME/ASTM DIN/ISO



Operating Temperature(°C)

| | Flange Type | Union Type |
|---------|-------------|------------|
| PVC | 0 ~ 60 | 0 ~ 50 |
| HT-CPVC | 0 ~ 90 | 0 ~ 90 |
| PP | 0 ~ 90 | |
| PVDF | 0 ~ 120 | 0 ~ 100 |

ESLON ELECTRIC DIAPHRAGM VALVE TYPE KS

Feature

- Excellent chemical and corrosion resistance with resin coated aluminum actuator.
- Compact and high durability motor onboard.
- Easy flow control and water hammer prevention by slow action.
- Visual position indicator on actuator.
- Manual open-close operation is available by attached box wrench.

⚠ Important Notes

- Fluid containing slurry, solid, sediment, or crystallized fluid might disable sealing.

Time For Open-Close (50/60Hz)

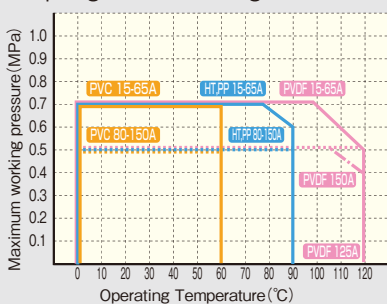
| Size (A) | Time(Sec.) | Size (A) | Time(Sec.) |
|----------|------------|----------|------------|
| 15 | 12/10 | 65 | 36/30 |
| 20 | 14/12 | 80 | 38/32 |
| 25,32 | 15/13 | 100 | 50/45 |
| 40 | 11/9 | 125 | 72/61 |
| 50 | 20/17 | 150 | 90/72 |

Specification of Actuator

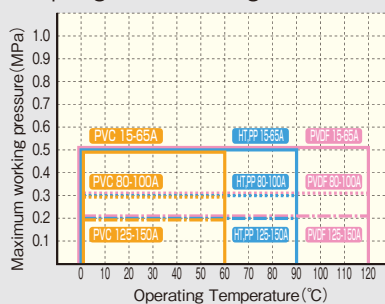
| | | | | | |
|---------------------|---|--------------------------|------|------|-----------|
| Nominal diameter(A) | 15~32A | 40~65A | 80A | 100A | 125-150A |
| Input system | Power switching system | | | | |
| Contact output | Power supply voltage | | | | |
| Operating voltage | Single-phase AC100,200V(50/60Hz) | | | | |
| Motor | Type | Reversible motor | | | |
| | Time rating | 30 minutes rating | | | |
| Protect | 15~32A | impedance protect inside | | | |
| | 40~150A | Thermal protect inside | | | |
| Rated current | 100V | 0.3A | 0.8A | 1.0A | 1.4A 2.0A |
| | 200V | 0.15A | 0.4A | 0.5A | 0.7A 1.0A |
| Manual operation | Drive shaft direct operation | | | | |
| Connector type | G1/2Conduit connector (max.φ10.5 Cabtire cable) | | | | |
| Material | AC-4 Resin Coating | | | | |
| Protection | IP63 | | | | |

Maximum Working Pressure - Temperature Rating

■ Diaphragm:EPDM/Flange



■ Diaphragm:PTFE/Flange



■ Diaphragm:EPDM-PTFE/TS-Thread-Butt Spigot

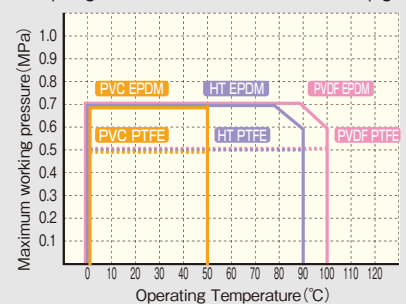
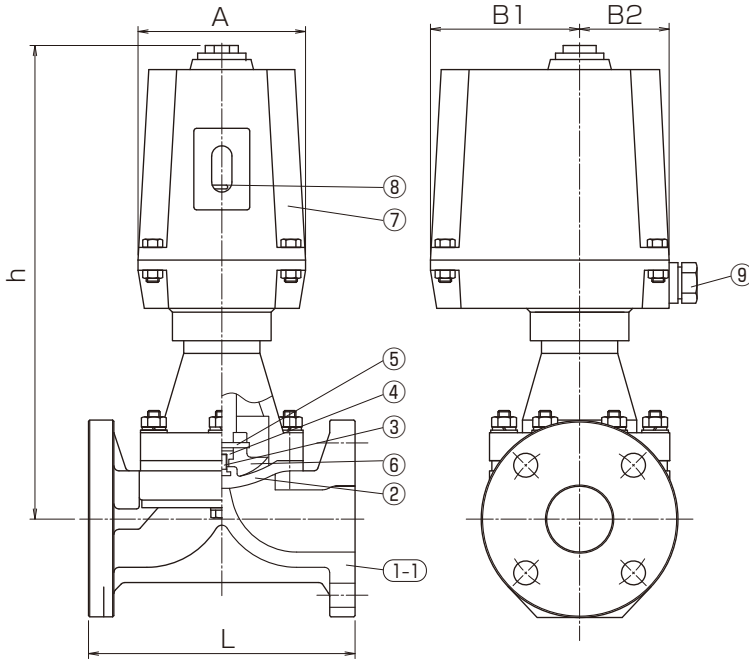
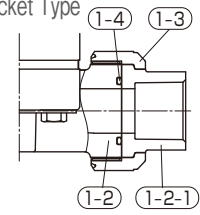


Figure (Flange Type · TS Socket Type · Thread Type · Butt Type)

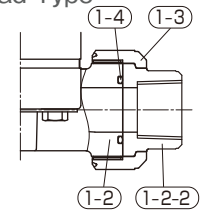
● Flange Type



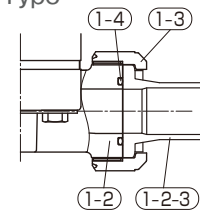
● TS Socket Type



● Thread Type



● Butt Type



Parts List

| No. | Part Name | QTY | Material / Type |
|-------|------------------------|-----|--|
| 1-1 | Flange Body | 1 | ●PVC ●HT(JIS:Brown)●CPVC(ANSI·DIN:Gray)●PP ●PVDF |
| 1-2 | Union Body | 1 | ●PVC ●HT(JIS:Brown)●CPVC(ANSI·DIN:Gray)●PVDF |
| 1-2-1 | TS Socket | 2 | ●PVC ●HT(JIS:Brown)●CPVC(ANSI·DIN:Gray) |
| 1-2-2 | Thread Socket | 2 | ●PVC ●PVDF |
| 1-2-3 | Butt Spigot | 2 | ●PVDF |
| 1-3 | Union Nut | 2 | ●PVC ●HT(JIS:Brown)●CPVC(ANSI·DIN:Gray)●PVDF |
| 1-4 | O-Ring | 2 | ●EPDM ●FKM |
| 2 | Diaphragm | 1 | ●EPDM ●PTFE+EPDM ●PTFE+PVDF+EPDM |
| 3 | Diaphragm Screw | 1 | SUS304※ |
| 4 | Compressor Nut | 1 | C3604※ |
| 5 | Pin | 1 | SUS304※ |
| 6 | Compressor | 1 | GF-PP |
| 7 | Actuator | 1 | AC-4+Resin Coating |
| 8 | Indicator | 1 | C3604 |
| 9 | Electric Conduit Gland | 1 | PP |

※ Titanium Palladium is available on request.

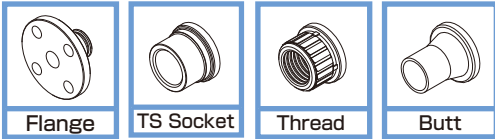
Option

- No-voltage limit switch
- Space heater
- Sodium resistance coating, Acid resistance coating

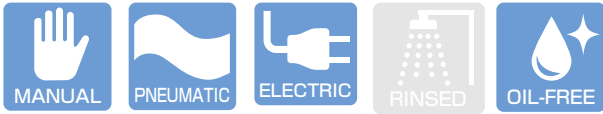
Size

| Size | | L | | | | | | | | | | | Actuator | | | Ref. Weight (kg/unit) | Actuator | | | |
|------|-------|---------------------|-------------|-----------|--------|----------|----------|---------|-----------|---------|-------------|-----|----------------|-----|-----|-----------------------|----------|----------------|----------------|-----|
| A | B | Flange | | TS Socket | | | Thread | | | | Butt Spigot | | Socket welding | h | A | | | B ₁ | B ₂ | |
| | | JIS10K | ANSI | DIN | JIS10K | ANSI | DIN | JIS(Rc) | ANSI(NPT) | DIN(Rp) | DIN | DIN | JIS | | | | | | | DIN |
| | | PVC,HT,CPVC,PP,PVDF | PVC,HT,CPVC | PVC | PVDF | PVC,PVDF | PVC,PVDF | PP,PVDF | PE | PE | PP | | | | | | | | | |
| 15 | 1/2 | 110 | 144 | 137 | 126 | 133 | 134 | 133 | 133 | 176 | 246 | — | 137 | 266 | 112 | 93 | 57 | 5.0 | ED-6 | |
| 20 | 3/4 | 120 | 172 | 158 | 146 | 157 | 157 | 157 | 157 | 189 | 259 | — | 153 | 277 | 112 | 93 | 57 | 5.5 | ED-6 | |
| 25 | 1 | 130 | 187 | 177 | 165 | 173 | 180 | 173 | 173 | 203 | 283 | 293 | 171 | 285 | 112 | 93 | 57 | 6.0 | ED-6 | |
| 32 | 1 1/4 | 142 | 210 | 190 | 179 | 188 | 191 | 188 | 188 | 210 | 301 | — | 183 | 285 | 112 | 93 | 57 | 6.3 | ED-6 | |
| 40 | 1 1/2 | 180 | 262 | 258 | 247 | 248 | 254 | 248 | 248 | 272 | 376 | 376 | 245 | 349 | 132 | 118 | 70 | 9.5 | ED-25 | |
| 50 | 2 | 210 | 298 | 283 | 284 | 280 | 290 | 269 | 269 | 306 | 419 | 409 | 278 | 387 | 132 | 118 | 70 | 10.5 | ED-25 | |
| 65 | 2 1/2 | 250 | — | — | — | — | — | — | — | — | — | — | — | 435 | 132 | 118 | 70 | 12.5 | ED-25 | |
| 80 | 3 | 280 | — | — | — | — | — | — | — | — | — | — | — | 511 | 200 | 154 | 83 | 22.0 | ED-40 | |
| 100 | 4 | 340 | — | — | — | — | — | — | — | — | — | — | — | 562 | 200 | 154 | 83 | 27.5 | ED-60 | |
| 125 | 5 | 410 | — | — | — | — | — | — | — | — | — | — | — | 595 | 200 | 154 | 84 | 35.0 | ED-90 | |
| 150 | 6 | 480 | — | — | — | — | — | — | — | — | — | — | — | 601 | 200 | 154 | 84 | 43.0 | ED-90 | |

Unit : mm



JIS ANSI/ASME/ASTM DIN/ISO



Operating Temperature(°C)

| | | | |
|---------|--------|------|-----------|
| PVC | 0 ~ 50 | PP | -20 ~ 80 |
| HT-CPVC | 0 ~ 90 | PVDF | -20 ~ 100 |



ESLON ELECTRIC BALL VALVE TYPE K

Feature

- Light weight and compact of actuator with aluminum die-cast housing.
- Excellent chemical and corrosion resistance.
- Visual position indicator on actuator.
- Easy flow control and water hammer prevention by slow action.
- Suitable for frequent operation with constant rating type of motor onboard.
- Conformity with CE.

Specification of Actuator

| | | | |
|---------------------|--|-------------------|------------|
| Nominal diameter(A) | 15~65A | 80·100A | |
| Input system | Power switching system | | |
| Contact output | Power supply voltage | | |
| Operating voltage | Single-phase AC100,200V(50/60Hz) | | |
| Motor | Type | Reversible motor | |
| | Time rating | Continuous rating | |
| Protect | Thermal protect inside Adjustable mechanical stopper for open and close-side | | |
| Rated current | 100/110V | 0.7/0.9A | 0.65/0.70A |
| | 200/220V | 0.4/0.5A | 0.35/0.40A |
| Manual operation | Drive shaft direct operation | | |
| Connector type | G 1/2 Conduit (t t Cable OD φ9-11) | | |
| Material | ADC12 Resin Coating | | |
| Protection | IP66 | | |

Time For Open-Close (50/60Hz)

| Size (A) | Time(Sec.) |
|----------|------------|
| 15-25A | 4/3.3 |
| 32-65A | 15/12.5 |
| 80,100A | 30/25 |

⚠ Important Notes

- Gasifying, volatile, or evaporating fluid such as hydrogen peroxide and sodium hypochlorite might rise inner pressure of valve and burst the valve. Please contact us concerning such risk. Gas relief type of customized ball valve which has relief orifice on the ball is available.
- Do not use for the fluid containing slurry, solid, sediment, or crystallized fluid. Or for those kinds of fluid, strainer should be used in upstream.

Maximum Working Pressure - Temperature Rating

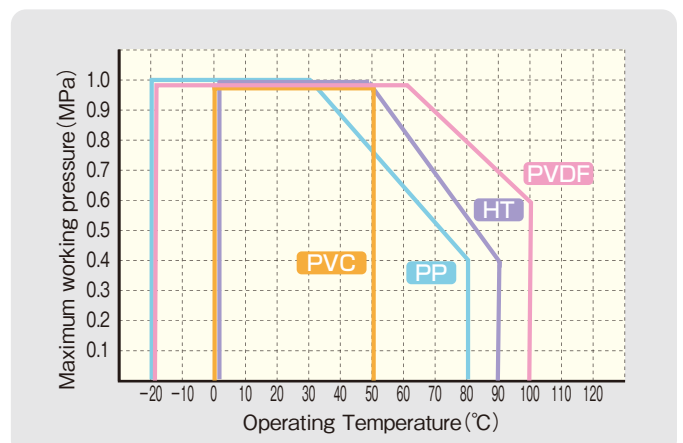
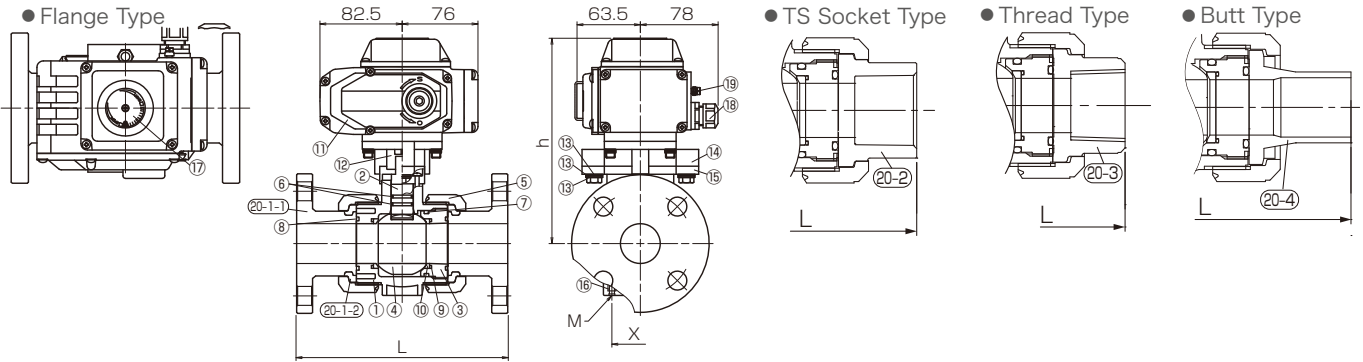


Figure (Flange Type · TS Socket Type · Thread Type · Butt Type)



Parts List

| No. | Part Name | QTY | Material / Type | No. | Part Name | QTY | Material / Type |
|-----|--------------------|-----|-----------------------|------|--------------------------|-----|----------------------|
| 1 | Body | 1 | ● PVC | 13 | Bolt,Washer | - | SUS304 |
| 2 | Stem | 1 | ● HT(JIS:Brown) | 14 | Upper mount | 1 | AC4A |
| 3 | Ball holder | 1 | ● CPVC(ANSI-DIN:Gray) | 15 | Lower mount | 1 | GF-PP |
| 4 | Ball | 1 | ● PP | 16 | Fixing Insert Nut | 2 | C3601 |
| 5 | Union nut | 2 | ● PVDF | 17 | Valve Position Indicator | 1 | Tempered glass |
| 6 | Stem O-ring*1 | 2 | | 18 | Electric wire connector | 1 | PA, G1/2 |
| 7 | Ball holder O-ring | 1 | ● EPDM | 19 | Earth Terminal *2 | 1 | SS400/Nickel Coated |
| 8 | Union O-ring | 2 | ● FKM | 20-1 | Flange,Set ring | 2 | ●PVC●HT●CPVC●PP●PVDF |
| 9 | Ball seat O-ring | 2 | | 20-2 | TS Socket | 2 | ●PVC●HT●CPVC |
| 10 | Ball Seat | 2 | PTFE | 20-3 | Threaded socket | 2 | ●PVC●PVDF |
| 11 | Actuator | 1 | ADC12(Resin Coating) | 20-4 | Butt Spigot Type | 2 | ●PP●PVDF●PE |
| 12 | Connector | 1 | pvcZDC3 | 20-5 | Socket welding | 2 | PP |

Option

- No-voltage limit switch
- Potentiometer
- Space heater
- Proportional control (please contact us)

*1 Stem O-Ring material will be FKM+PTFE in case of Oil Free *2 AC200 / 220V

Size

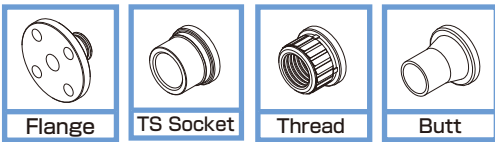
Flange type · Thread type · TS socket type · Butt type

Unit : mm

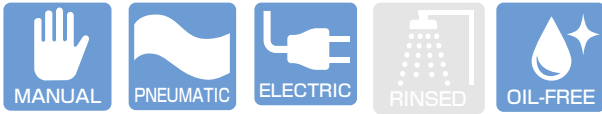
| Size | | A | | B | | Fixing Insert | | Flange | | | | | | | | | | | | | | | |
|------|-------|---------------|----------------------------|---------------|----------------------------|---------------|-----|-------------|---------|--------|-----|-------|------|------|-------|-------|-------|------|------|-------|------|------|----|
| A | B | Double Action | Air to open / Air to close | Double Action | Air to open / Air to close | X | M | Nut | | JIS10K | | | | ANSI | | | | DIN | | | | | |
| | | | | | | | | PVC,HT,CPVC | PP,PVDF | φ D | φ C | n-φ h | t | φ D | φ C | n-φ h | t | φ D | φ C | n-φ h | t | | |
| 15 | 1/2 | 15 | 147 | 97 | 133 | 60 | 75 | 27.0 | M5 | 143 | 95 | 70 | 4-15 | 14 | 89 | 60.5 | 4-16 | 11.5 | 95 | 65 | 4-14 | 11 | |
| 20 | 3/4 | 20 | 152 | 97 | 133 | 60 | 75 | 32 | M5 | 172 | 100 | 75 | 4-15 | 14 | 98 | 70 | 4-16 | 13 | 105 | 75 | 4-14 | 12 | |
| 25 | 1 | 25 | 162 | 97 | 133 | 60 | 75 | 37 | M5 | 187 | 125 | 90 | 4-19 | 14 | 108 | 79.5 | 4-16 | 14.5 | 115 | 85 | 4-14 | 14 | |
| 32 | 1 1/4 | 32 | 170 | 162 | 257 | 75 | 75 | 42 | M5 | 190 | 135 | 100 | 4-19 | 16 | 117.5 | 89 | 4-16 | 16 | 140 | 100 | 4-18 | 15 | |
| 40 | 1 1/2 | 40 | 193 | 162 | 257 | 75 | 75 | 57 | M6 | 212 | 140 | 105 | 4-19 | 16 | 127 | 98.5 | 4-16 | 17.5 | 150 | 110 | 4-18 | 16 | |
| 50 | 2 | 50 | 216 | 162 | 314 | 75 | 89 | 67 | M6 | 234 | 155 | 120 | 4-19 | 20 | 152 | 120.5 | 4-19 | 19.5 | 165 | 125 | 4-18 | 18 | |
| 65 | 2 1/2 | 65 | 264 | 202 | 430 | 89 | 101 | 81 | M6 | 259 | 257 | 175 | 140 | 4-19 | 22 | 178 | 139.5 | 4-20 | 22.5 | 185 | 145 | 4-18 | 22 |
| 80 | 3 | 80 | 275 | 202 | 430 | 89 | 101 | 99.7 | M8 | 304 | 301 | 185 | 150 | 8-19 | 22 | 191 | 152.5 | 4-20 | 24 | 200 | 160 | 8-18 | 23 |
| 100 | 4 | 100 | 341 | 262 | 500 | 101 | 129 | 119.7 | M8 | 372 | 367 | 210 | 175 | 8-19 | 24 | 229 | 190.5 | 8-20 | 24 | 220 | 180 | 8-18 | 23 |

| Size | | TS Socket | | | | | | Thread | | | | | | | | | | | |
|------|-------|-------------|----|-------------|-------|-------------|----|--------------|----|------|----|------------|----|------|-----|----------|----|------|-----|
| A | B | JIS | | ASTM | | DIN | | JIS,DIN (Rc) | | | | ANSI (NPT) | | | | DIN (Rp) | | | |
| | | PVC,HT,CPVC | | PVC,HT,CPVC | | PVC,HT,CPVC | | PVC | | PVDF | | PVC | | PVDF | | PVC | | PVDF | |
| | | L | ℓ | L | ℓ | L | ℓ | L | ℓ | L | ℓ | L | ℓ | L | ℓ | L | ℓ | | |
| 15 | 1/2 | 109 | 22 | 103 | 22.22 | 92 | 16 | 97 | 18 | 99 | 20 | 97 | 18 | 99 | 99 | 97 | 18 | 99 | 99 |
| 20 | 3/4 | 132 | 25 | 119 | 25.4 | 107 | 19 | 117 | 18 | 116 | 22 | 117 | 18 | 116 | 116 | 117 | 18 | 116 | 116 |
| 25 | 1 | 143 | 29 | 133 | 28.58 | 121 | 22 | 128 | 23 | 136 | 24 | 128 | 23 | 136 | 136 | 128 | 23 | 136 | 136 |
| 32 | 1 1/4 | 166 | 32 | 147 | 31.75 | 137 | 26 | 146 | 23 | 148 | 25 | 146 | 23 | 148 | 148 | 146 | 23 | 148 | 148 |
| 40 | 1 1/2 | 175 | 35 | 171 | 34.93 | 161 | 31 | 163 | 25 | 169 | 28 | 163 | 25 | 169 | 169 | 163 | 25 | 169 | 169 |
| 50 | 2 | 203 | 38 | 188 | 38.1 | 189 | 38 | 188 | 30 | 196 | 30 | 188 | 30 | 196 | 196 | 188 | 30 | 196 | 196 |
| 65 | 2 1/2 | 259 | 61 | 211 | 44.45 | 211 | 44 | 227 | 32 | 227 | 32 | 212 | 32 | 212 | 227 | 212 | 32 | 212 | 227 |
| 80 | 3 | 311 | 64 | 262 | 47.63 | 263 | 51 | 278 | 37 | 278 | 37 | 261 | 37 | 261 | 278 | 261 | 37 | 261 | 278 |
| 100 | 4 | 390 | 84 | 315 | 57.15 | 315 | 61 | 330 | 45 | 330 | 45 | 315 | 45 | 315 | 330 | 315 | 45 | 315 | 330 |

| Size | | Butt Spigot | | | | | | Socket welding | | | Ref.Weight Body:PVC (kg/unit) | |
|------|-------|-------------|----|-----|-----|-----|-----|----------------|------|------|-------------------------------|------------------|
| A | B | DIN | | DIN | | JIS | | DIN | | | Flange | TS Socket Thread |
| | | PP,PVDF | | PE | | PE | | PP | | | | |
| | | L | ℓ | L | ℓ | L | ℓ | L | ℓ 1 | ℓ 2 | | |
| 15 | 1/2 | 143 | 30 | 210 | 65 | - | - | 103 | 17.5 | 12 | 3.0 | 2.8 |
| 20 | 3/4 | 152 | 24 | 220 | 65 | - | - | 114 | 19 | 13 | 3.3 | 2.9 |
| 25 | 1 | 161 | 24 | 237 | 70 | 247 | 75 | 126 | 21 | 14.5 | 3.5 | 3.0 |
| 32 | 1 1/4 | 167 | 25 | 258 | 75 | - | - | 141 | 23.5 | 18 | 3.9 | 3.2 |
| 40 | 1 1/2 | 190 | 24 | 292 | 80 | 291 | 80 | 162 | 26.5 | 16 | 4.5 | 3.7 |
| 50 | 2 | 216 | 28 | 325 | 90 | 314 | 85 | 185 | 30.5 | 20 | 5.3 | 4.3 |
| 65 | 2 1/2 | 208 | 23 | 363 | 100 | - | - | 204 | 34 | 21 | 7.1 | 5.9 |
| 80 | 3 | 301 | 45 | 424 | 105 | 424 | 105 | 264 | 37 | 26.5 | 11.4 | 10.3 |
| 100 | 4 | 340 | 43 | 478 | 110 | 498 | 120 | 317 | 41 | 31.5 | 16.2 | 15.3 |



JIS ANSI/ASME/ASTM
DIN/ISO



Operating Temperature(°C)

| | | | |
|---------|--------|------|-----------|
| PVC | 0 ~ 50 | PP | -20 ~ 80 |
| HT-CPVC | 0 ~ 90 | PVDF | -20 ~ 100 |

ESLON ELECTRIC BALL VALVE TYPE N

Feature

- Light weight and compact of actuator with aluminum die-cast housing.
- Excellent chemical and corrosion resistance.
- Available 2 type of rotation speed by motor, standard type and high speed type for open-close operation.
- Visually confirmable valve action and open-close position, available manual open-close operation.

Time For Open-Close (50/60Hz)

| Size (A) | Time(Sec.) | |
|----------|---------------|-------------------|
| | Standard Type | Higher Speed Type |
| 15A | 5.4/4.5 | 3/2.5 |
| 20,25A | 15.5/13 | 15/22.5 |
| 32,40A | 16/13.5 | 6/5 |
| 50,65A | - | 3 ~ 4 |
| 80,100A | - | 6 ~ 10 |

⚠ Important Notes

- Gasifying, volatile, or evaporating fluid such as hydrogen peroxide and sodium hypochlorite might rise inner pressure of valve and burst the valve. Please contact us concerning such risk. Gas relief type of customized ball valve which has relief orifice on the ball is available.
- Do not use for the fluid containing slurry, solid, sediment, or crystallized fluid. Or for those kinds of fluid, strainer should be used in upstream.

Specification of Actuator

| Type | Standard Type | | High Speed Type | |
|-------------------------|---|--|------------------------------|------------|
| Nominal diameter(A) | 15~32A | 40A | 15~40A | 50~100A |
| Input system | Power switching system | | | |
| Contact output | Power supply voltage | | | |
| Operating voltage | Single-Phase AC100/110,200/220V(50/60Hz) | | | |
| Motor | Type | Inductor type synchronous motor | | |
| | Time rating | 15 minutes rating under loading rate 20% | | |
| Protect | Thermal protect inside | Thermal protect inside | Thermistor type | |
| Power consumption | 16VA | 19VA | 50VA | 100VA max. |
| Manual operation | Release of the screw lock | | Drive shaft direct operation | |
| Connector type | G3/8 wire connecto(r $\phi 5 \sim \phi 10.5$ Cabtire cable) | | | |
| Material | ADC Resin Coating | | | |
| Protection | IP65 | | | |
| Condensation prevention | Built-in space heater | | | |

Maximum Working Pressure - Temperature Rating

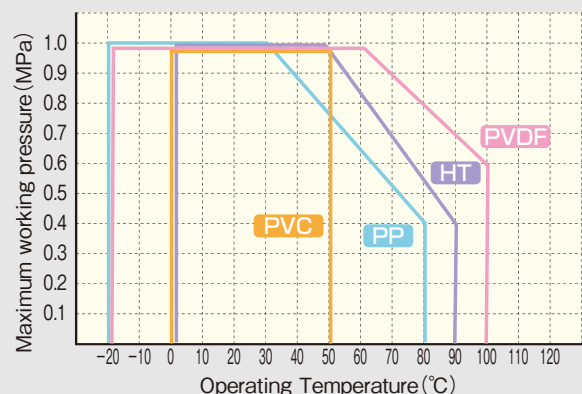
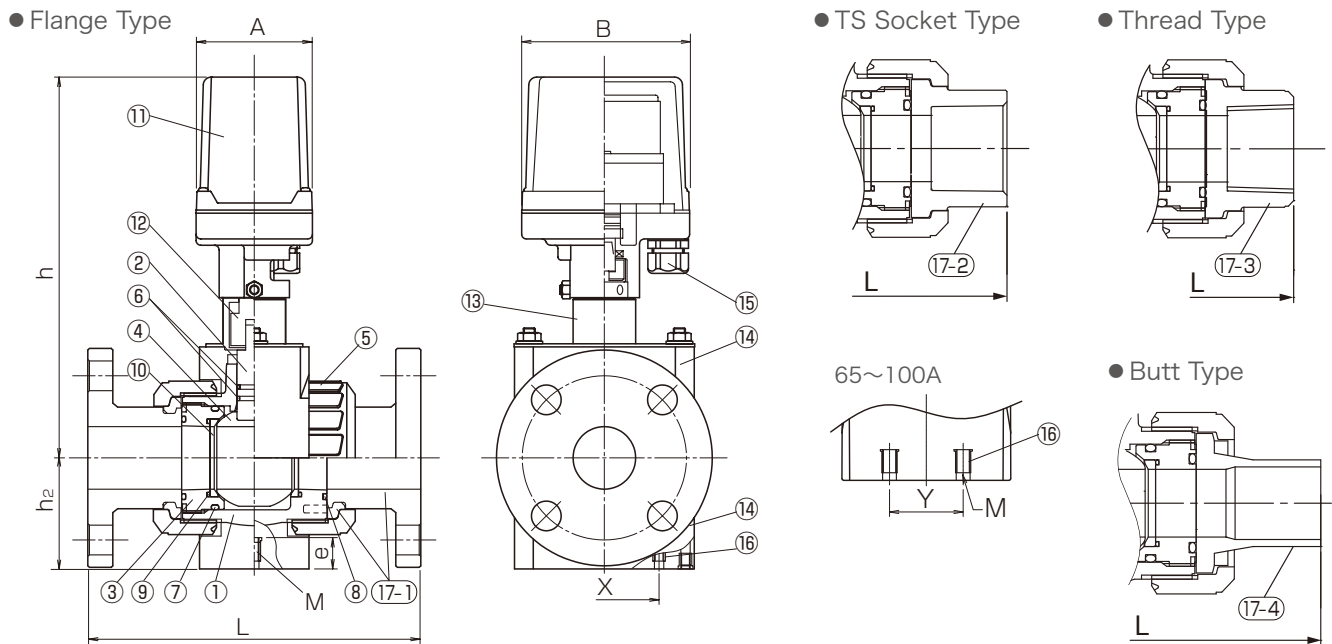


Figure (Flange Type · TS Socket Type · Thread Type · Butt Type)



Parts List

| No. | Part Name | Q'TY | Material / Type | No. | Part Name | Q'TY | Material / Type |
|-----|--------------------|------|------------------------|------|------------------------|------|-------------------------------------|
| 1 | Body | 1 | ● PVC | 13 | Yoke | 1 | SUS304 |
| 2 | Stem | 1 | ● HT (JIS:Brown) | 14 | Mount | 2 | FRP |
| 3 | Ball holder | 1 | ● CPVC (ANSI-DIN:Gray) | 15 | Electric Conduit Gland | 1 | PA, G1/2 |
| 4 | Ball | 1 | ● PP | 16 | Fixing Insert Nut | - | C3601 |
| 5 | Union nut | 2 | ● PVDF | 17-1 | Flange, Set ring | 2 | ● PVC ● HT ● CPVC ● PP ● PVDF |
| 6 | Stem O-ring*1 | 2 | | 17-2 | TS Socket | 2 | ● PVC ● HT ● CPVC |
| 7 | Ball holder O-ring | 1 | ● EPDM | 17-3 | Threaded socket | 2 | ● PP ● PVDF ● PE |
| 8 | Union O-ring | 2 | ● FKM | 17-4 | Butt Spigot Type | 2 | PVDF |
| 9 | Ball seat O-ring | 2 | | | | | |
| 10 | Ball Seat | 2 | PTFE | | | | |
| 11 | Actuator | 1 | ADC+Resin Coating | | | | |
| 12 | Connector | 1 | C3604 | | | | |

Option

- No-voltage limit switch

*1 Stem O-Ring material will be FKM+PTFE in case of Oil Free.

Size

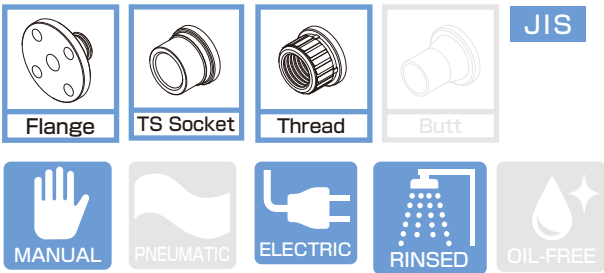
Flange Type · Thread Type · TS Socket Type · Butt Type

Unit : mm

| Size | | L | | | | | | h | | h ₂ | | Actuator | | | | |
|------|-------|--------|---------|-----------|--------|------|---------------|-------------------|--------|------------------|-----|----------|-----|-----|----|------|
| A | B | Flange | | TS Socket | Thread | | Standard Type | Higher Speed Type | Flange | TS, Thread, Butt | A | B | X | Y | M | |
| | | PVC-HT | PP-PVDF | PVC-HT | PVC | PVDF | | | | | | | | | | PVDF |
| 15 | 1/2 | 143 | 143 | 109 | 97 | 99 | 143 | 166 | 193 | 49 | 30 | 74 | 107 | 50 | - | M6 |
| 20 | 3/4 | 172 | 172 | 132 | 117 | 116 | 152 | 168 | 195 | 52 | 34 | 74 | 107 | 50 | - | M6 |
| 25 | 1 | 187 | 187 | 143 | 128 | 136 | 161 | 181 | 208 | 64 | 39 | 74 | 107 | 50 | - | M6 |
| 32 | 1 1/4 | 190 | 190 | 166 | 146 | 148 | 167 | 228 | 228 | 69 | 49 | 74 | 107 | 55 | - | M6 |
| 40 | 1 1/2 | 212 | 212 | 175 | 163 | 169 | 190 | 244 | 244 | 71 | 59 | 74 | 107 | 70 | - | M8 |
| 50 | 2 | 234 | 234 | 203 | 188 | 196 | 216 | - | 331 | 79 | 74 | 160 | 175 | 85 | - | M8 |
| 65 | 2 1/2 | 259 | 257 | 259 | 227 | 227 | 208 | - | 351 | 89 | 89 | 160 | 175 | 115 | 38 | M8 |
| 80 | 3 | 304 | 301 | 311 | 278 | 278 | 301 | - | 377 | 110 | 110 | 160 | 175 | 140 | 48 | M8 |
| 100 | 4 | 372 | 367 | 390 | 330 | 330 | 340 | - | 412 | 140 | 140 | 160 | 175 | 180 | 59 | M8 |

| Size | | Ref. Weight (kg/unit) | | Actuator | |
|------|-------|-----------------------|------------|---------------|-----------------|
| A | B | Flange | TS, Thread | Standard Type | High Speed Type |
| | | 15 | 1/2 | 2.0 | 1.7 |
| 20 | 3/4 | 2.2 | 1.8 | AM-070 | AH-070 ※ |
| 25 | 1 | 2.5 | 2.0 | AM-070 | AH-070 ※ |
| 32 | 1 1/4 | 3.3 | 2.7 | AM-180 | AH-180 ※ |
| 40 | 1 1/2 | 3.9 | 3.4 | AM-180 | AH-180 ※ |
| 50 | 2 | 11.0 | 10.0 | - | AD-300 |
| 65 | 2 1/2 | 14.0 | 13.0 | - | AD-300 |
| 80 | 3 | 18.0 | 17.0 | - | AD-700 |
| 100 | 4 | 24.5 | 24.0 | - | AD-700 |

※ No-voltage limit switch is not available



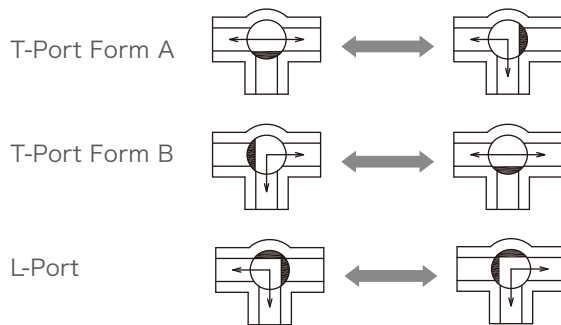
Operating Temperature(°C)

PVC 0 ~ 50

ESLON 3-WAY BALL VALVE

Feature

- Open/close position and flow rate control in 3-way
- Light weight and compact of actuator with aluminum die-cast housing.
- Excellent chemical and corrosion resistance.
- Visually confirmable valve action and open-close position, available manual open-close operation.



Specification of Actuator

| | | |
|-------------------------|--|--|
| Nominal diameter(A) | 15~25A | 32~65A |
| Input system | Power switching system | |
| Contact output | Power supply voltage | |
| Operating voltage | Single-phase AC100/110,200/220V(50/60Hz) | |
| Motor | Type | Synchronous motor Reversible motor |
| | Time rating | 15 minutes rating under loading rate 20% |
| Protect | Thermal protect inside | |
| Power consumption | 19VA | 60VA |
| Manual operation | Drive shaft direct operation | |
| Connector type | G1/2 conduit (Cable connector) (Φ6-12 catbire cable) | |
| Material | ADC Resin Coating | |
| Protection | IP65 | |
| Condensation prevention | Built-in space heater | |

⚠ Important Notes

- Do not use for the fluid containing slurry, solid, sediment, or crystallized fluid. Or for those kinds of fluid, strainer should be used in upstream.

Maximum Working Pressure - Temperature Rating

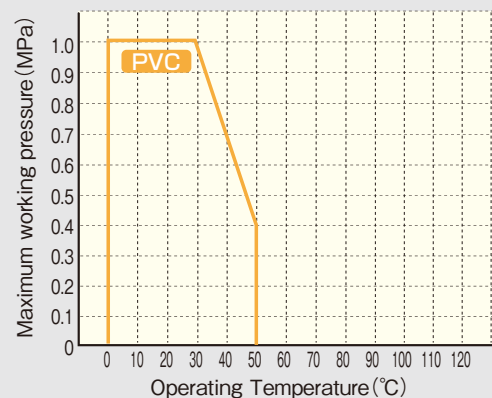
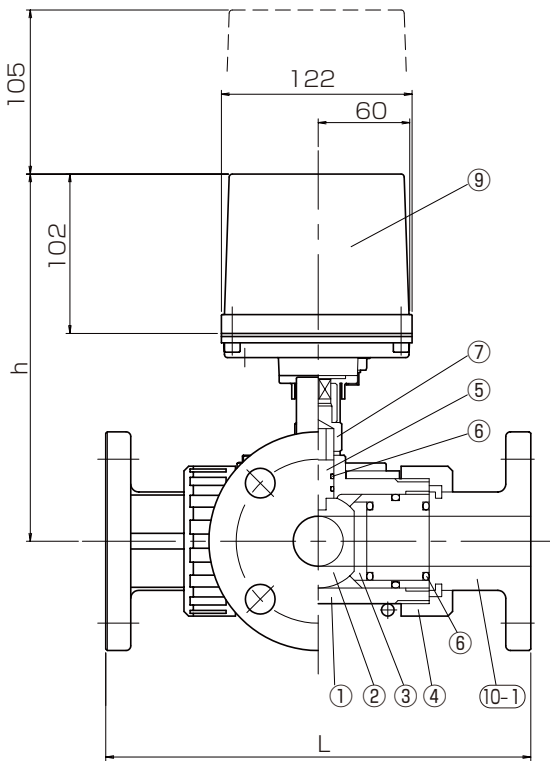
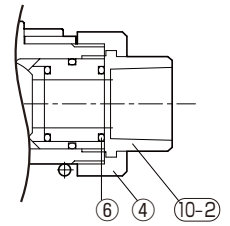


Figure (Flange Type · TS Socket Type · Thread Type)

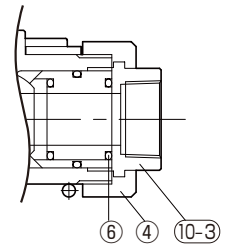
● Flange Type



● TS Socket Type



● Thread Type



Parts List

| No. | Part Name | QTY | Material / Type |
|------|-----------------|-----|-------------------|
| 1 | Body | 1 | PVC |
| 2 | Ball | 1 | PVC |
| 3 | Ball holder | 2 | PVC |
| 4 | Union nut | 3 | PVC |
| 5 | Stem | 2 | PVC |
| 6 | O-ring | 11 | ● EPDM ● FKM |
| 7 | Connector | 1 | C3604BD |
| 8 | Yoke | 1 | SCS13 |
| 9 | Actuator | 1 | ADC+Resin Coating |
| 10-1 | Flange,Set ring | 3 | PVC |
| 10-2 | TS Socket | 3 | PVC |
| 10-3 | Threaded socket | 3 | PVC |

Option

- No-voltage limit switch

Size

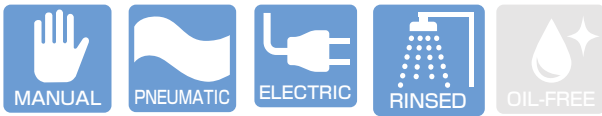
Flange Type · Thread Type · TS Socket Type

Unit : mm

| Size | | L | | | L ₁ | | | h | Actuator | | Ref. Weight (kg/unit) | | Actuator |
|------|-------|--------|-----------|--------|----------------|-----------|--------|-----|----------|-----|-----------------------|------------------|----------|
| A | B | Flange | TS Socket | Thread | Flange | TS Socket | Thread | | A | B | Flange | TS, Thread, Butt | |
| 15 | 1/2 | 163 | 129 | 118 | 82 | 65 | 59 | 202 | 145 | 122 | 3.7 | 3.2 | AE-120 |
| 20 | 3/4 | 200 | 151 | 134 | 100 | 76 | 67 | 206 | 145 | 122 | 3.9 | 3.4 | AE-120 |
| 25 | 1 | 221 | 175 | 156 | 111 | 88 | 78 | 221 | 145 | 122 | 4.5 | 3.6 | AE-120 |
| 40 | 1 1/2 | 272 | 232 | 203 | 136 | 116 | 102 | 235 | 145 | 122 | 5.8 | 4.9 | AE-300 |
| 50 | 2 | 306 | 260 | 225 | 153 | 130 | 113 | 246 | 145 | 122 | 7.3 | 5.7 | AE-300 |



JIS ANSI/ASME DIN



Operating Temperature(°C)

| | |
|------|---------|
| PVC | 0 ~ 50 |
| PP | 0 ~ 80 |
| PVDF | 0 ~ 120 |

ESLON ELECTRIC BUTTERFLY VALVE TYPE K

Feature

- Light weight and compact of actuator with aluminum die-cast housing.
- Excellent chemical and corrosion resistance.
- Visual position indicator built in the actuator.
- Easy flow control and water hammer prevention by slow action.
- Suitable for frequent operation with constant rating type of motor onboard.
- Manual open-close operation is available by attached handle.
- Conformity with CE.

Specification of Actuator

| | | | | |
|---------------------|--|-------------------|------------|------------|
| Nominal diameter(A) | 40~65A | 80~100A | 125~200A | 250~300A |
| Input system | Power switching system | | | |
| Contact output | Power supply voltage | | | |
| Operating voltage | Single-phase AC100/110,200/220V(50/60Hz) | | | |
| Motor | Type | Reversible motor | | |
| | Time rating | Continuous rating | | |
| Protect | Thermal protect inside | | | |
| | Adjustable mechanical stopper for open-side and close-side | | | |
| Rated current | 100/110V | 0.7/0.9A | 0.65/0.70A | 1.1/1.2A |
| | 200/220V | 0.4/0.5A | 0.35/0.40A | 0.55/0.60A |
| Manual operation | with manual operation mechanism | | | |
| Connector type | G1/2 conduit (Cable ODΦ9~11) | | | |
| Material | ADC12 Resin coating | | | |
| Protection | IP66 | | | |

Time For Open-Close (50/60Hz)

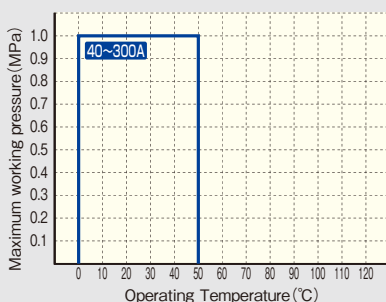
| Size (A) | Time(Sec.) |
|----------|------------|
| 40-65A | 15/12.5 |
| 80-300A | 30/25 |

⚠ Important Notes

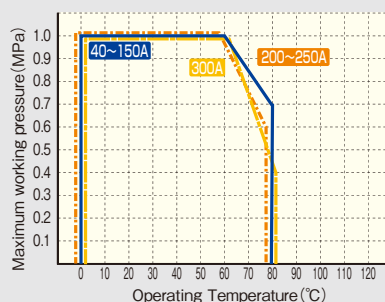
- Fluid containing slurry, solid, sediment, or crystallized fluid might disable sealing.

Maximum Working Pressure - Temperature Rating

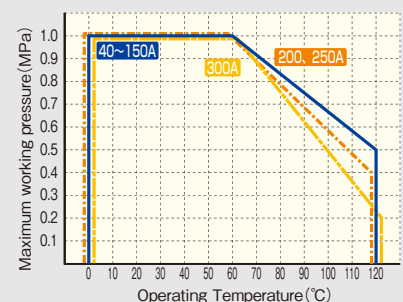
Body material : PVC



Body material : PP

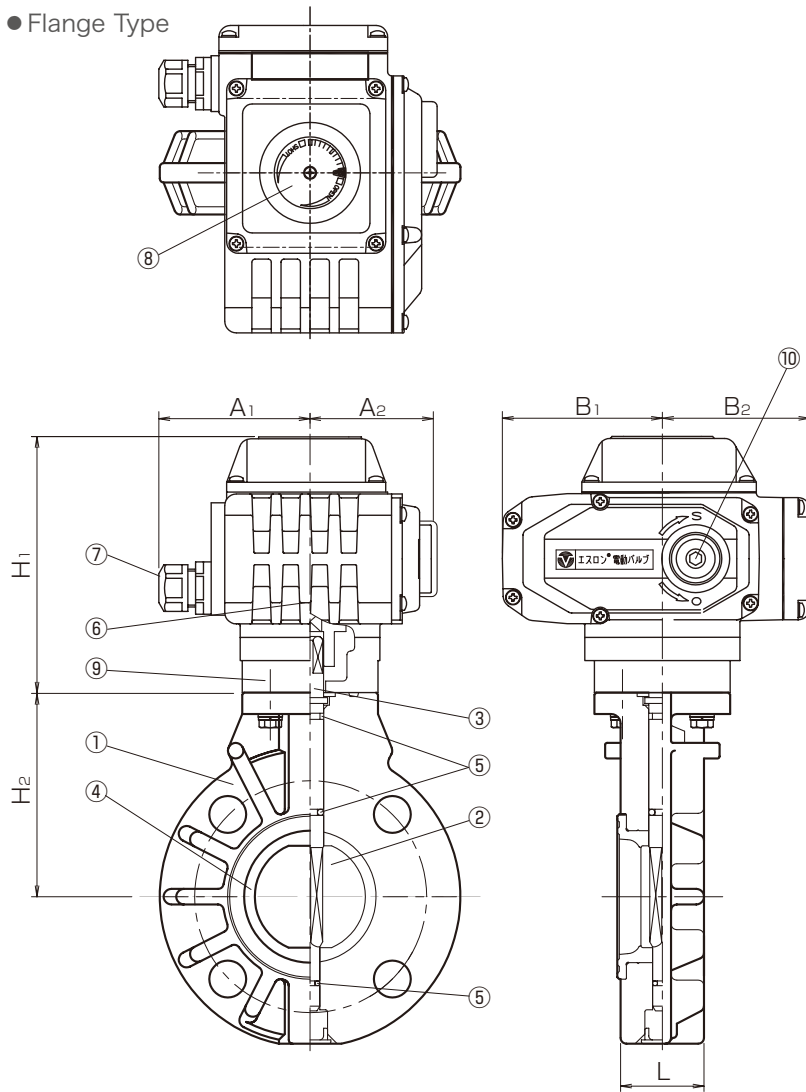


Body material : PVDF



Figure

● Flange Type



Parts List

| No. | Part Name | QTY | Material / Type |
|-----|-------------------------|-----|---|
| 1 | Body | 1 | Body/Disc ● PVC / PP ● PP / PP ● PVDF / PVDF |
| 2 | Disc | 1 | ● SUS420J2 ● SUS316 |
| 3 | Shaft | 1 | ● EPDM |
| 4 | Seat Ring | 1 | ● FKM |
| 5 | O-Ring | 1 | ADC12 |
| 6 | Actuator | 1 | PA, G1/2 |
| 7 | Electric Conduit Gland | 1 | — |
| 8 | Indicator | 1 | — |
| 9 | Yoke | 1 | AC4A+Resin Coating |
| 10 | Handle shaft hole(Hex.) | 1 | S45C |

Option

- No-voltage limit switch
- Potentiometer
- Space heater
- Proportional control
(please contact us)

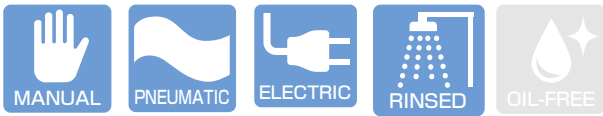
Size

Unit : mm

| Size | | L | h | H ₁ | H ₂ | A ₁ | A ₂ | Ref. Weight (kg/unit) | Actuator |
|------|-------|-----|-----|----------------|----------------|----------------|----------------|-----------------------|----------|
| A | B | | | | | | | | |
| 40 | 1 1/2 | 33 | 230 | 134 | 105 | 63.5 | 78.0 | 3.3 | EF-05 |
| 50 | 2 | 43 | 237 | 134 | 112 | 63.5 | 78.0 | 3.5 | EF-05 |
| 65 | 2 1/2 | 46 | 248 | 134 | 123 | 63.5 | 78.0 | 3.8 | EF-05 |
| 80 | 3 | 46 | 282 | 160 | 130 | 67.0 | 80.5 | 6.1 | EF-10 |
| 100 | 4 | 52 | 302 | 160 | 152 | 67.0 | 80.5 | 6.9 | EF-10 |
| 125 | 5 | 56 | 348 | 191 | 169 | 94.0 | 88.5 | 11.8 | EF-20 |
| 150 | 6 | 60 | 357 | 191 | 178 | 94.0 | 88.5 | 12.8 | EF-20 |
| 200 | 8 | 71 | 409 | 191 | 230 | 94.0 | 88.5 | 15.1 | EF-20 |
| 250 | 10 | 73 | 486 | 236 | 250 | 137.0 | 105.0 | 33.0 | EF-60 |
| 300 | 12 | 114 | 516 | 236 | 280 | 137.0 | 105.0 | 40.1 | EF-60 |



JIS ANSI/ASME DIN



Operating Temperature(°C)

| | |
|------|---------|
| PVC | 0 ~ 50 |
| PP | 0 ~ 80 |
| PVDF | 0 ~ 120 |

ESLON ELECTRIC BUTTERFLY VALVE TYPE N

Feature

- Light weight and compact of actuator with aluminum die-cast housing.
- Excellent chemical and corrosion resistance.
- High speed of open-close operation for smaller sizes, easy flow control and water hammer prevention by slow action for larger sizes.

⚠ Important Notes

- Gasifying, volatile, or evaporating fluid such as hydrogen peroxide and sodium hypochlorite might rise inner pressure of valve and burst the valve. Please contact us concerning such risk. Gas relief type of customized ball valve which has relief orifice on the ball is available.
- Do not use for the fluid containing slurry, solid, sediment, or crystallized fluid. Or for those kinds of fluid, strainer should be used in upstream.

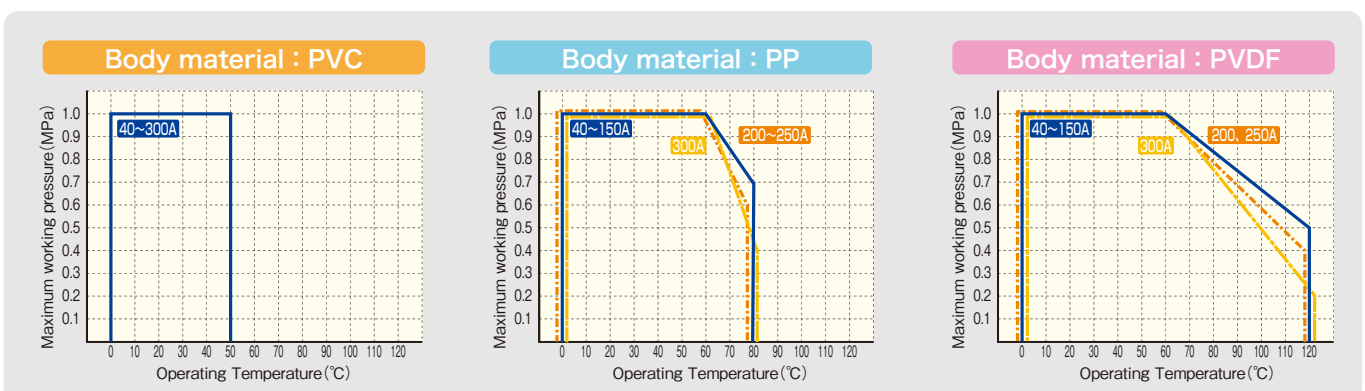
Specification of Actuator

| | | | |
|-------------------------|---|--|------------|
| Nominal diameter(A) | 40~100A | 125~200A | 250-300A |
| Input system | Power switching system | | |
| Contact output | Power supply voltage | | |
| Operating voltage | Single-phase AC100/110,200/220V(50/60Hz) | | |
| Motor | Type | DC Motor | |
| | Time rating | 15 minutes rating under loading rate 20% | |
| Protect | Thermistor type | | |
| Power consumption | 100VA max. | 150VA max. | 120VA max. |
| Manual operation | Drive shaft dired operation | Drive shaft manipulation | |
| Connector type | G1/2 wire connector (φ6-12 Cabtire cable) | | |
| Material | ADC Resin Coating | | |
| Protection | IP65 | | |
| Condensation prevention | Built-in space heater | | |

Time For Open-Close (50/60Hz)

| Size (A) | Time(Sec.) |
|----------|------------|
| 40-65A | 3 ~ 4 |
| 80-100A | 6 ~ 10 |
| 125-200A | 8 ~ 15 |
| 250-300A | 24 ~ 45 |

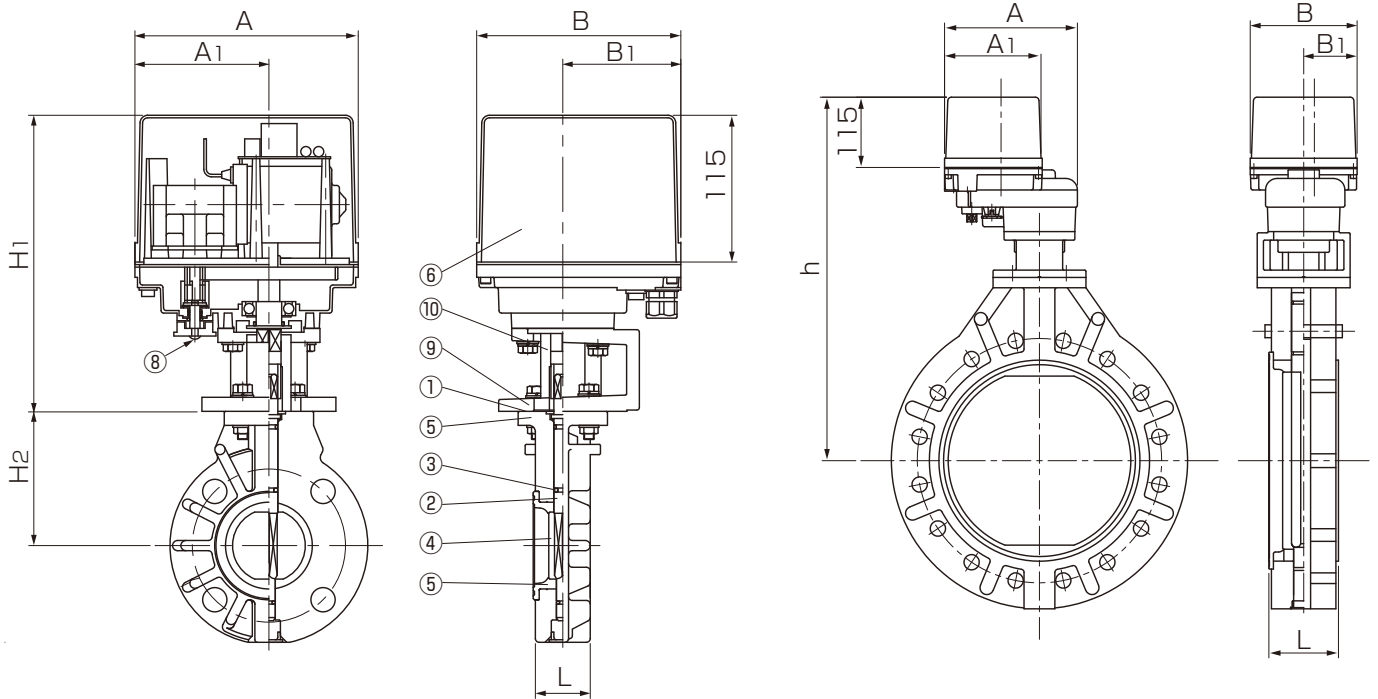
Maximum Working Pressure - Temperature Rating



Figure

(40A~200A)

(250~300A)



Parts List

| No. | Part Name | QTY | Material / Type |
|-----|------------------------|-----|---|
| 1 | Body | 1 | Body/Disc ● PVC/PP ● PP/PP ● PVDF/PVDF |
| 2 | Disc | 1 | ● SUS420J2 ● SUS316 |
| 3 | Shaft | 1 | ● EPDM ● FKM |
| 4 | Seat Ring | 1 | — |
| 5 | O-Ring | 3 | — |
| 6 | Actuator | 1 | ADC12 |
| 7 | Electric Conduit Gland | 1 | PA, G1/2 |
| 8 | Manual Handle | 1 | — |
| 9 | Yoke | 1 | AC4A |
| 10 | Connector | 1 | S45C+Ni Coated |

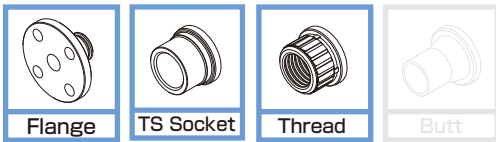
Option

- No-voltage limit switch

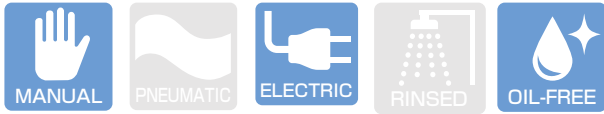
Size

Unit : mm

| Size | | L | H ₁ | H ₂ | Actuator | | | | Ref. Weight (kg/unit) | Actuator |
|------|-------|-----|----------------|----------------|----------|----------------|-----|----------------|-----------------------|----------|
| A | B | | | | A | A ₁ | B | B ₁ | | |
| 40 | 1 1/2 | 33 | 226 | 105 | 175 | 105 | 160 | 92.5 | 7.8 | AD-300 |
| 50 | 2 | 43 | 226 | 112 | 175 | 105 | 160 | 92.5 | 8.0 | AD-300 |
| 65 | 2 1/2 | 46 | 226 | 120 | 175 | 105 | 160 | 92.5 | 8.5 | AD-300 |
| 80 | 3 | 46 | 226 | 130 | 175 | 105 | 160 | 92.5 | 9.0 | AD-700 |
| 100 | 4 | 52 | 226 | 152 | 175 | 105 | 160 | 92.5 | 10.5 | AD-700 |
| 125 | 5 | 56 | 256 | 169 | 175 | 105 | 160 | 92.5 | 14.0 | HD-02K |
| 150 | 6 | 60 | 256 | 178 | 175 | 105 | 160 | 92.5 | 15.0 | HD-02K |
| 200 | 8 | 71 | 256 | 230 | 175 | 105 | 160 | 92.5 | 18.0 | HD-02K |
| 250 | 10 | 73 | 315 | 250 | 217.5 | 158 | 175 | 87.5 | 27.0 | HD-06K |
| 300 | 12 | 114 | 315 | 280 | 217.5 | 158 | 175 | 87.5 | 34.0 | HD-06K |



JIS ANSI/ASME/ASTM DIN



Operating Temperature(°C)

PVC 0 ~ 50



ESLON ELECTRIC YP BALL VALVE

Feature

- Unique flow channel design of the ball enable precise flowrate control.
- Automatic open/close control with 4- 20mA signal input.
- Excellent chemical and corrosion resistance with epoxy resin coated aluminum actuator.
- Compact and high durability motor onboard.
- Visual position indicator built in the actuator.

Time For Open-Close (50/60Hz)

| Size (A) | Time(Sec.) |
|----------|------------|
| 15-25A | 10 |
| 32-50A | 13 |

Specification of Actuator

| | | |
|---------------------|--|-----------------------|
| Nominal diameter(A) | 15~32A | 40-50A |
| Operating voltage | DC24V | |
| Power consumption | 14.4W | |
| Motor type | Synchronous motor | |
| Protective function | ·Overload (lock) protection function ·Re-starting limit timer | |
| Opening detection | Potentiometer | |
| Input signal | DC4-20mA (Input resistance250Ω) | |
| Output signal | DC1~5V (Allowable load resistance 5kΩ or more) | |
| Resolution | 1/1000 | |
| Manual operation | None. | Drive shaft operation |
| Connector type | G1/2 female screw with 1m-cable | |
| Material | ADC | |
| Protection class | IP55 | |

⚠ Important Notes

- Do not use for the fluid containing slurry, solid, sediment, or crystallized fluid. Or for those kinds of fluid, strainer should be used in upstream.

Maximum Working Pressure - Temperature Rating

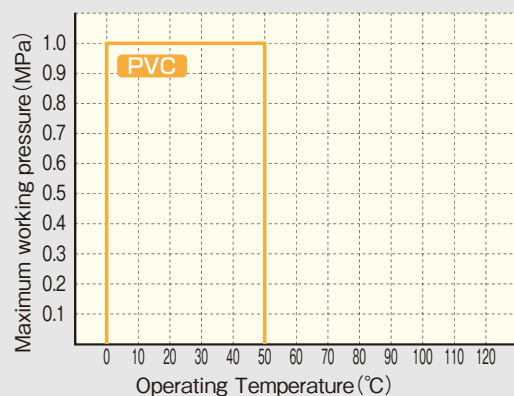
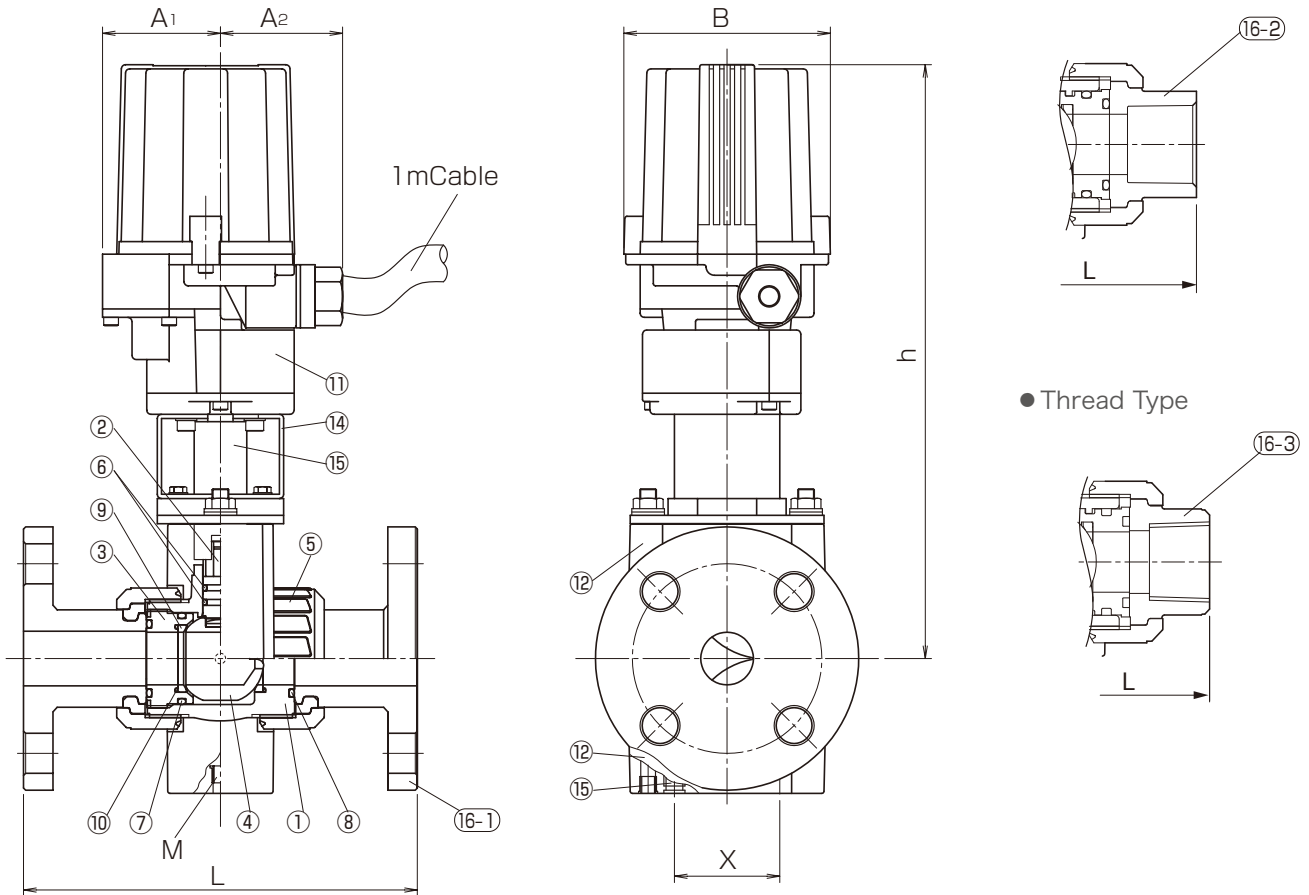


Figure (Flange Type · TS Socket Type · Thread Type)

● Flange Type

● TS Socket Type

● Thread Type



Parts List

| No. | Part Name | QTY | Material / Type | No. | Part Name | QTY | Material / Type |
|-----|--------------------|-----|-----------------|------|-------------------|-----|-----------------|
| 1 | Body | 1 | PVC | 10 | Ball Seat | 2 | PTFE |
| 2 | Stem | 1 | PVC | 11 | Electric Actuator | 1 | — |
| 3 | Ball holder | 1 | PVC | 12 | Yoke | 1 | SUS304 |
| 4 | Ball | 1 | PVC | 13 | Joint | 1 | SUS303 |
| 5 | Union nut | 2 | PVC | 14 | Mount | 2 | FRP |
| 6 | Stem O-ring | — | | 15 | Insert Nut | 2 | C3604 |
| 7 | Ball holder O-ring | 1 | ● EPDM | 16-1 | Flange, Set Ring | 2 | PVC |
| 8 | Union O-ring | 2 | ● FKM | 16-2 | TS Socket | 2 | PVC |
| 9 | Ball seat O-ring | 2 | | 16-3 | Thread Socket | 2 | PVC |

Size

Flange Type · Thread Type · TS Socket Type

Unit : mm

| Size | | L | | | | | | | | | Actuator | | | Ref. Weight (kg/unit) | | Actuator | | | |
|------|-------|--------|------|-----|-----------|------|-----|---------------|------------|----------|----------|----------------|----------------|-----------------------|------|----------|---|--------|------------|
| A | B | Flange | | | TS Socket | | | Thread | | | h | A ₁ | A ₂ | B | X | | M | Flange | TS, Thread |
| | | JIS10K | ANSI | DIN | JIS10K | ANSI | DIN | JIS, DIN (Rp) | ANSI (NPT) | DIN (Rp) | | | | | | | | | |
| 15 | 1/2 | 143 | 109 | 103 | 92 | 97 | 267 | 63 | 58 | 98 | 50 | M6 | 3.5 | 3.1 | MRP5 | | | | |
| 20 | 3/4 | 172 | 132 | 119 | 107 | 117 | 270 | 63 | 58 | 98 | 50 | M6 | 4.0 | 3.5 | MRP5 | | | | |
| 25 | 1 | 187 | 143 | 133 | 121 | 128 | 282 | 63 | 58 | 98 | 50 | M6 | 4.5 | 4.0 | MRP5 | | | | |
| 32 | 1 1/4 | 190 | 166 | 147 | 137 | 146 | 286 | 63 | 58 | 98 | 55 | M6 | 5.0 | 4.5 | MRP5 | | | | |
| 40 | 1 1/2 | 212 | 175 | 171 | 161 | 163 | 336 | 56 | 118 | 110 | 70 | M8 | 6.0 | 5.5 | MRP6 | | | | |
| 50 | 2 | 234 | 203 | 188 | 189 | 188 | 343 | 56 | 118 | 110 | 85 | M8 | 7.0 | 6.4 | MRP6 | | | | |

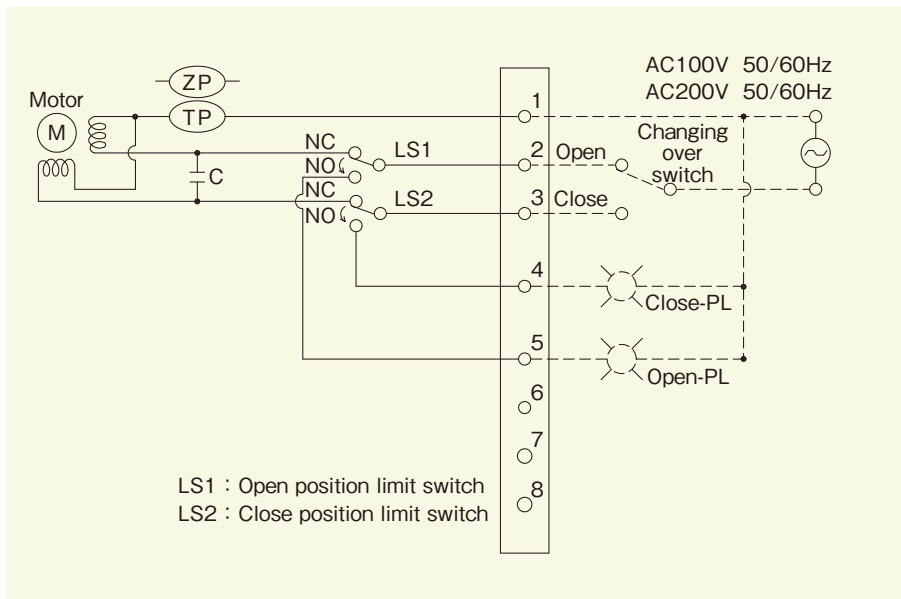
CONNECTING DIAGRAM

Connecting diagrams below are for the standard type of actuators, additional diagram must be referred to diagram for optional accessories.

Precaution

- ⚠ Do not apply the current to selector switches for both open and close at same time.
- ⚠ Selector switch must be independently installed for each valve to prevent malfunction.

ELECTRIC DIAPHRAGM VALVE TYPE KS

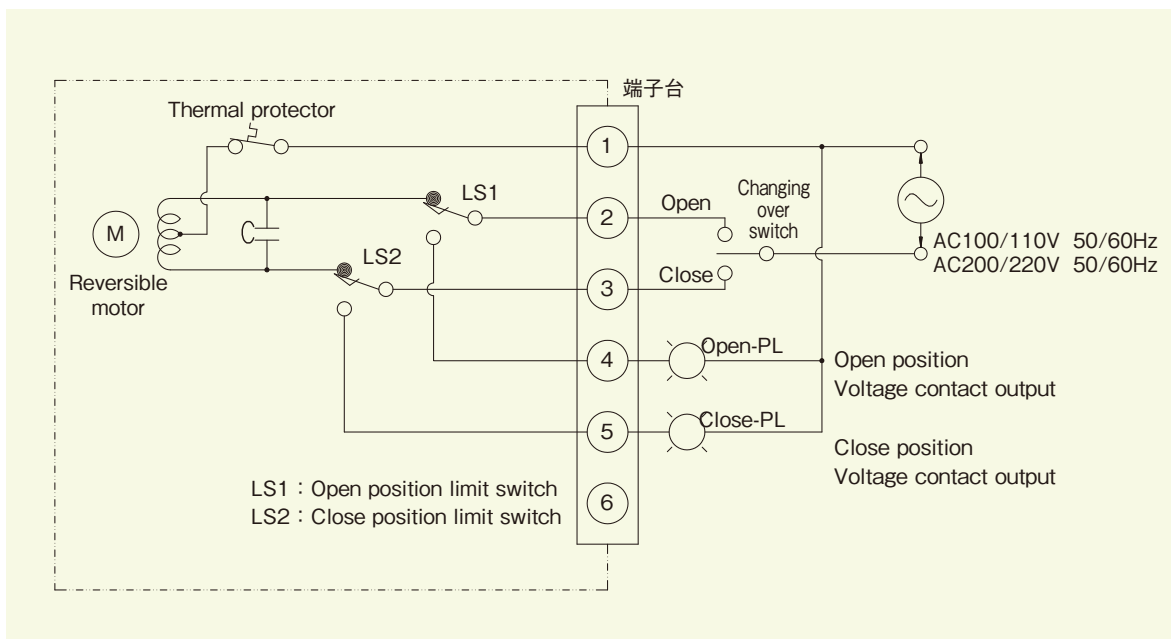


ZP : Impedance protector
(Diaphragm Valve 15~25A)

TP : Thermal protector
(Diaphragm Valve 32~150A)

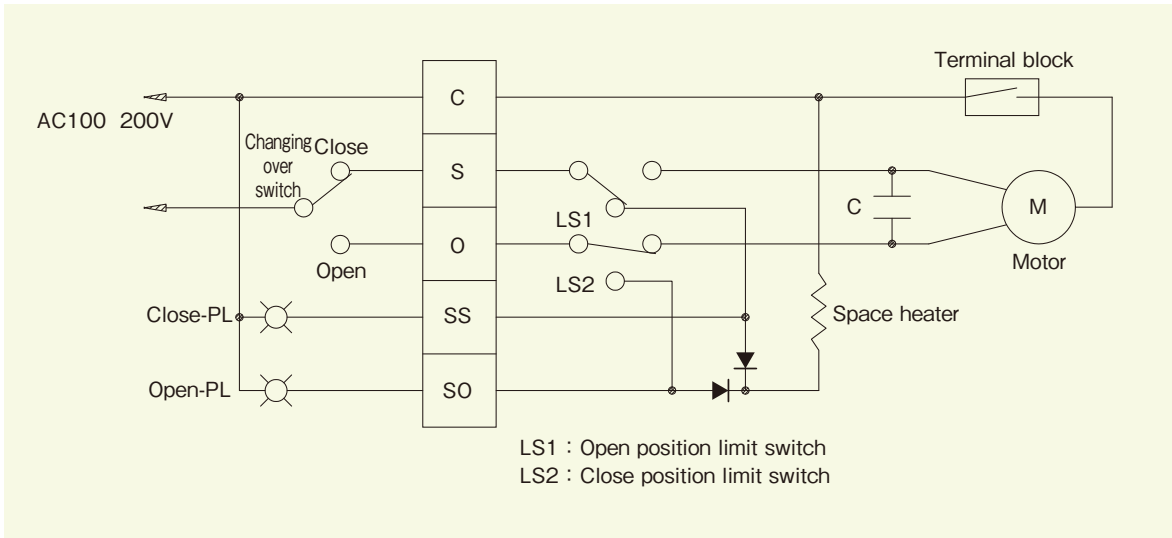
- Terminal 1 : Power source common terminal
 2 : Power terminal for opening
 3 : Signal terminal for closing
 4 : Signal terminal for closing
 5 : Signal terminal for opening
 6 : be not in use
 7 : be not in use
 8 : be not in use

ELECTRIC BALL VALVE TYPE K, ELECTRIC BUTTERFLY VALVE TYPE K



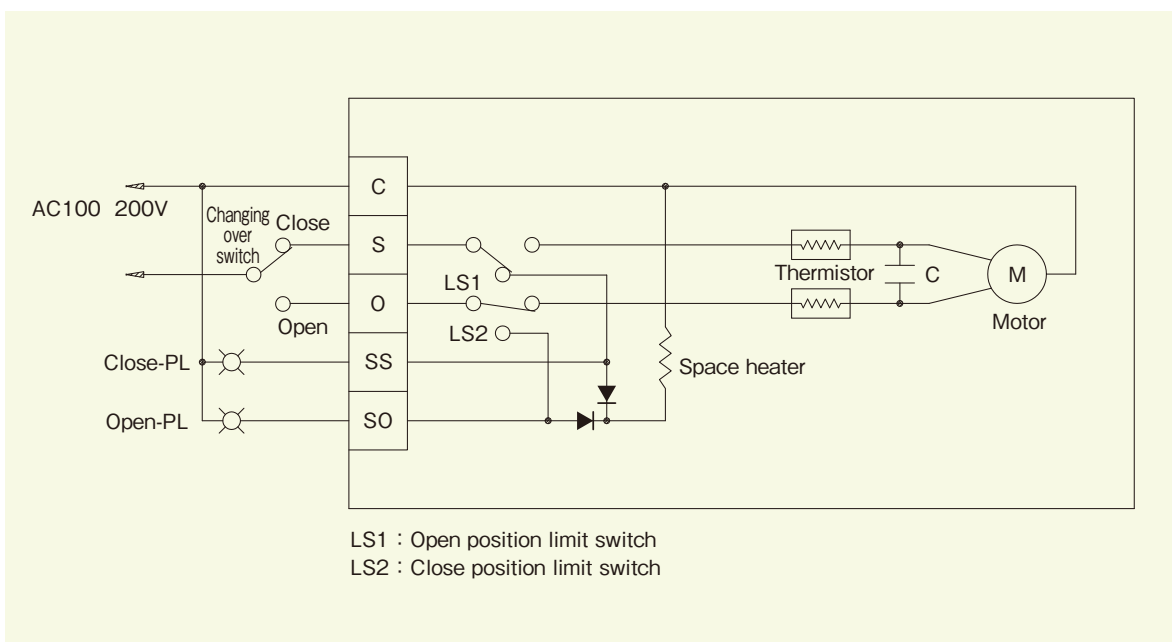
- Terminal 1 : Power source common terminal
 2 : Power terminal for opening
 3 : Signal terminal for closing
 4 : Signal terminal for opening
 5 : Signal terminal for closing
 6 : be not in use

ELECTRIC BALL VALVE TYPE N STANDARD TYPE, 3-WAY BALL VALVE



- Terminal C : Power source common terminal
- S : Terminal for closing
- O : Terminal for opening
- SS : Signal terminal for closing
- SO : Signal terminal for opening

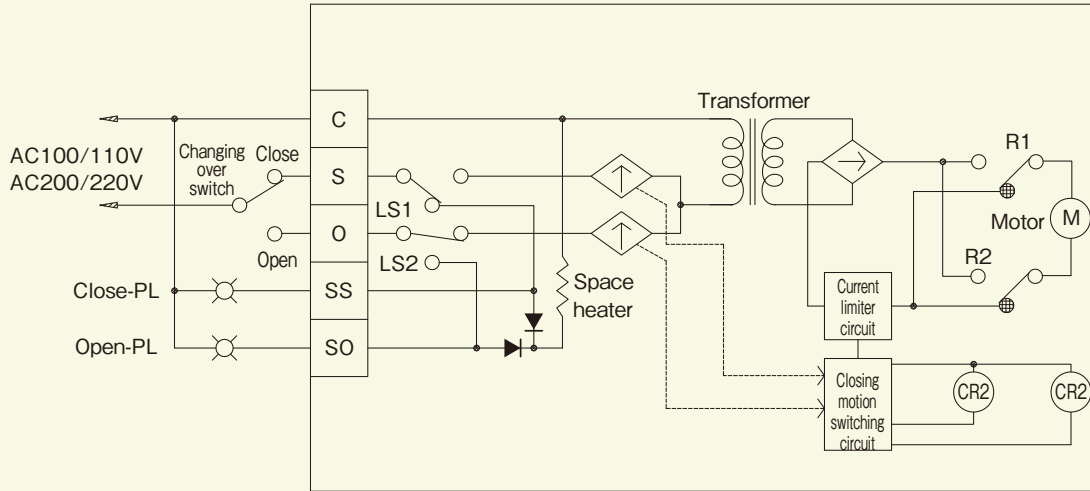
ELECTRIC BALL VALVE TYPE N HIGH SPEED TYPE (15~40A)



- Terminal C : Power source common terminal
- S : Terminal for closing
- O : Terminal for opening
- SS : Signal terminal for closing
- SO : Signal terminal for opening

CONNECTING DIAGRAM

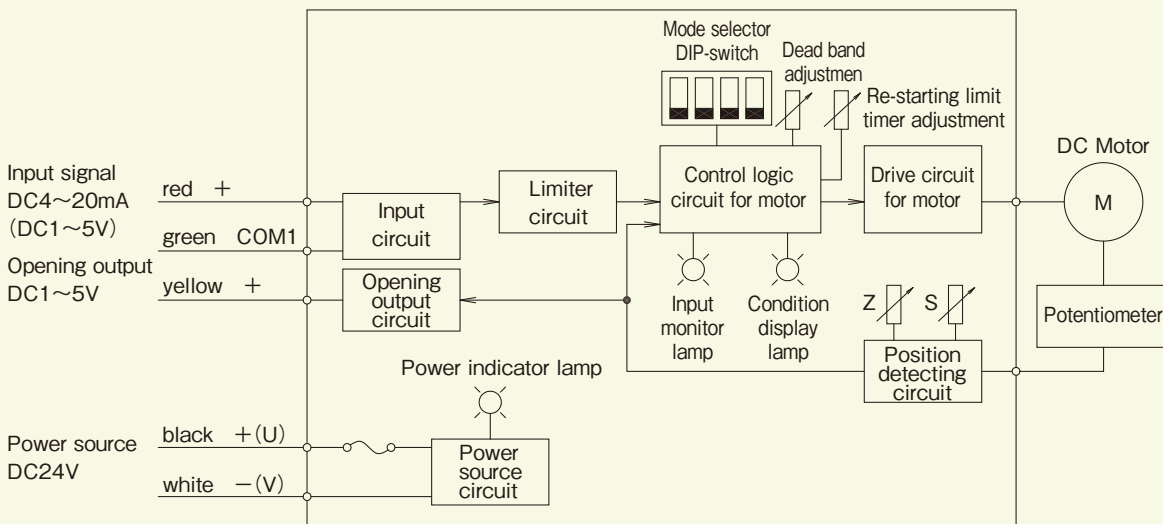
ELECTRIC BALL VALVE TYPE N HIGH SPEED TYPE (50~100A), ELECTRIC BUTTERFLY VALVE TYPE N



LS1 : Open position limit switch
LS2 : Close position limit switch

- Terminal C : Power source common terminal
S : Terminal for closing
O : Terminal for opening
SS : Signal terminal for closing
SO : Signal terminal for opening

ELECTRIC YP BALL VALVE



Z : Zero point adjustment
S : Span adjustment

memo

Basic Physical Property of Material for Valve

Characteristic of Material

| | Material | Abbreviation | General Characteristic |
|-------------------|--|--------------|---|
| Valve body | Polyvinyl Chloride | PVC | Resistant against most of acids, alkalis and sodium of high to low concentration level, however tends to be attacked by some chemicals such as aromatic hydrocarbon, ketones, esters and chlorinated hydrocarbon. |
| | Hi-Impact Polyvinyl Chloride | HI-PVC | Almost same mechanical properties as PVC however higher impact strength and durability. Inferior to PVC in chemical resistance. |
| | Chlorinated Polyvinyl Chloride | HT CPVC | Almost same properties as PVC however higher heat resistance and usable for higher temperature application than PVC. |
| | Polypropylene | PP | Resist against most of acids, alkalis and salts however weak resistant against strong acids such as highly-concentrated nitric acid, chrome acid, and mixture of them. Resistant against many solvents (specifically the solvent with active group), however tends to be attacked by chlorine-containing solvents, aliphatic series, and aromatic hydro-carbon. |
| | Glass Fiber reinforced polypropylene (Trade name Teflon) | GF-PP | Glass fiber reinforced PP(polypropylene) has higher mechanical properties and temperature resistance than PP. High chemical resistance and light weight. |
| | Polyvinylidene difluoride | PVDF | Highly resistant in higher temperature range, against ordinary acids and chemicals, however broken down by fuming sulfuric acid and strong basic amines. Usable conditions and application are limited for ketones, amides, esters, solvents and alkalis. |
| Seal material etc | Polytetra-fluoroethylene | PTFE | Highly resistant against ordinary acids and alkalis, and not dissolved nor changed by ordinary solvent medium. Attacked by melted alkali metal and by fluorine and chlorine trifluoride in high temperature. |
| | Ethylene Propylene Rubber | EPDM | Chemical resistant and ozone resistant. Comparatively resistant against ketones and esters, however weak resistant against aromatics, aliphatic families, gasoline, and oil. |
| | Fluor rubber (Trade name Viton) | FKM | Highly resistant against ordinary chemicals, especially acids. Resistant against oils, however attacked by ketones, ammonia anhydride, concentrated caustic soda, etc. |
| | Chlorinated polyethylene | FKM-FB | Enhanced FKM in chemical resistance. Superior resistant especially against high-temperature acids and highly concentrated acids. Remarkably low metal elution by chemicals. Same level of oil-resistance and high temperature resistance as FKM. |
| | Polyvinylidene chloride | PVDC | Almost same properties as PVC however resistant and durability in higher temperature. |

Basic Physical Property of Material for Valve at Temp.23°C

| Material | | PVC | HI-PVC | HT CPVC | PP | GF-PP | PVDF | PTFE |
|------------------------------|-------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Property | Unit | | | | | | | |
| Density | g/cc | 1.43 | 1.40 | 1.48 | 0.92 | 1.04 | 1.77 | 2.17 |
| Water Absorption | mg/m ² | 0.04~0.06 | 0.04~0.06 | 0.04~0.06 | 0.01 | | 0.04≤ | 0.00 |
| Tensile Strength Yield | MPa | 50~55 | 40~45 | 50~55 | 35~40 | 77~83 | 49~54 | 17~22 |
| Modulus of Elasticity | MPa | 2.5~3.0×10 ³ | 2.0~2.5×10 ³ | 2.5~3.0×10 ³ | 1.0~1.5×10 ³ | 3.3~3.8×10 ³ | 2.3~2.8×10 ³ | 3.7~4.2×10 ² |
| Flexural Strength | MPa | 78~89 | 76~81 | 88≤ | 24~35 | 93~98 | 64≤ | |
| Charpy Impact Strength | kJ/m ² | 5~10 | not break (90≤) | 10~15 | 3~8 | 7~12 | 17~21 | 2~5 |
| Heat Deflection Temperature | °C | 61~66 | 63~68 | 98~103 | 118~123 | 145~150 | 145~150 | |
| Linear Expansion Coefficient | /°C | 7×10 ⁻⁵ | 7×10 ⁻⁵ | 7×10 ⁻⁵ | 12×10 ⁻⁵ | 4.5×10 ⁻⁵ | 12×10 ⁻⁵ | 10×10 ⁻⁵ |
| Thermal Conductivity | W/m·K | 0.15 | 0.15 | 0.14 | 0.12 | | 0.12 | 0.7 |
| Dielectric Strength | kV/mm | 40≤ | 40≤ | 40≤ | 26 | 26 | 70 | |
| Volume Resistivity | Ωcm | 5.3×10 ¹⁵ ≤ | 5.3×10 ¹⁵ ≤ | 5.3×10 ¹⁵ ≤ | 4.9×10 ¹⁵ ≤ | | 5×10 ¹⁵ ≤ | 1×10 ¹⁸ |

*This data is intended to serve as reference.

Chemical Resistance Guide

Please refer to "Chemical Resistance Manual for Esilon Plastics Pipe, Valves and Relative Materials" for details.

1 Please note that plastic might be strongly affected by surface-activating agent.
 2 "PVC" in chemical resistance guide does not include "Hl-PVC".
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++ : Excellent Resistant - : Caution
 + : Good Resistant -- : Not recommended
 (Actual testing suggested)

| Chemical | Concentration(%) | Temp. | | Plastic | | | | | | Rubber | | | Metal | | |
|---|------------------|--------|--------|---------|-----------|-----|------|------|------|--------|-----|--------|---------|---------|-----|
| | | (°C) | (°F) | PVC | CPVC (HT) | PP | PVDC | PVDF | PTFE | EPDM | FKM | FKM FB | SUS 304 | SUS 316 | |
| Hydrochloric acid HCl | 15 | 20 | 68 | + | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | --- | --- |
| | | 40 | 104 | + | ++ | ++ | ++ | ++ | ++ | + | + | ++ | | | |
| | | 60 | 140 | + | ++ | ++ | ++ | ++ | ++ | - | - | ++ | | | |
| | | 80 | 176 | | ++ | ++ | ++ | ++ | ++ | --- | --- | + | | | |
| | | 100 | 212 | | | | | ++ | ++ | | | | | | |
| | | 120 | 248 | | | | | | | | | | | | |
| | 35 | 20 | 68 | + | ++ | ++ | ++ | ++ | ++ | + | ++ | ++ | --- | --- | |
| | | 40 | 104 | + | ++ | ++ | ++ | ++ | ++ | - | - | ++ | | | |
| | | 60 | 140 | + | + | ++ | ++ | ++ | ++ | --- | --- | + | | | |
| | | 80 | 176 | | + | + | ++ | ++ | ++ | | | + | | | |
| | | 100 | 212 | | | | | + | ++ | | | | | | |
| | | 120 | 248 | | | | | | | | | | | | |
| | 38 | 20 | 68 | + | ++ | ++ | ++ | ++ | ++ | + | + | ++ | --- | --- | |
| | | 40 | 104 | - | ++ | ++ | ++ | ++ | ++ | - | - | + | | | |
| | | 60 | 140 | - | + | ++ | + | ++ | ++ | --- | --- | + | | | |
| | | 80 | 176 | | + | + | | ++ | ++ | | | - | | | |
| | | 100 | 212 | | | | | + | ++ | | | | | | |
| | | 120 | 248 | | | | | | | | | | | | |
| Nitric acid HNO ₃ | 10 | 20 | 68 | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | |
| | | 40 | 104 | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | |
| | | 60 | 140 | + | ++ | ++ | ++ | ++ | ++ | + | + | ++ | ++ | ++ | |
| | | 80 | 176 | | + | + | | ++ | ++ | --- | --- | ++ | ++ | ++ | |
| | | 100 | 212 | | | | | ++ | ++ | | | | + | | |
| | | 120 | 248 | | | | | | | | | | | | |
| | 30 | 20 | 68 | ++ | ++ | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | |
| | | 40 | 104 | + | + | ++ | ++ | ++ | ++ | + | + | ++ | ++ | ++ | |
| | | 60 | 140 | - | - | + | ++ | ++ | ++ | --- | + | ++ | + | + | |
| | | 80 | 176 | | --- | + | | ++ | ++ | | - | + | + | + | |
| | | 100 | 212 | | | | | ++ | ++ | | - | + | + | + | |
| | | 120 | 248 | | | | | | | | | | | | |
| | 50 | 20 | 68 | ++ | ++ | ++ | ++ | ++ | ++ | --- | ++ | ++ | ++ | ++ | |
| | | 40 | 104 | - | - | + | ++ | ++ | ++ | | + | ++ | + | + | |
| | | 60 | 140 | --- | --- | - | | + | ++ | | - | + | + | + | |
| | | 80 | 176 | | | --- | | + | ++ | | --- | + | - | - | |
| | | 100 | 212 | | | | | - | ++ | | | | - | - | |
| | | 120 | 248 | | | | | | | | | | | | |
| | 60 | 20 | 68 | + | + | - | ++ | ++ | ++ | --- | --- | ++ | ++ | ++ | |
| | | 40 | 104 | - | - | --- | | ++ | ++ | | | + | + | + | |
| | | 60 | 140 | --- | --- | | | + | ++ | | | + | + | + | |
| | | 80 | 176 | | | | | - | ++ | | | - | - | - | |
| | | 100 | 212 | | | | | | ++ | | | | - | - | |
| | | 120 | 248 | | | | | | | | | | | | |
| 70 | 20 | 68 | --- | --- | --- | --- | - | ++ | --- | --- | - | ++ | ++ | | |
| | 40 | 104 | | | | | --- | + | | | | | | | |
| | 60 | 140 | | | | | | + | | | | | | | |
| | 80 | 176 | | | | | | - | | | | | | | |
| | 100 | 212 | | | | | | ++ | | | | | | | |
| | 120 | 248 | | | | | | | | | | | | | |
| Sulfuric acid H ₂ SO ₄ | 10 | 20 | 68 | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | --- | + | |
| | | 40 | 104 | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | | --- | |
| | | 60 | 140 | ++ | ++ | ++ | | ++ | ++ | ++ | ++ | ++ | | | |
| | | 80 | 176 | | ++ | ++ | | ++ | ++ | ++ | ++ | ++ | | | |
| | | 100 | 212 | | | | | ++ | ++ | | ++ | ++ | | | |
| | | 120 | 248 | | | | | | | | | | | | |
| | 30 | 20 | 68 | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | --- | --- | |
| | | 40 | 104 | ++ | ++ | ++ | | ++ | ++ | ++ | ++ | ++ | | | |
| | | 60 | 140 | ++ | ++ | ++ | | ++ | ++ | ++ | ++ | ++ | | | |
| | | 80 | 176 | | ++ | ++ | | ++ | ++ | + | ++ | ++ | | | |
| | | 100 | 212 | | | | | ++ | ++ | --- | ++ | ++ | | | |
| | | 120 | 248 | | | | | | | | | | | | |
| | 50 | 20 | 68 | ++ | ++ | ++ | - | ++ | ++ | ++ | ++ | ++ | --- | --- | |
| | | 40 | 104 | ++ | ++ | ++ | | ++ | ++ | ++ | ++ | ++ | | | |
| | | 60 | 140 | ++ | ++ | ++ | | ++ | ++ | ++ | ++ | ++ | | | |
| | | 80 | 176 | | ++ | ++ | | ++ | ++ | + | ++ | ++ | | | |
| | | 100 | 212 | | | | | ++ | ++ | --- | ++ | ++ | | | |
| | | 120 | 248 | | | | | | | | | | | | |

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 + : Good Resistant (Actual testing suggested)
 --- : Not recommended

| Chemical | Concentration(%) | Temp. | | Plastic | | | | | | Rubber | | | Metal | |
|---|------------------|-------|------|---------|-----------|----|------|------|------|--------|-----|--------|---------|---------|
| | | (°C) | (°F) | PVC | CPVC (HT) | PP | PVDC | PVDF | PTFE | EPDM | FKM | FKM FB | SUS 304 | SUS 316 |
| Sulfuric acid H ₂ SO ₄ | 70 | 20 | 68 | ++ | ++ | ++ | -- | ++ | ++ | ++ | ++ | ++ | --- | --- |
| | | 40 | 104 | ++ | ++ | ++ | | ++ | ++ | ++ | ++ | ++ | | |
| | | 60 | 140 | ++ | ++ | ++ | | ++ | ++ | + | ++ | ++ | | |
| | | 80 | 176 | | + | + | | + | ++ | - | ++ | ++ | | |
| | | 100 | 212 | | | | | + | ++ | | + | + | | |
| | 80 | 20 | 68 | ++ | ++ | ++ | -- | ++ | ++ | ++ | ++ | ++ | -- | -- |
| | | 40 | 104 | ++ | ++ | ++ | | ++ | ++ | ++ | ++ | ++ | | |
| | | 60 | 140 | + | + | + | | ++ | ++ | + | ++ | ++ | | |
| | | 80 | 176 | | - | + | | + | ++ | - | + | ++ | | |
| | | 100 | 212 | | | | | + | ++ | | - | + | | |
| | 90 | 20 | 68 | + | + | ++ | -- | ++ | ++ | ++ | ++ | ++ | -- | -- |
| | | 40 | 104 | + | + | ++ | | ++ | ++ | + | ++ | ++ | | |
| | | 60 | 140 | - | - | + | | ++ | ++ | - | ++ | ++ | | |
| | | 80 | 176 | | | + | | + | ++ | -- | + | + | | |
| | | 100 | 212 | | | | | + | + | | -- | - | | |
| | 98 | 20 | 68 | + | + | -- | -- | ++ | ++ | -- | ++ | ++ | -- | -- |
| | | 40 | 104 | - | - | | | + | ++ | | + | ++ | | |
| | | 60 | 140 | -- | -- | | | | ++ | | - | + | | |
| | | 80 | 176 | | | | | | + | | | | | |
| | | 100 | 212 | | | | | | | | | | | |
| Hydrofluoric acid HF | Dilute | 20 | 68 | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | | |
| | | 40 | 104 | ++ | + | + | ++ | ++ | ++ | ++ | ++ | ++ | | |
| | | 60 | 140 | - | + | + | ++ | ++ | ++ | ++ | ++ | ++ | | |
| | | 80 | 176 | | - | + | ++ | ++ | ++ | ++ | ++ | ++ | | |
| | | 100 | 212 | | | + | | ++ | ++ | ++ | ++ | ++ | | |
| | 30 | 20 | 68 | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | | |
| | | 40 | 104 | + | + | + | ++ | ++ | ++ | ++ | ++ | ++ | | |
| | | 60 | 140 | - | - | + | ++ | ++ | ++ | ++ | ++ | ++ | | |
| | | 80 | 176 | -- | -- | + | ++ | ++ | ++ | + | ++ | ++ | | |
| | | 100 | 212 | | | | | ++ | ++ | -- | ++ | ++ | | |
| | 40 | 20 | 68 | + | + | ++ | ++ | ++ | ++ | ++ | ++ | ++ | | |
| | | 40 | 104 | - | - | + | ++ | ++ | ++ | + | ++ | ++ | | |
| | | 60 | 140 | -- | -- | + | ++ | ++ | ++ | - | ++ | ++ | | |
| | | 80 | 176 | | | + | ++ | ++ | ++ | -- | ++ | ++ | | |
| | | 100 | 212 | | | | | ++ | ++ | | + | ++ | | |
| | 50 | 20 | 68 | + | + | ++ | ++ | ++ | ++ | ++ | ++ | ++ | -- | -- |
| | | 40 | 104 | -- | -- | + | ++ | ++ | ++ | + | ++ | ++ | | |
| | | 60 | 140 | | | + | ++ | ++ | ++ | - | ++ | ++ | | |
| | | 80 | 176 | | | + | | ++ | ++ | | ++ | ++ | | |
| | | 100 | 212 | | | | | ++ | ++ | | + | ++ | | |
| Acetic acid CH ₃ COOH | 20 | 20 | 68 | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ |
| | | 40 | 104 | + | ++ | ++ | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ |
| | | 60 | 140 | - | + | + | | ++ | ++ | + | - | + | ++ | ++ |
| | | 80 | 176 | | - | - | | ++ | ++ | | -- | + | ++ | ++ |
| | | 100 | 212 | | | | | + | ++ | | | | ++ | ++ |
| | 50 | 20 | 68 | ++ | ++ | ++ | ++ | ++ | ++ | + | + | + | ++ | ++ |
| | | 40 | 104 | + | + | + | ++ | ++ | ++ | - | - | - | ++ | ++ |
| | | 60 | 140 | - | - | - | | ++ | ++ | -- | -- | -- | ++ | ++ |
| | | 80 | 176 | | -- | | | ++ | ++ | | | | ++ | ++ |
| | | 100 | 212 | | | | | + | ++ | | | | ++ | ++ |
| | 120 | 20 | 248 | | | | | | | | | | | |
| | | 20 | 68 | + | + | -- | ++ | ++ | ++ | + | + | + | + | + |
| | | 40 | 104 | + | + | | + | ++ | ++ | -- | + | + | - | - |
| | | 60 | 140 | + | + | | + | ++ | ++ | | + | + | -- | - |
| | | 80 | 176 | | | | | ++ | ++ | | - | - | -- | - |
| | 20 | 100 | 212 | | | | | ++ | ++ | | -- | -- | -- | -- |
| | | 120 | 248 | | | | | | | | | | | |

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 + : Good Resistant (Actual testing suggested)
 --- : Not recommended

| Chemical | Concentration(%) | Temp. | | Plastic | | | | | | Rubber | | | Metal | |
|--|------------------|-------|------|---------|-----------|----|------|------|------|--------|-----|--------|---------|---------|
| | | (°C) | (°F) | PVC | CPVC (HT) | PP | PVDC | PVDF | PTFE | EPDM | FKM | FKM FB | SUS 304 | SUS 316 |
| Chromic acid H ₂ CrO ₄ | 50 | 20 | 68 | + | + | -- | ++ | ++ | ++ | -- | + | + | + | + |
| | | 40 | 104 | + | + | | + | - | ++ | | | | -- | -- |
| | | 60 | 140 | | | | + | -- | ++ | | | | | |
| | | 80 | 176 | | | | | | ++ | | | | | |
| | | 100 | 212 | | | | | | ++ | | | | | |
| Hydrogen peroxide H ₂ O ₂ | 20 | 20 | 68 | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | -- | -- |
| | | 40 | 104 | + | + | ++ | ++ | ++ | ++ | + | ++ | ++ | -- | -- |
| | | 60 | 140 | - | - | ++ | | ++ | ++ | + | ++ | ++ | -- | -- |
| | | 80 | 176 | | - | + | | ++ | ++ | - | ++ | ++ | | |
| | | 100 | 212 | | | | | | | | | | | |
| | 30 | 20 | 68 | ++ | - | ++ | ++ | ++ | ++ | ++ | ++ | ++ | -- | -- |
| | | 40 | 104 | + | - | + | ++ | ++ | ++ | + | + | + | -- | -- |
| | | 60 | 140 | - | | + | | ++ | ++ | - | - | - | -- | -- |
| | | 80 | 176 | | | - | | ++ | ++ | | | | | |
| | | 100 | 212 | | | | | | | | | | | |
| | 50 | 20 | 68 | + | - | - | ++ | ++ | ++ | -- | - | - | -- | -- |
| | | 40 | 104 | - | -- | -- | ++ | ++ | ++ | | -- | -- | -- | -- |
| | | 60 | 140 | | | | | ++ | ++ | | | | | |
| | | 80 | 176 | | | | | ++ | ++ | | | | | |
| | | 100 | 212 | | | | | | | | | | | |
| Caustic potash (Potassium hydroxide) KOH | 5 | 20 | 68 | ++ | ++ | ++ | ++ | ++ | ++ | ++ | + | ++ | + | + |
| | | 40 | 104 | ++ | + | ++ | ++ | ++ | ++ | ++ | | | + | + |
| | | 60 | 140 | + | + | ++ | | + | ++ | ++ | | | + | + |
| | | 80 | 176 | | + | ++ | | - | ++ | ++ | | | + | + |
| | | 100 | 212 | | | | | -- | ++ | + | | | + | + |
| | 14 | 20 | 68 | + | + | ++ | ++ | ++ | ++ | ++ | + | ++ | + | + |
| | | 40 | 104 | + | -- | | | | | ++ | -- | | + | + |
| | | 60 | 140 | + | -- | | | | | ++ | | | + | + |
| | | 80 | 176 | | | | | | | ++ | | | + | + |
| | | 100 | 212 | | | | | | | + | | | + | + |
| | 25 | 20 | 68 | ++ | ++ | ++ | ++ | ++ | ++ | ++ | + | ++ | + | + |
| | | 40 | 104 | ++ | + | ++ | ++ | ++ | ++ | ++ | | | + | + |
| | | 60 | 140 | ++ | + | ++ | | + | ++ | ++ | | | + | + |
| | | 80 | 176 | | + | ++ | | - | ++ | ++ | | | + | + |
| | | 100 | 212 | | | | | -- | ++ | + | | | + | + |
| Sodium hydroxide NaOH | 5 | 20 | 68 | + | + | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ |
| | | 40 | 104 | + | -- | ++ | | | ++ | ++ | ++ | ++ | ++ | ++ |
| | | 60 | 140 | + | -- | ++ | | | ++ | ++ | + | + | ++ | ++ |
| | | 80 | 176 | | | | | | ++ | + | | | ++ | ++ |
| | | 100 | 212 | | | | | | | | | | ++ | ++ |
| | 15 | 20 | 68 | ++ | + | ++ | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ |
| | | 40 | 104 | ++ | - | ++ | | ++ | ++ | ++ | - | + | ++ | ++ |
| | | 60 | 140 | ++ | - | ++ | | + | ++ | ++ | -- | | ++ | ++ |
| | | 80 | 176 | | -- | + | | - | ++ | + | | | ++ | ++ |
| | | 100 | 212 | | | | | -- | ++ | + | | | ++ | ++ |
| | 30 | 20 | 68 | ++ | ++ | ++ | ++ | ++ | ++ | ++ | - | + | ++ | ++ |
| | | 40 | 104 | ++ | ++ | ++ | | + | ++ | ++ | -- | -- | ++ | ++ |
| | | 60 | 140 | ++ | + | ++ | | - | ++ | ++ | | | ++ | ++ |
| | | 80 | 176 | | - | + | | -- | ++ | ++ | | | ++ | ++ |
| | | 100 | 212 | | | | | | ++ | + | | | - | |
| 50 | 20 | 68 | ++ | ++ | ++ | ++ | ++ | ++ | ++ | -- | -- | + | + | |
| | 40 | 104 | ++ | ++ | ++ | | + | ++ | ++ | | | + | + | |
| | 60 | 140 | ++ | ++ | ++ | | - | ++ | ++ | | | + | + | |
| | 80 | 176 | | + | + | | -- | ++ | ++ | | | + | + | |
| | 100 | 212 | | | | | | ++ | | | | + | + | |
| 120 | 248 | | | | | | | | | | -- | - | | |

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 --- : Not recommended

| Chemical | Concentration(%) | Temp. | | Plastic | | | | | | Rubber | | | Metal | |
|--|------------------|-------|------|---------|-----------|----|------|------|------|--------|-----|--------|---------|---------|
| | | (°C) | (°F) | PVC | CPVC (HT) | PP | PVDC | PVDF | PTFE | EPDM | FKM | FKM FB | SUS 304 | SUS 316 |
| Sodium hypochlorite NaClO | 1ppm | 20 | 68 | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | | |
| | | 40 | 104 | | | | | | | | | | | |
| | | 60 | 140 | | | | | | | | | | | |
| | | 80 | 176 | | | | | | | | | | | |
| | | 100 | 212 | | | | | | | | | | | |
| | 3 | 20 | 68 | ++ | ++ | + | ++ | ++ | ++ | + | ++ | ++ | + | + |
| | | 40 | 104 | ++ | ++ | + | ++ | ++ | ++ | + | ++ | ++ | - | + |
| | | 60 | 140 | + | - | + | + | ++ | ++ | - | ++ | ++ | -- | - |
| | | 80 | 176 | | | | | ++ | | | | | | |
| | | 100 | 212 | | | | | ++ | | | | | | |
| | 5 | 20 | 68 | ++ | ++ | + | ++ | ++ | ++ | + | ++ | ++ | + | + |
| | | 40 | 104 | ++ | ++ | + | ++ | ++ | ++ | + | ++ | ++ | - | + |
| | | 60 | 140 | + | - | - | + | ++ | ++ | - | ++ | ++ | -- | - |
| | | 80 | 176 | | | | | ++ | | | | | | |
| | | 100 | 212 | | | | | ++ | | | | | | |
| | 7 | 20 | 68 | ++ | ++ | + | ++ | ++ | ++ | + | ++ | ++ | + | + |
| | | 40 | 104 | ++ | ++ | - | ++ | ++ | ++ | + | ++ | ++ | - | + |
| | | 60 | 140 | + | - | - | + | ++ | ++ | - | ++ | ++ | -- | - |
| | | 80 | 176 | | | | | ++ | | | | | | |
| | | 100 | 212 | | | | | ++ | | | | | | |
| | 10 | 20 | 68 | ++ | ++ | + | ++ | ++ | ++ | -- | ++ | ++ | -- | -- |
| | | 40 | 104 | ++ | ++ | - | + | ++ | ++ | | ++ | ++ | | |
| | | 60 | 140 | + | - | - | + | ++ | ++ | | ++ | ++ | | |
| | | 80 | 176 | | | | | ++ | | | | | | |
| 100 | | 212 | | | | | ++ | | | | | | | |
| 13 | 20 | 68 | ++ | ++ | + | ++ | ++ | ++ | -- | ++ | ++ | -- | -- | |
| | 40 | 104 | ++ | ++ | - | + | ++ | ++ | | + | + | | | |
| | 60 | 140 | + | - | | + | ++ | ++ | | | | | | |
| | 80 | 176 | | | | | ++ | | | | | | | |
| | 100 | 212 | | | | | ++ | | | | | | | |
| Ferric chloride FeCl ₃ | Satu | 20 | 68 | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | -- | -- |
| | | 40 | 104 | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | | |
| | | 60 | 140 | + | ++ | ++ | | ++ | ++ | ++ | ++ | ++ | | |
| | | 80 | 176 | | ++ | ++ | | ++ | ++ | ++ | ++ | ++ | | |
| | | 100 | 212 | | | | | ++ | ++ | + | + | + | | |
| Ammonia water NH ₃ Aq | 10 | 20 | 68 | + | -- | ++ | | ++ | ++ | ++ | + | + | ++ | ++ |
| | | 40 | 104 | + | -- | ++ | | ++ | ++ | ++ | - | - | + | + |
| | | 60 | 140 | + | -- | ++ | | ++ | ++ | ++ | -- | -- | + | + |
| | | 80 | 176 | | -- | + | | ++ | ++ | ++ | | | + | + |
| | | 100 | 212 | | | | | ++ | ++ | ++ | | | + | + |
| | 28 | 20 | 68 | + | -- | ++ | -- | ++ | ++ | ++ | - | - | ++ | ++ |
| | | 40 | 104 | + | -- | ++ | | ++ | ++ | ++ | - | - | | |
| | | 60 | 140 | - | -- | ++ | | ++ | ++ | ++ | -- | -- | | |
| | | 80 | 176 | | -- | ++ | | ++ | ++ | | | | | |
| | | 100 | 212 | | | | | ++ | ++ | | | | | |
| Toluene (Toluol) C ₆ H ₅ CH ₃ | Pure | 20 | 68 | -- | -- | + | -- | ++ | ++ | -- | - | - | | |
| | | 40 | 104 | | | - | | ++ | ++ | | | | | |
| | | 60 | 140 | | | -- | | + | ++ | | | | | |
| | | 80 | 176 | | | | | + | ++ | | | | | |
| | | 100 | 212 | | | | | - | + | | | | | |
| Benzene C ₆ H ₆ | Pure | 20 | 68 | - | - | + | ++ | ++ | ++ | -- | + | + | | |
| | | 40 | 104 | -- | -- | - | | + | ++ | | + | + | | |
| | | 60 | 140 | | | | | + | ++ | | + | + | | |
| | | 80 | 176 | | | | | + | ++ | | + | + | | |
| | | 100 | 212 | | | | | | | | | | | |
| 120 | 248 | | | | | | | | | | | | | |

Please refer to "Chemical Resistance Manual for Eslon Plastics Pipe, Valves and Relative Materials" for details.

- 1 Please note that plastic might be strongly affected by surface-activating agent.
 2 "PVC" in chemical resistance guide does not include "HI-PVC".
 3 This table is intended to serve as guide only. The information based on data accumulated from immersion test and experiments herein is believed to be reliable, but no representations, guarantee or warranties of any kinds are made as to its accuracy, suitability for particular applications or results to be obtained.

++ : Excellent Resistant - : Caution
 + : Good Resistant (Actual testing suggested)
 --- : Not recommended

| Chemical | Concentration(%) | Temp. | | Plastic | | | | | | Rubber | | | Metal | |
|--|------------------|-------|------|---------|-----------|-----|------|------|------|--------|-----|--------|---------|---------|
| | | (°C) | (°F) | PVC | CPVC (HT) | PP | PVDC | PVDF | PTFE | EPDM | FKM | FKM FB | SUS 304 | SUS 316 |
| Non-ionic Surfactant | 10 | 20 | 68 | - | --- | | | + | + | | | | | |
| | | 40 | 104 | - | --- | | | + | + | | | | | |
| | | 60 | 140 | | | | | | | | | | | |
| | | 80 | 176 | | | | | | | | | | | |
| | | 100 | 212 | | | | | | | | | | | |
| Cationic surfactant | 10 | 20 | 68 | + | - | | | ++ | ++ | | | | | |
| | | 40 | 104 | + | - | | | ++ | ++ | | | | | |
| | | 60 | 140 | | | | | | | | | | | |
| | | 80 | 176 | | | | | | | | | | | |
| | | 100 | 212 | | | | | | | | | | | |
| Anionic surfactant | 10 | 20 | 68 | + | - | | | ++ | ++ | | | | | |
| | | 40 | 104 | + | - | | | ++ | ++ | | | | | |
| | | 60 | 140 | | | | | | | | | | | |
| | | 80 | 176 | | | | | | | | | | | |
| | | 100 | 212 | | | | | | | | | | | |
| Methyl alcohol (Methanol) CH ₃ OH | Pure | 20 | 68 | - | - | ++ | ++ | ++ | ++ | ++ | ++ | ++ | + | ++ |
| | | 40 | 104 | --- | --- | ++ | ++ | ++ | ++ | ++ | ++ | ++ | + | ++ |
| | | 60 | 140 | | | + | + | + | + | + | + | + | | ++ |
| | | 80 | 176 | | | | | | | | | | | |
| | | 100 | 212 | | | | | | | | | | | |
| | 20 | 20 | 68 | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | + | ++ |
| | | 40 | 104 | + | + | ++ | ++ | ++ | ++ | ++ | ++ | ++ | + | ++ |
| | | 60 | 140 | | | + | + | + | + | + | + | + | | ++ |
| | | 80 | 176 | | | | | | | | | | | |
| | | 100 | 212 | | | | | | | | | | | |
| Soybean oil | - | 20 | 68 | - | - | ++ | | ++ | ++ | ++ | ++ | ++ | | |
| | | 40 | 104 | - | - | ++ | | ++ | ++ | ++ | ++ | ++ | | |
| | | 60 | 140 | - | - | ++ | | ++ | ++ | ++ | ++ | ++ | | |
| | | 80 | 176 | | - | + | | ++ | ++ | - | ++ | ++ | | |
| | | 100 | 212 | | | | | ++ | ++ | --- | - | - | | |
| Gasoline | - | 20 | 68 | - | - | --- | | ++ | ++ | --- | + | + | | |
| | | 40 | 104 | | | | | ++ | ++ | | | | | |
| | | 60 | 140 | | | | | ++ | ++ | | | | | |
| | | 80 | 176 | | | | | ++ | ++ | | | | | |
| | | 100 | 212 | | | | | | | | | | | |
| Kerosene (kerosine) | - | 20 | 68 | - | - | + | | ++ | ++ | --- | ++ | ++ | | |
| | | 40 | 104 | - | - | | | ++ | ++ | | | | | |
| | | 60 | 140 | --- | --- | | | ++ | ++ | | | | | |
| | | 80 | 176 | | | | | ++ | ++ | | | | | |
| | | 100 | 212 | | | | | | | | | | | |
| Aniline (Aminobenzene) C ₆ H ₅ NH ₂ | Pure | 20 | 68 | - | - | + | --- | ++ | ++ | ++ | ++ | ++ | + | + |
| | | 40 | 104 | --- | --- | + | | + | ++ | - | + | + | + | + |
| | | 60 | 140 | | | - | | + | ++ | --- | - | - | + | + |
| | | 80 | 176 | | | --- | | - | ++ | | | | + | + |
| | | 100 | 212 | | | | | --- | ++ | | | | + | + |
| Ethanolamine H ₂ NCH ₂ CH ₂ OH | Pure | 20 | 68 | --- | --- | ++ | | --- | ++ | + | --- | --- | + | + |
| | | 40 | 104 | | | | | | ++ | | | | + | + |
| | | 60 | 140 | | | | | | | | | | + | + |
| | | 80 | 176 | | | | | | | | | | + | + |
| | | 100 | 212 | | | | | | | | | | + | + |
| 120 | 248 | | | | | | | | | | + | + | | |

Flow characteristic of ESLON VALVE

1. Cv value

Cv value (valve constant) is the flow coefficient used in USA, and non-dimensional value representing how many gallons (1 US gallon = 3.7852 liters) of water of 60°F(15.5°C) pass valve for one minute, where the pressure difference at the inlet and the outlet of the valve is 1 psi (0.0703kgf/cm²)at its full open. 1 gallon is treated as 1Cv.

$$Cv = Q \sqrt{\frac{G}{P_1 - P_2}}$$

$$Cv = Q \sqrt{\frac{G}{\Delta P}}$$

G: Specific Gravity (water=1)
Q: Flow Rate [US_gal/min]
P1: Valve Inlet Pressure [psi]
P2: Valve Outlet Pressure [psi]
ΔP: P1 - P2 [psi]

| Unit | Cv | Q : Flow Rate | ΔP : Pressure Drop |
|-------------------------|---|--|--|
| m ³ /hr, kPa | $Cv = 11.6 Q_{(h)} \sqrt{\frac{G}{\Delta P_{(k)}}}$ | $Q_{(h)} = \frac{Cv}{11.6 \sqrt{\frac{G}{\Delta P_{(k)}}}}$ | $\Delta P_{(k)} = \frac{G}{\left(\frac{Cv}{11.6 Q_{(h)}}\right)^2}$ |
| m ³ /hr, MPa | $Cv = \frac{1}{2.73} Q_{(h)} \sqrt{\frac{G}{\Delta P_{(M)}}}$ | $Q_{(h)} = \frac{2.73 Cv}{\sqrt{\frac{G}{\Delta P_{(M)}}}}$ | $\Delta P_{(M)} = \frac{G}{\left(\frac{2.73 Cv}{Q_{(h)}}\right)^2}$ |
| L/min, kPa | $Cv = 0.694 Q_{(m)} \sqrt{\frac{G}{\Delta P_{(k)}}}$ | $Q_{(m)} = \frac{Cv}{0.694 \sqrt{\frac{G}{\Delta P_{(k)}}}}$ | $\Delta P_{(k)} = \frac{G}{\left(\frac{Cv}{0.694 Q_{(m)}}\right)^2}$ |
| L/min, MPa | $Cv = \frac{1}{45.7} Q_{(m)} \sqrt{\frac{G}{\Delta P_{(M)}}}$ | $Q_{(m)} = \frac{45.7 Cv}{\sqrt{\frac{G}{\Delta P_{(M)}}}}$ | $\Delta P_{(M)} = \frac{G}{\left(\frac{45.7 Cv}{Q_{(m)}}\right)^2}$ |

- Flow Rate: Q(h) [m³/hr], Q(m) [L/min]
- Pressure Drop: ΔP(k) [kPa], ΔP(M) [MPa]

Follow Cv value for each valve when valve selection.
When Cv value is

- too small: ① Volumetric flow shortage
② High Pressure drop
- too big: ① Poor Control
② Wrong size

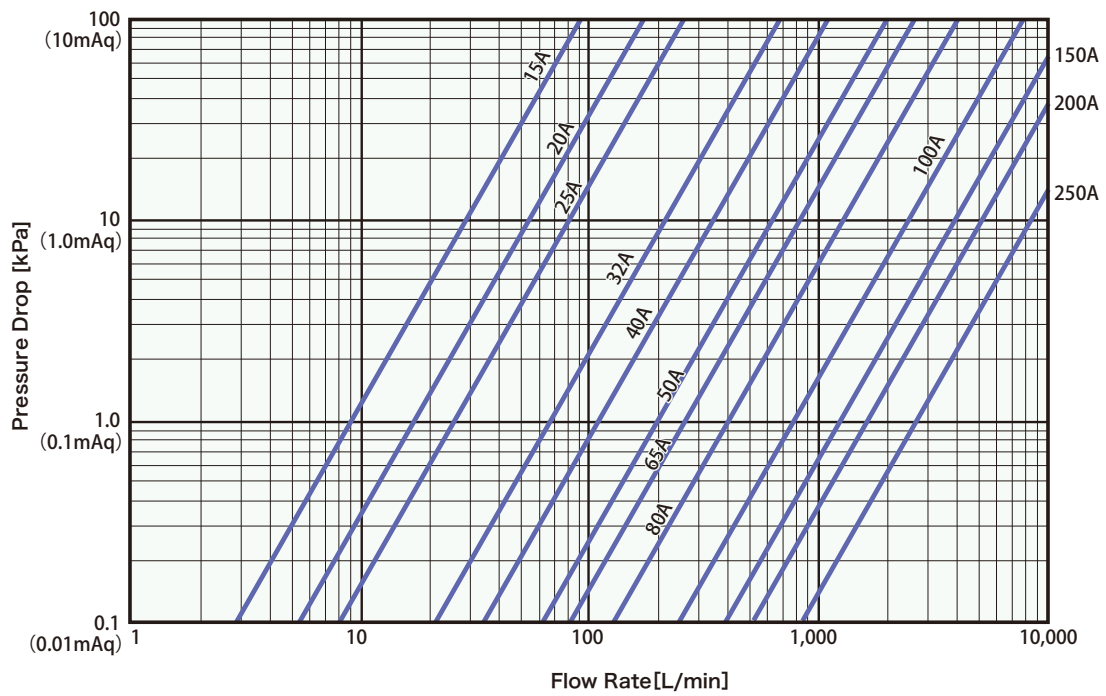
Kv value is the flow capacity coefficient used in the International Standards. It represents how many liters of water can pass the valve for one hour, where the pressure difference at the inlet and the outlet of the valve is 1 bar(1.0197kgf/cm²)at its full open.
The Cv and Kv value for liquids is expressed by the following equation;

$$KV = \frac{1}{1.16} Cv$$

2. Cv value and Flow Rate of ESLON VALVE

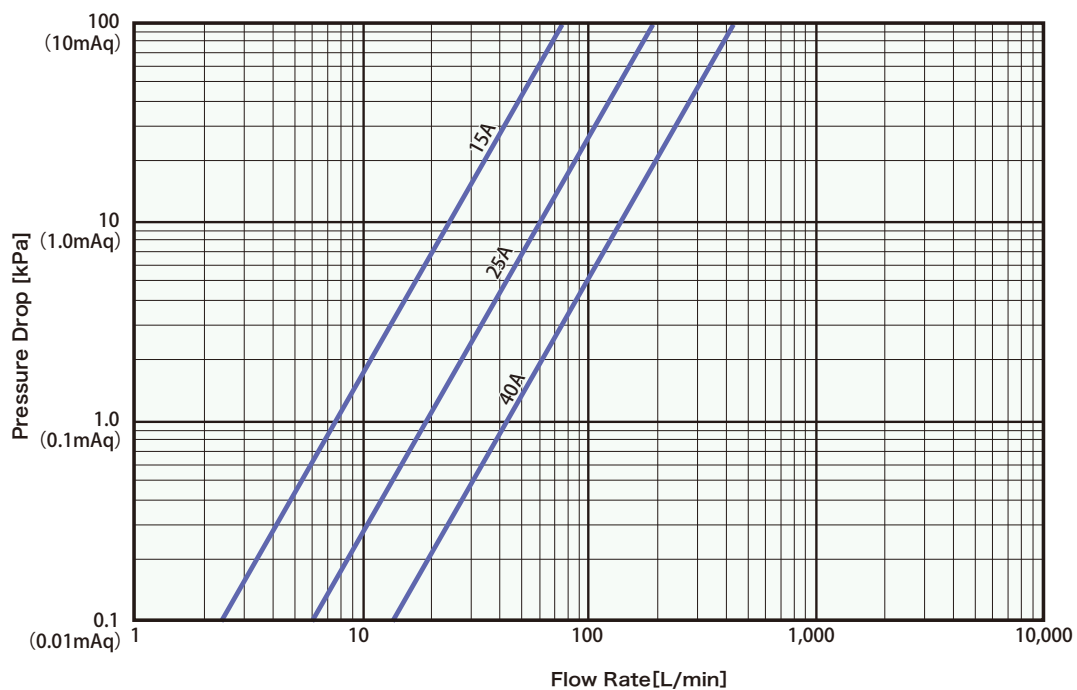
DIAPHRAGM VALVE

| Size[A] | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 |
|-----------|-----|------|------|------|------|------|-----|-----|-----|-----|-----|------|------|
| Cv Value | 6.3 | 12.0 | 17.6 | 17.6 | 46.3 | 76.1 | 135 | 180 | 280 | 533 | 857 | 1113 | 1864 |



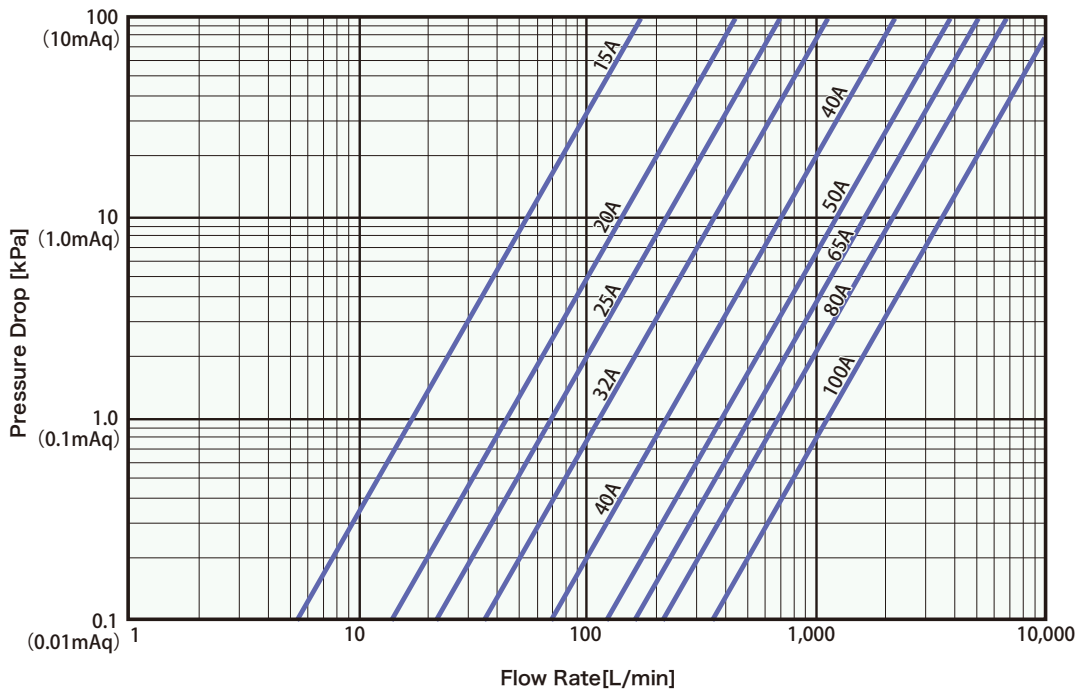
DEAD SPACE FREE TEE-TYPE DIAPHRAGM VALVE

| Size[A] | 15 | 20 | 25 | 32 | 40 |
|-----------|-----|----|------|----|------|
| Cv Value | 5.2 | - | 13.1 | - | 30.1 |



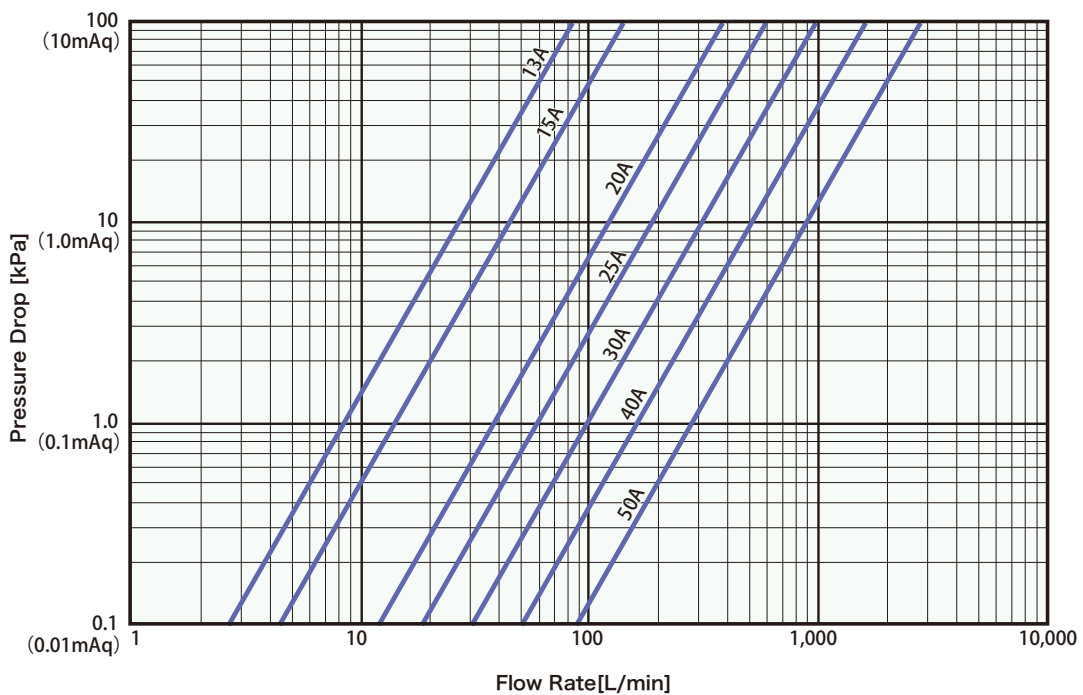
BALL VALVE, BALL VALVE TYPE M

| | | | | | | | | | |
|----------|------|------|------|------|-----|-----|-----|-----|-----|
| Size[A] | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 |
| Cv Value | 12.1 | 31.5 | 48.9 | 80.1 | 154 | 267 | 352 | 471 | 780 |



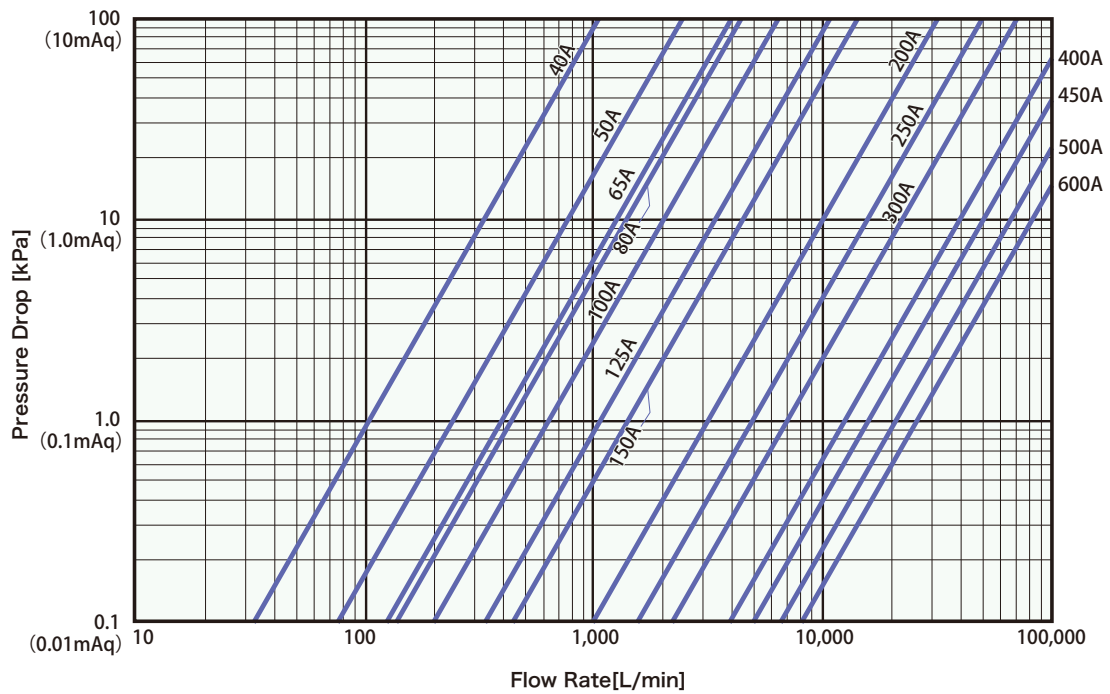
COMPACT BALL VALVE(13 - 20A), LOCK BALL VALVE(25 - 50A)

| | | | | | | | |
|----------|----|------|------|------|------|-----|-----|
| Size[A] | 13 | 15 | 20 | 25 | 32 | 40 | 50 |
| Cv Value | 6 | 10.0 | 26.8 | 43.1 | 69.6 | 115 | 196 |



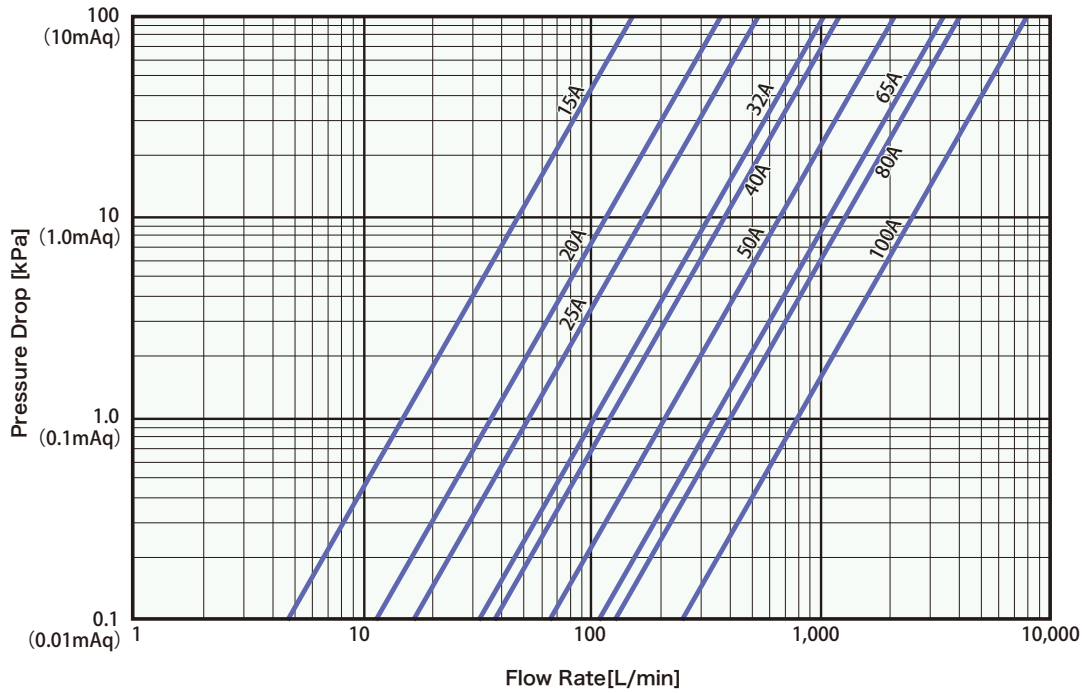
BUTTERFLY VALVE

| Size[A] | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 |
|----------|------|-----|-----|-----|-----|-----|-----|------|------|------|------|------|-------|-------|-------|
| Cv Value | 74.0 | 172 | 282 | 309 | 446 | 755 | 993 | 2213 | 3440 | 4929 | 6311 | 8757 | 11107 | 14622 | 17945 |



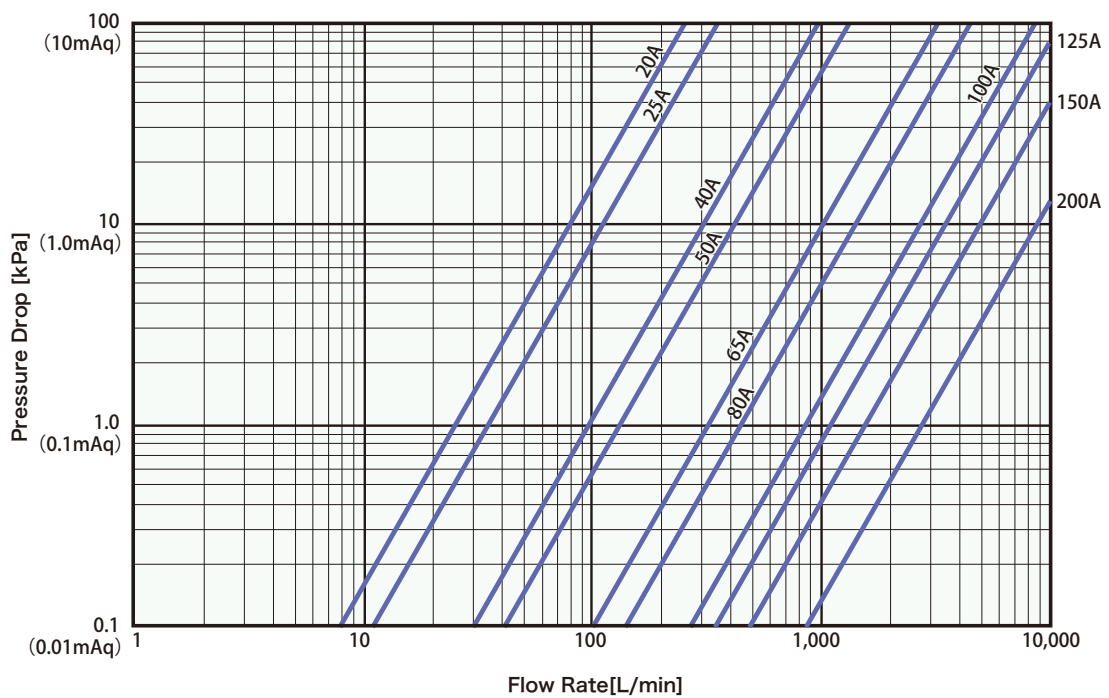
CHECK VALVE BALL TYPE

| | | | | | | | | | |
|----------|------|------|------|----|------|-----|-----|-----|-----|
| Size[A] | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 |
| Cv Value | 10.5 | 25.7 | 36.9 | 71 | 84.0 | 146 | 235 | 280 | 547 |



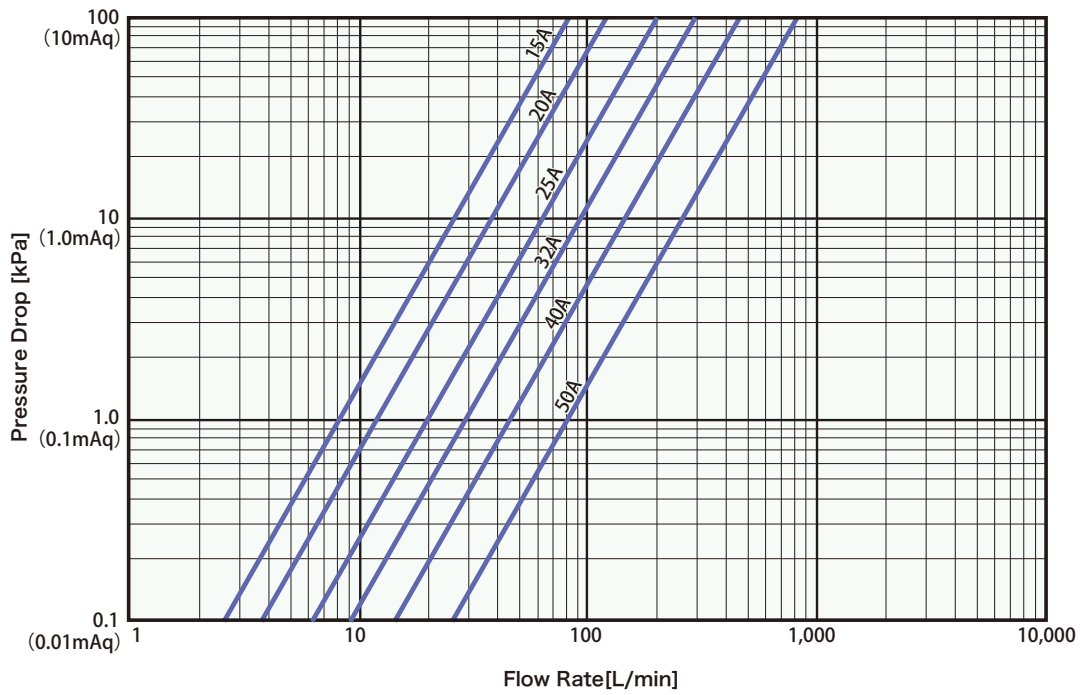
CHECK VALVE SWING TYPE

| | | | | | | | | | | |
|----------|------|------|------|------|-----|-----|-----|-----|------|------|
| Size[A] | 20 | 25 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 |
| Cv Value | 17.6 | 24.2 | 67.8 | 91.4 | 222 | 306 | 596 | 771 | 1084 | 1920 |



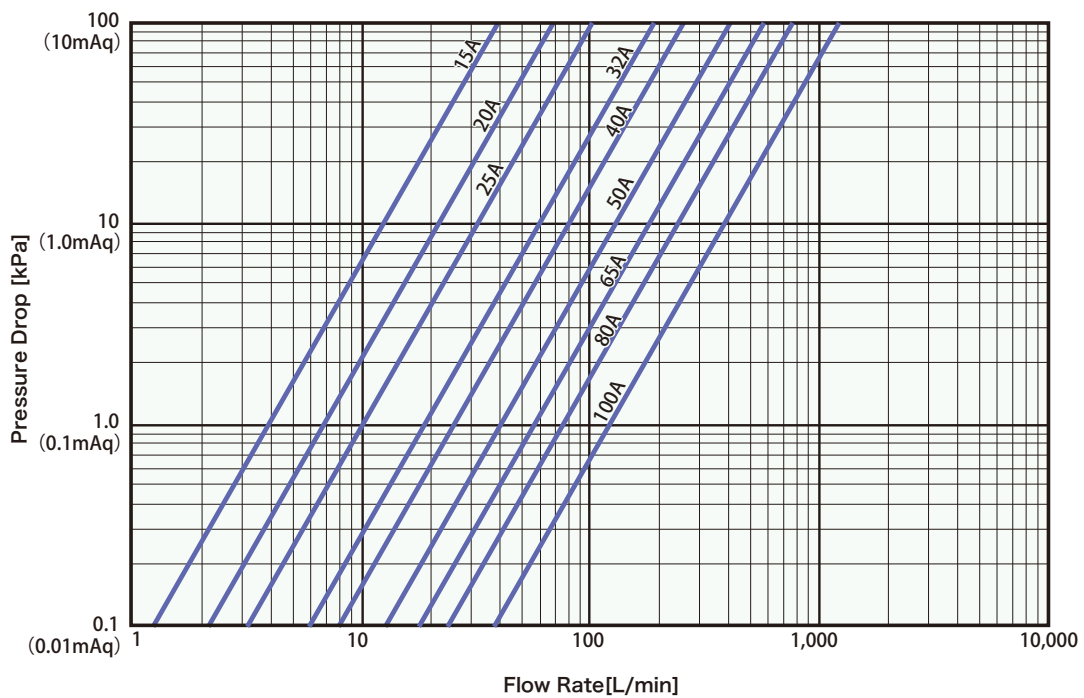
CHECK VALVE LIFT TYPE

| | | | | | | |
|----------|-----|-----|------|------|------|------|
| Size[A] | 15 | 20 | 25 | 32 | 40 | 50 |
| Cv Value | 5.6 | 8.3 | 13.8 | 20.2 | 31.7 | 56.5 |



STRAINER

| | | | | | | | | | |
|----------|-----|-----|-----|------|------|------|------|------|------|
| Size[A] | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 |
| Cv Value | 2.8 | 4.9 | 7.2 | 13.2 | 17.9 | 28.7 | 39.8 | 52.6 | 84.6 |



3. Relationship between Valve opening and Flow rate

The relationship between valve opening and flow rate is shown in the figure below.

The flow characteristics depend on the valve structure.

NEEDLE VALVE is suitable for flow control because the flow rate increases linearly with valve opening.

However, the pressure loss of the NEEDLE VALVE is very large at large flow rates.

In this case, select DIAPHRAGM VALVE close to the linear characteristic.

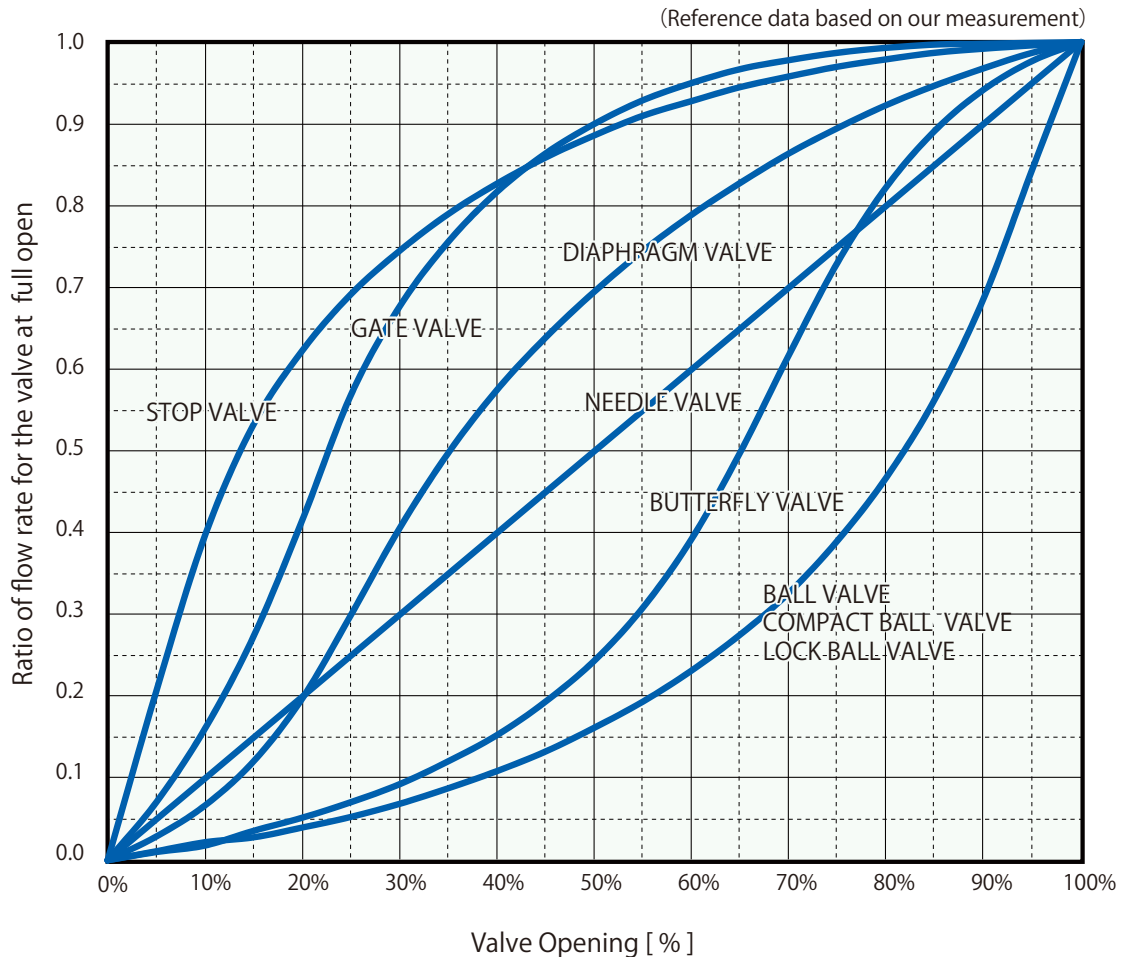
The flow characteristics of STOP VALVE or GATE VALVE vary greatly in a small opening range.

The flow characteristics of BALL VALVE or BUTTERFLY VALVE change greatly in a large opening range.

These valves are suitable for opening and closing valves.

Please select a valve suitable for your purpose.

Relationship between Valve opening and Flow rate



CAUTION IN USE OF ESLON VALVES



Pay special attention on items with this mark, because it may cause personal accident if the caution is in question in neglected.

1 Storage and Transportation

- ① Handle products carefully, avoid dropping and throwing products. Products might be affected in performance or damaged by strong impact.
- ② As large size of product is heavy, unload and handle by 2-persons if necessary.
- ③ For storage, store products in their cartons or wrapping and stack up orderly not to unpile.
- ④ Avoid exposing products to direct sunlight. Avoid storing and handling products in the condition of excessive temperature or humidity.

2 Operating Instructions

- ① Check inspection certificate packed with the products and observe the precaution.
- ② When installing products, avoid bending, tension, or other external load on products.
Avoid stepping or apply excessive weight on products. It might cause failure, leaking, or damage of products.
- ③ Do not install and use products under out of condition of temperature or humidity.
- ④ Keep ventilating when products are installed in corrosive atmosphere.
- ⑤ In case that fluid might freeze up due to operating condition, prevent freezing by thermal insulation or other methods.
- ⑥ In case of leaking from union nut, retighten evenly both sides of union nuts.
- ⑦ Inspect and exchange periodically valves in use for slurry medium.
- ⑧ Prevent using for crystalline fluid.
- ⑨ Check periodically bolt torque for flange connection and keep them specified torque. Bolt looseness might cause leaking.
- ⑩ Gasifying, volatile, or evaporating fluid such as hydrogen peroxide and sodium hypochlorite might rise inner pressure of valve and burst the valve. Please contact us concerning such risk.
- ⑪ Do not insert your hands into the valve in operating test to prevent serious injury accident.
- ⑫ Do not use Eslon valves, Pipes, and Fittings for compressed air or gas applications.
- ⑬ Do not disassemble valves while applying inner pressure to valves to avoid accident such as burst of valves or scatter fluid.

- ⑭ Use Eslon gasket (packing) as sealing for flange connection.
- ⑮ Tighten evenly bolts, using washers and spring washers for both of bolts and nuts for prevention of damage of flanges.
- ⑯ Set valve and gaskets between flanges, then tighten bolts after adjusting the position and dimensions not to make a gap between them.
- ⑰ Use flat faced flanges for Eslon valves and gaskets, do not use raised faced flange.
- ⑱ Tighten bolts diagonally, evenly, and gradually as shown below.
- ⑲ For tighten torque of bolts, refer to the dimension table of Eslon Packing (Gasket) .
- ⑳ Use specified size and length of bolts shown in table.

3 Installation

- ① Keep ventilating when products are installed in corrosive atmosphere.
- ② When installing products, avoid bending, tension, or other external load on products. Avoid stepping or apply excessive weight on products. It might cause failure, leaking, or damage of products.
- ③ Do not install automatic valve so as to set the actuator downward, it should be installed upward or sideways.
- ④ Align the axes of pipe and valve. Tighten bolts diagonally and evenly.
- ⑤ Support valve by proper method not to load excess stress.
- ⑥ Do not over-fasten the union nut of ball valve. Over-fastening union nut than the state at shipment may cause the inability of actuator operation due to over-torque.
- ⑦ Do not install and use products under out of condition of temperature or humidity.
- ⑧ In case that fluid might freeze up due to operating condition, prevent freezing by thermal insulation or other methods.
- ⑨ In case of leaking from union nut, retighten evenly both sides of union nuts.
- ⑩ Inspect and exchange periodically valves in use for slurry medium.
- ⑪ Prevent using for crystalline fluid.
- ⑫ Check periodically bolt torque for flange connection and keep them specified torque. Bolt looseness

might cause leaking.

- 13 Do not insert your hands into the valve in operating test to prevent serious injury accident.
- 14 Do not use Eslon valves, Pipes, & Fittings for compressed air or gas applications
- 15 Do not take the valve apart under pressure to prevent destruction and damage for the valve, scatter of solution in the valve.

4 Instructions

Pneumatic valve

- 1 Operation-air should be dry-air.
- 2 In case air pressure for actuator operation is high, reduce into the specified pressure for the actuators.
- 3 For flow test or operation test after installation, apply air pressure of less than 0.5MPa for double action valve and 0.6MPa for single action valve.
- 4 For the tube to supply compression air for actuator operation, use the tube with more than 6mm diameter. Using other diameter of tube may influence open-close speed.
- 5 In manual operation of pneumatic actuator, do not turn shaft-top of the actuator by wrench because spring back is dangerous.
Use manual operation unit if the manual operation is necessary.
- 6 Do not use pneumatic actuator under the condition of rainwater, splash, or fine particles. Install the cover to avoid rainwater or direct sunlight when use outside.
- 7 Prevent entering water into pneumatic actuator from air intake hole to avoid the inability of actuator operation.

Electric Valve

- 1 Electric valve is not explosion-proof. Do not install electric valve in flammable atmosphere.
- 2 Electric actuator is not waterproof. For outdoor use, install waterproof measure such as cover or roof. Install electric valve so as to set cable gland downward and putty to avoid water seeping.
- 3 Apply allowable voltage and the power source specified by indication on actuator.
- 4 Connect electric wire according to connecting diagram.
- 5 Install the grounding wire.
- 6 Usable only single phase AC for AC source. For positioner, install necessary devices for the proportional control of flow rate, such as balancing relay-unit, detect-sensor, and controller.
- 7 Do not splash water to the actuator.
- 8 Unable to change opening/closing speed of electric valve.

5 Maintenance

- 1 In case of des-assembling or re-assembling of valve for the maintenance, refer instruction or manual.
- 2 Execute maintenance and inspection of valve in every 3-6 months.
- 3 Refer instruction or manual of each valve type for installation, how to use, and others.

Pneumatic valve

- 4 Prohibit des-assembling of pneumatic actuator after installation of valve to avoid danger and trouble in operation.
- 5 No lubricating required.

Electric Valve

- 6 Prohibit des-assembling of electric pneumatic actuator.
- 7 Even in case thermal protector worked, the valve will return to workable condition in a few minutes. Check cause of overheating and execute preventive measures.

6 Installation Procedure for Flange connection

- 1 Use Eslon gasket (packing) as sealing for flange connection.
- 2 Tighten evenly bolts, using washers for both of bolts and nuts for prevention of damage of flanges.
- 3 Set valve and gaskets between flanges, then tighten bolts after adjusting the position and dimensions not to make a gap between them.
- 4 Use flat faced flanges for Eslon valves and gaskets, do not use raised faced flange.
- 5 Tighten bolts diagonally, evenly, and gradually as shown below.
- 6 Recommended torque for bolts is specified in table. 1(for Eslon EPDM gaskets).
- 7 Use specified size and length of bolts shown in table.2.

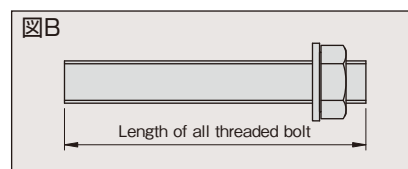
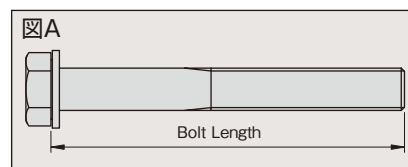
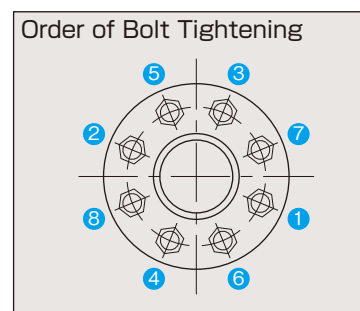


Table-1 Torque Standards for Bolt Tightening

Unit:N·m [kgf-cm]

| Size(A) | 15~20 | 25~50 | 65~100 | 125~200 | 250~350 | 400 |
|---------|-------|-------|--------|---------|---------|-----|
| Torque | 15 | 30 | 45 | 55 | 65 | 70 |

Table-2 The bolt for the flange connection

Unit:mm

| Nominal diameter (A) | | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 75 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 | |
|------------------------------|-----------------------------|---|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | BALL-STOP-STRAINER CHECK-TS Flange(10K) | Bolt Diameter | M12 | M12 | M16 | M16 | M16 | M16 | M16 | — | M16 | M16 | M20 | M20 | M20 | M22 | M22 | — | — | — | — |
| | Bolt Length | 50 | 50 | 55 | 60 | 60 | 70 | 75 | — | 75 | 75 | 80 | 85 | 90 | 95 | 100 | — | — | — | — | — | |
| TS Flange(5K) | Bolt Diameter | M10 | M10 | M10 | M12 | M12 | M12 | M12 | — | M16 | M16 | M16 | M16 | M20 | M20 | — | — | — | — | — | — | |
| | Bolt Length | 45 | 45 | 45 | 50 | 50 | 55 | 55 | — | 55 | 60 | 60 | 65 | 90 | 95 | — | — | — | — | — | — | |
| TS Flange (For Water Supply) | Bolt Diameter | — | — | — | — | — | — | — | M16 | — | M16 | M16 | M16 | M16 | M20 | M20 | — | — | — | — | — | |
| | Bolt Length | — | — | — | — | — | — | — | 75 | — | 80 | 80 | 85 | 90 | 95 | 100 | — | — | — | — | — | |
| DIAPHRAGM(10K) | Bolt Diameter | M12 | M12 | M16 | M16 | M16 | M16 | M16 | — | M16 | M16 | M20 | M20 | M20 | M22 | — | — | — | — | — | — | |
| | Bolt Length | 45 | 45 | 50 | 55 | 55 | 65 | 70 | — | 70 | 80 | 80 | 85 | 90 | 95 | — | — | — | — | — | — | |
| GATE VALVE FOR PIPELINE(10K) | Bolt Diameter | — | — | — | — | — | M16 | M16 | — | M16 | M16 | M20 | M20 | M20 | — | — | — | — | — | — | — | |
| | Bolt Length | — | — | — | — | — | 70 | 70 | — | 70 | 75 | 80 | 85 | 90 | — | — | — | — | — | — | — | |
| BUTTERFLY VALVE | Bolt Diameter | — | — | — | — | M16 | M16 | M16 | — | M16 | M16 | M20 | M20 | M20 | M22 | M22 | M22 | M24 | M24 | M24 | M30 | |
| | Bolt Length | — | — | — | — | 90 | 110 | 120 | — | 120 | 130 | 140 | 140 | 160 | 180 | 210 | 250 | 265 | 280 | 295 | 330 | |
| | Length of all threaded bolt | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 120 | 120 | 140 |

*For length of all threaded bolt for Butterfly valves 350 - 600A, please refer to Fig.B.

7 Installation Procedure by Solvent Cement

Disassemble union nut and socket ends from valve body, then connect by solvent cement. Cementing without disassembling socket ends might cause failure of valve function by flowing solvent cement in valve.

Make marks on union nuts and body in accordance with fully-tighten position before loosen union nuts, and becomes easy to reassemble.

- 1 Cut pipe in a right angle to the pipe axis.
- 2 Remove all burrs and saw dust by knife then round off edge by 1-2 degree.
- 3 Mark the insert length of pipe and depth of socket to ensure O (zero) point and complete inserting.
- 4 Wipe cementing surfaces of pipe and fitting by dry and clean cloth to remove all dirt, dust, moisture and oil.

- 5 Use specified grade of Eslon solvent cement.
- 6 Apply solvent cement evenly but slightly more on pipe and less on fitting to avoid overflowing of solvent cement to inside.
- 7 Avoid flowing of solvent cement into valve if in case of installing without disassembling socket ends. Need more attention especially for vertical piping lines.
- 8 After applying solvent cement, insert pipe quickly into socket end and wipe away overflowing cement.
- 9 Hold pipe and socket for 1 - 2 minutes after insertion. Avoid any impact and bending until dry. Ventilate inside of valve and piping to release solvent vapors in order to prevent solvent crack. Blow inside of piping if necessary.

- ⑩ Because of slow evaporation of solvent, installation at less than 5 degree C is not recommended.
- ⑪ Solvent cement is flammable hazardous material including organic solvents. To avoid explosion and any serious incidents, prohibit use of fire such as smoking, torching, or fire-working around work and storage area. Ventilate sufficiently, do not inhale solvent vapors.

8 Installation Procedure for Thread connection

- ① Disassemble union nut and thread ends from valve body, then connect to pipe. Make marks on union nuts and body in accordance with fully-tighten position before loosen union nuts, and becomes easy to reassemble.
- ② Do not screw with metal thread to prevent damage. Use plastic thread of fittings such as PVC valve sockets.
- ③ Prevent over-tightening to avoid damage of thread.
- ④ Use sealing tape for thread connection (wrap 2 - 3 ply). Do not use required sealing, hemp, or paint. It can cause stress cracking.
- ⑤ Tighten by single hand then use water-pump pliers or belt wrench by turning 180 - 360°
- ⑥ In case of tightening by belt wrench, turn carefully not to damage thread.

9 Installation Procedure by Socket welding

- ① For socket welding work, wide space to set welding machine is needed. Keep enough work space for safety and work by 2-persons.
- ② Prevent receiving wind during installation as temperature of heater face is affected and it cause failure in welding.
- ③ Ensure the type of welding machine corresponding to the size and material of pipe.
- ④ Ensure ground connection before turning on the power of welding machine.
- ⑤ Be careful of an electric shock by electric all leakage.
- ⑥ Be careful not to burn yourself by touch to heater face heated at 260 - 270 degree C.
- ⑦ Follow the instruction and specified welding condition such as heater face temperature, fusion time, and length of insertion as directed.
- ⑧ Insert pipe smoothly into socket with 5 seconds after pipe is pulled out from heater face. For details, refer to the instruction manual for welding machine.

■ Holding time after installation

| Season | Size | |
|--------|----------------------|---------------------|
| | Up to 50A | 65~150A |
| Summer | More than 30 seconds | More than 1 minute |
| Winter | | More than 2 minutes |

10 Leak test on installed piping

- ① Prohibit using compressed air or gas in leak test for thermoplastic piping systems. Conduct leak test under hydrostatic pressure. Apply hydrostatic pressure after releasing air in piping.
- ② Prohibit using leak detector including surface-activating agent. That can cause damage or crack on valves, pipes, and fittings.

11 Expansion and Contraction

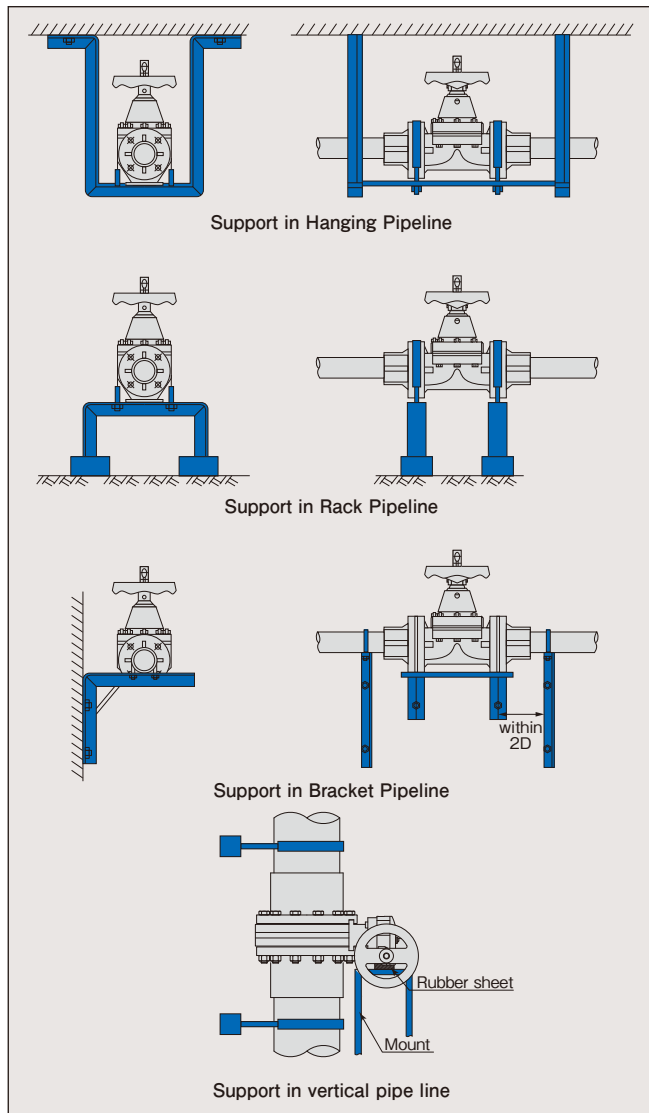
Linear expansion coefficient of plastic and temperature variation by fluid or change in atmosphere temperature cause thermal expansion & contraction, and tensile or compress stress on piping. Especially in case of installation of Eslon valve with metal piping, inlet and outlet around valves needs to be fixed not to be affected on valve as mechanical properties and loaded stress between plastic valve and metal piping absolutely differ.

12 Supporting

Support valve by proper method not to load excess stress.

- ① Support valve body, not at connection ends by union or other parts.
- ② In case of installation of Eslon valve with metal piping, support metal piping not to load on valve with concerning support position and method.

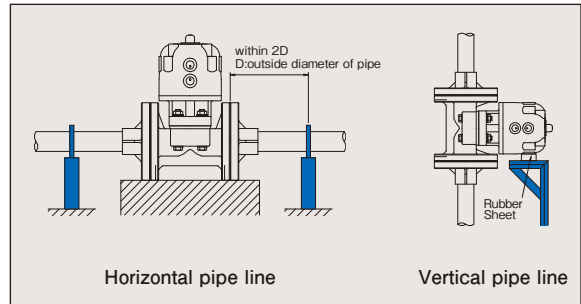
Standard Supporting Method(Manual Valve)



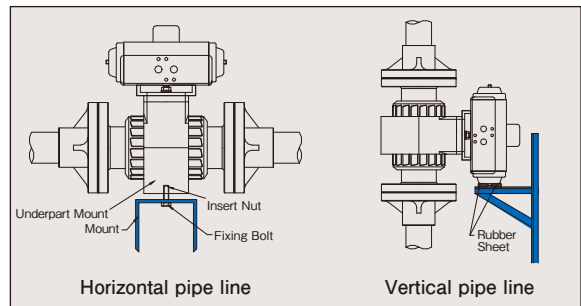
- ③ For flange type of valve, support by fixing valve flange with metal band and bolts. For union type of diaphragm valve, support by fixing with insert nuts at the bottom of valve body.
- ④ Support pipes of both sides of valve at the position within 2D (D : nominal size) distance from valve, separately from support of valve itself.
- ⑤ In case that pipe line or valve is vibrating, fix absolutely both of valve and piping.

Standard Supporting Method(Automatic Valve)

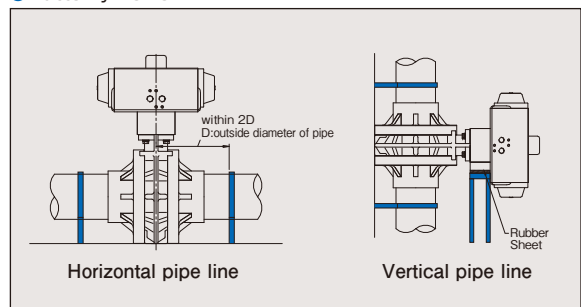
Diaphragm Valve



Ball Valve



Butterfly Valve



13 Thermal Insulation

Fluid might freeze up in valve when temperature is under freezing point of fluid and stop flowing. Install thermal insulation material such as glass wool or foamed urethane onto piping in those cases. Refer to

insulation handbook to consult for proper thickness of insulation.

PVDF valves correspond to the export restriction products according to the regulations of the Export Trade Control Order. The export certificate is needed when exporting.

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