

Series T772-773 - for compressed air and vacuum in technopolymer - G1/2" & G3/4"

General

The range of G1/2" and G3/4" pilot and solenoid operated poppet valves are manufactured with high impact resistant thermoplastic. The use of this materiel results in a versatile, lightweight and economical valve.

The traditional piston lip seal has been replaced with a rolling diaphragm, thereby eliminating frictional wear and tear to this seal. The valves (with the exception of certain vacuum models) also features a seal, which separates port 3 from the piston head. The inclusion of this seal has enhanced the valve's performance and allows the valve to be used as normally open (a configuration not possible in the Zama series). Solenoid operated valves (both internal and external pilot versions) are fitted with a quick exhaust unit, which reduces the return stroke

Solenoid operated valves (both internal and external pilot versions) are fitted with a quick exhaust unit, which reduces the return stroke operating time by 60%.

The bulk of the valves in this series use the MP type operator, the exception being internally piloted vacuum models, which use the MV operator. These operators differ from the M2 type in that they have self-tapping mounting screws for use in plastics.

The ordering code are referring to the solenoid valves with mechanics "MP" or "MV" assembled.

Coils are not included and have to be ordered separately (series 300, Section 1, General Catalogue), with the exception of the bistable versions which already include 24V DC Coils (N331.0A).

Coils 🔊 Nus homologated are also available. (See series 300).

Construction characteristics

| Springs | AISI 302 stainless steel |
|------------------------------|-------------------------------------|
| Diaphragm | Oil resistant rubber (NBR) |
| Body, operator and end cover | High impact resistant thermoplastic |
| Seals and poppets | NBR |
| Piston and shaft | Acetal resin |
| | |

Use and maintenance

These valves have a mean life of 10 to 15 million cycles under normal operating conditions.

Lubrication is not required for good operation but we recommend good filtration to avoid dirty deposit causing malfunction. Please ensure that the valve is being used according with the manufacturers specification, such as air pressure and temperature.

The exhaust port of the distributor has to be protected in a dusty and dirty environment.

For these products, according to the construction technique and special application, is not required any maintenance with parts replacement.

When necessary it is sufficient to clean the internal parts.

When it is used the solenoid valves with internal pilot, either for air or vacuum, inlet flow rate must be equal or higher that the required consumption flow rate.

Otherwise is better choose the external pilot version.

MINIMUM PILOTING PRESSURE DIAGRAM (Valves for compressed air) PNEUMATIC/SPRING AND EXTERNAL SOLENOID PILOT VERSION

Overall dimensions and technical information are provided solely for informative purposes and may be modified without notice







Coding: T772.32.11.1

| Operational characteristics | | |
|---|--|--|
| Fluid | Filtered air. No lubrication needed, if applied it shall be continuous | |
| Max working pressure (bar) | 10 | |
| Minimum piloting pressure (bar) | See diagram at general page | |
| Temperature °C | -5 ÷ +50 | |
| Flow rate at 6 bar with $\Delta p=1$ (NI/min) | 4100 | |
| Orifice size (mm) | 15 | |
| Working ports size | G1/2" | |
| Pilot ports size | G1/8" | |



Pneumatic - Spring



For compressed air - N.C. Inlet port 1 Outlet port 2 Exhaust port 3

12 -5 M 10

For compressed air - N.O. Inlet port 3 Outlet port 2 Outlet port 1

Coding:

FUNCTION

1AA =

1AC

12 - 2 W 10

T772.32.0.6.MP

Normally Open

Normally Closed

Weight 350 g

Solenoid-Spring - Internal pilot

| | Operational characteristics | |
|---|--|--|
| Fluid | Filtered air. No lubrication needed, if applied it shall be continuous | |
| Max working pressure (bar) | 10 | |
| Minimum piloting pressure (bar) | 2,5 | |
| Temperature °C | -5 ÷ +50 | |
| Flow rate at 6 bar with $\Delta p=1$ (NI/min) | 4100 | |
| Orifice size (mm) | 15 | |
| Working ports size | G1/2" | |
| Pilot ports size | G1/8" | |



Weight 390 g



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For compressed air - N.C. Inlet port 1 Outlet port 2 Exhaust port 3







Solenoid-Spring - External pilot

Coding: T772.32.0.1.MP

| Operational characteristics | | |
|---|--|--|
| Fluid | Filtered air. No lubrication needed, if applied it shall be continuous | |
| Max working pressure (bar) | 10 | |
| Minimum piloting pressure (bar) | See diagram at general page | |
| Temperature °C | -5 ÷ +50 | |
| Flow rate at 6 bar with $\Delta p=1$ (NI/min) | 4100 | |
| Orifice size (mm) | 15 | |
| Working ports size | G1/2" | |
| Pilot ports size | G1/8" | |

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For compressed air - N.C. Inlet port 1 Outlet port 2 Exhaust port 3

12 M 10

For compressed air - N.O. Inlet port 3 Outlet port 2 Outlet port 1

Weight 390 g

| Solenoid-Spring - Internal pilot with quick ex | haust | Cod | ling: | T772S.32.0. |
|--|--|-----|-------|-------------------------------------|
| Operat | ional characteristics | | FUNC | TION |
| Fluid | Filtered air. No lubrication needed, if applied it shall be continuous | 6 | 1AA | Normally Open |
| Max working pressure (bar) | 10 | | 1AC | Normally Closed |
| Minimum piloting pressure (bar) | 2,5 | | | |
| Temperature °C | -5 ÷ +50 | | | |
| Flow rate at 6 bar with $\Delta p=1$ (NI/min) | 4100 | | | |
| Orifice size (mm) | 15 | | | |
| Working ports size | G1/2" | | | |
| Pilot ports size | G1/8" | | | |



Weight 390 g



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For compressed air - N.C. Inlet port 1 Outlet port 2 Exhaust port 3







Coding: T772S.32.0.1.MP

Solenoid - Spring - External pilot with quick exhaust

| Operational characteristics | | |
|---|--|--|
| Fluid | Filtered air. No lubrication needed, if applied it shall be continuous | |
| Max working pressure (bar) | 10 | |
| Minimum piloting pressure (bar) | See diagram at general page | |
| Temperature °C | -5 ÷ +50 | |
| Flow rate at 6 bar with $\Delta p=1$ (NI/min) | 4100 | |
| Orifice size (mm) | 15 | |
| Working ports size | G1/2" | |
| Pilot ports size | G1/8" | |





Overall dimensions and technical information are provided solely for informative purposes and may be modified without notice

For compressed air - N.C. Inlet port 1 Outlet port 2 Exhaust port 3

12 M 10

For compressed air - N.O. Inlet port 3 Outlet port 2 Outlet port 1



·N.C.

Weight 390 g

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Pneumatic - Spring

Coding: T772/V.32.11.1

| Operational characteristics | | |
|---------------------------------|----------|--|
| Fluid | Vacuum | |
| Minimum piloting pressure (bar) | 2,5 | |
| Temperature °C | -5 ÷ +50 | |
| Orifice size (mm) | 15 | |
| Working ports size | G1/2" | |
| Pilot ports size | G1/8" | |



G 1/8



For vacuum - N.C. Exhaust port 3 Outlet port 2 Pump 1



For vacuum - N.O. Outlet port 1 Outlet port 2 Pump 3

Weight 350 g

| | Solenoid-Spring - Internal pilot | | Cod | ling: | T77 | 72/V.32.0. @ .MV |
|---|----------------------------------|----------------------|-----|-------|------|-------------------------|
| | Operati | onal characteristics | | FUNC | TION | |
| | Fluid | Vacuum | 6 | 1AA | = | Normally Open |
| - | Temperature °C | -5 ÷ +50 | | 1AC | = | Normally Closed |
| 1 | Orifice size (mm) | 15 | | | | |
| 1 | Working ports size | G1/2" | | | | |
| | Pilot ports size | G1/8" | | | | |





Overall dimensions and technical information are provided solely for informative purposes and may be modified without notice

For vacuum - N.O. Exhaust port 3 Outlet port 2 Pump 1



For vacuum - N.O. Outlet port 1 Outlet port 2 Pump 3



Weight 390 g



Coding: T772/V.32.0.1.MP

Solenoid-Spring - External pilot

| Operational characteristics | |
|---------------------------------|----------|
| Fluid | Vacuum |
| Minimum piloting pressure (bar) | 2,5 |
| Temperature °C | -5 ÷ +50 |
| Orifice size (mm) | 15 |
| Working ports size | G1/2" |
| Pilot ports size | G1/8" |





For vacuum - N.O. Outlet port 1 Outlet port 2 Pump 3

M 10 12

For vacuum - N.C. Exhaust port 3 Outlet port 2 Pump 1



oding: T772/VS.32.0.1.MP

Weight 390 g

| Solenoid - Spring - External pilot with quick exhaust | | Co |
|---|-----------------------|----|
| Operati | ional characteristics | |
| Fluid | Vacuum | |
| Minimum piloting pressure (bar) | 2,5 | |
| Temperature °C | -5 ÷ +50 | |
| Orifice size (mm) | 15 | |
| Working ports size | G1/2" | |
| Pilot ports size | G1/8" | |

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Weight 390 g

1 54 M5 (Quick exhaust port) ЬŢ H ⊕Ł G 1/8 ſΟ Ы 155 ٩ 06.5 Ð 101 2 1 55 Œ 22.5 G 1/2 G 1/2 ø55 63

Overall dimensions and technical information are provided solely for informative purposes and may be modified without notice

For vacuum - N.O. Outlet port 1 Outlet port 2 Pump 3



For vacuum - N.C. Exhaust port 3 Outlet port 2 Pump 1



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Pneumatic - Spring

Coding: T773.32.11.1

| Operational characteristics | | |
|---|--|--|
| Fluid | Filtered air. No lubrication needed, if applied it shall be continuous | |
| Max working pressure (bar) | 10 | |
| Minimum piloting pressure (bar) | See diagram at general page | |
| Temperature °C | -5 ÷ +50 | |
| Flow rate at 6 bar with $\Delta p=1$ (NI/min) | 7500 | |
| Orifice size (mm) | 20 | |
| Working ports size | G3/4" | |
| Pilot ports size | G1/8" | |





For compressed air - N.C. Inlet port 1 Outlet port 2 Exhaust port 3

12 -W 10

For compressed air - N.O. Inlet port 3 Outlet port 2 Outlet port 1

12

Weight 330 g

Solenoid-Spring - Internal pilot

| Operational characteristics | | |
|---|--|------------|
| Fluid | Filtered air. No lubrication needed, if applied it shall be continuous |] G |
| Max working pressure (bar) | 10 | |
| Minimum piloting pressure (bar) | 2,5 | 7 |
| Temperature °C | -5 ÷ +50 | 7 |
| Flow rate at 6 bar with $\Delta p=1$ (NI/min) | 7500 | |
| Orifice size (mm) | 20 | 7 |
| Working ports size | G3/4" | 7 |
| Pilot ports size | G1/8" | |



M 10

FUNCTION 1AA = Normally Open 1AC = Normally Closed





Overall dimensions and technical information are provided solely for informative purposes and may be modified without notice

For compressed air - N.C. Inlet port 1 Outlet port 2 Exhaust port 3



For compressed air - N.O. Inlet port 3 Outlet port 2 Outlet port 1

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Weight 370 g

Solenoid-Spring - External pilot

| Operational characteristics | | |
|---|--|--|
| Fluid | Filtered air. No lubrication needed, if applied it shall be continuous | |
| Max working pressure (bar) 10 | | |
| Minimum piloting pressure (bar) | See diagram at general page | |
| Temperature °C | -5 ÷ +50 | |
| Flow rate at 6 bar with $\Delta p=1$ (NI/min) | 7500 | |
| Orifice size (mm) | 20 | |
| Working ports size | G3/4" | |
| Pilot ports size | G1/8" | |





PNEUMAX

Coding: T773.32.0.1.MP

For compressed air - N.C. Inlet port 1 Outlet port 2 Exhaust port 3

12 M 10

For compressed air - N.O. Inlet port 3 Outlet port 2 Outlet port 1

Weight 370 g

Solenoid-Spring - Internal pilot with quick exhaust

| Operational characteristics | | |
|---|--|--|
| Fluid | Filtered air. No lubrication needed, if applied it shall be continuous | |
| Max working pressure (bar) | 10 | |
| Minimum piloting pressure (bar) | 2,5 | |
| Temperature °C | -5 ÷ +50 | |
| Flow rate at 6 bar with $\Delta p=1$ (NI/min) | 7500 | |
| Orifice size (mm) | 20 | |
| Working ports size | G3/4" | |
| Pilot ports size | G1/8" | |

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= 54 Ð M5 (Quick exhaust port) H Ы G 1/8 φ Â ٩ 155 06.5 Ð 101 2 X 1 55 Ð 22.5 t G 3/4 G 3/4 63 ø55

Overall dimensions and technical information are provided solely for informative purposes and may be modified without notice

Coding: T773S.32.0.

FUNCTION

 IAA
 Normally Open

 IAC
 Normally Closed

For compressed air - N.C. Inlet port 1 Outlet port 2 Exhaust port 3







Solenoid - Spring - External pilot with quick exhaust

Coding: T773S.32.0.1.MP

| Operational characteristics | | |
|---|--|--|
| Fluid | Filtered air. No lubrication needed, if applied it shall be continuous | |
| Max working pressure (bar) | 10 | |
| Minimum piloting pressure (bar) | See diagram at general page | |
| Temperature °C | -5 ÷ +50 | |
| Flow rate at 6 bar with $\Delta p=1$ (NI/min) | 7500 | |
| Orifice size (mm) | 20 | |
| Working ports size | G3/4" | |
| Pilot ports size | G1/8" | |



Overall dimensions and technical information are provided solely for informative purposes and may be modified without notice

For compressed air - N.C. Inlet port 1 Outlet port 2 Exhaust port 3

12 M 10

For compressed air - N.O. Inlet port 3 Outlet port 2 Outlet port 1

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Weight 370 g



Coding: T773/V.32.11.1

| Pneumatic - Spri | ng |
|------------------|----|
|------------------|----|

| Operational characteristics | | |
|---------------------------------|----------|--|
| Fluid | Vacuum | |
| Minimum piloting pressure (bar) | 2,5 | |
| Temperature °C | -5 ÷ +50 | |
| Orifice size (mm) | 20 | |
| Working ports size | G3/4" | |
| Pilot ports size | G1/8" | |





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For vacuum - N.C. Exhaust port 3 Outlet port 2 Pump 1

, W 10 12-5

For vacuum - N.O. Outlet port 1 Outlet port 2 Pump 3

Weight 330 g

| Solenoid-Spring - Internal | pilot | | Cod | ling: | Τ7 | 73/V.32.0. @ .MV |
|----------------------------|----------|---------------------|-----|-------|-------|-------------------------|
| | Operatio | nal characteristics | | FUN | CTION | I |
| Fluid | | Vacuum | | 1AA | = | Normally Open |
| Temperature °C | | -5 ÷ +50 | | 1AC | = | Normally Closed |
| Orifice size (mm) | | 20 | | | | |
| Working ports size | | G3/4" | | | | |
| Pilot ports size | | G1/8" | | | | |



#3 54 M5 (Quick exhaust port) ⊣ ∃⊖ Н Ы G 1/8 155 3 06.5 \oplus 101 2 V 1 55 Œ 22.5 G 3/4 G 3/4 63 ø55

Overall dimensions and technical information are provided solely for informative purposes and may be modified without notice

For vacuum - N.O. Exhaust port 3 Outlet port 2 Pump 1



For vacuum - N.O. Outlet port 1 Outlet port 2 Pump 3



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Weight 370 g



Solenoid-Spring - External pilot

| Coding: | T773/V.32 | .0.1.MP |
|---------|-----------|---------|
|---------|-----------|---------|

| Operational characteristics | | |
|---------------------------------|----------|--|
| Fluid | Vacuum | |
| Minimum piloting pressure (bar) | 2,5 | |
| Temperature °C | -5 ÷ +50 | |
| Orifice size (mm) | 20 | |
| Working ports size | G3/4" | |
| Pilot ports size | G1/8" | |



For vacuum - N.O. Outlet port 1 Outlet port 2 Pump 3

W 10 12

For vacuum - N.C. Exhaust port 3 Outlet port 2 Pump 1

M 10 12

T773/VS.32.0.1.MP

Weight 350 g

| Solenoid - Spring - External pilot with quick exhaust | | Coding: |
|---|-----------------------|---------|
| Operat | ional characteristics | |
| Fluid | Vacuum | |
| Minimum piloting pressure (bar) | 2,5 | |
| Temperature °C | -5 ÷ +50 | |
| Orifice size (mm) | 20 | |
| Working ports size | G3/4" | |
| Pilot ports size | G1/8" | |

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[±] 54 ∃⊕F M5 (Quick exhaust port) \pm ŧ ГО G 1/8 Ŧ D Ĩ U C 155 ٩ 06.5 Ø 101 2 X 1 55 Ê 22.5 G 3/4 G 3/4 ø55 63

Overall dimensions and technical information are provided solely for informative purposes and may be modified without notice

For vacuum - N.O. Outlet port 1 Outlet port 2 Pump 3



For vacuum - N.C. Exhaust port 3 Outlet port 2 Pump 1

Weight 350 g



Coding: T772.32.0.1.BP

Bistable for compressed air - G1/2"

| Operational characteristics | | |
|---|--|--|
| Fluid | Filtered air. No lubrication needed, if applied it shall be continuous | |
| Max working pressure (bar) | 10 | |
| Minimum piloting pressure (bar) | 2 | |
| Temperature °C | -5 ÷ +50 | |
| Flow rate at 6 bar with $\Delta p=1$ (NI/min) | 4100 | |
| Orifice size (mm) | 15 | |
| Working ports size | G1/2" | |
| Pilot ports size | G1/8" | |



G 1/8"





For compressed air - N.C. Inlet port 1 Outlet port 2 Exhaust port 3



For compressed air - N.O. Inlet port 3 Outlet port 2 Outlet port 1

Coding:



T773.32.0.1.BP

Weight 550 g

Bistable for compressed air - G3/4"

| Operational characteristics | | | |
|--|----------|--|--|
| Fluid Filtered air. No lubrication needed, if applied it shall be continuous | | | |
| Max working pressure (bar) | 10 | | |
| Minimum piloting pressure (bar) | 2 | | |
| Temperature°C | -5 ÷ +50 | | |
| Flow rate at 6 bar with $\Delta p=1$ (NI/min) | 7500 | | |
| Orifice size (mm) | 15 | | |
| Working ports size | G3/4" | | |
| Pilot ports size | G1/8" | | |

Weight 550 g





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For compressed air - N.C. Inlet port 1 Outlet port 2 Exhaust port 3







Bistable for compressed air with quick exhaust - G1/2"

Coding: T772S.32.0.1.BP

| Operational characteristics | | |
|--|----------|--|
| Fluid Filtered air. No lubrication needed, if applied it shall be continuous | | |
| Max working pressure (bar) | 10 | |
| Minimum piloting pressure (bar) 2 | | |
| Temperature °C | -5 ÷ +50 | |
| Flow rate at 6 bar with $\Delta p=1$ (NI/min) | 4100 | |
| Orifice size (mm) | 15 | |
| Working ports size | G1/2" | |
| Pilot ports size | G1/8" | |

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For compressed air - N.C. Inlet port 1 Outlet port 2 Exhaust port 3

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For compressed air - N.O. Inlet port 3 Outlet port 2 Outlet port 1

Coding:



T773S.32.0.1.BP

Weight 550 g

Bistable for compressed air with quick exhaust - G3/4"

G 1/8"

| Operational characteristics | | |
|---|--|--|
| Fluid | Filtered air. No lubrication needed, if applied it shall be continuous | |
| Max working pressure (bar) | 10 | |
| Minimum piloting pressure (bar) | 2 | |
| Temperature °C | -5 ÷ +50 | |
| Flow rate at 6 bar with $\Delta p=1$ (NI/min) | 7500 | |
| Orifice size (mm) | 15 | |
| Working ports size | G3/4" | |
| Pilot ports size | G1/8" | |





Overall dimensions and technical information are provided solely for informative purposes and may be modified without notice

For compressed air - N.C. Inlet port 1 Outlet port 2 Exhaust port 3



For compressed air - N.O. Inlet port 3 Outlet port 2 Outlet port 1



Weight 550 g



T772/V.32.0.1.BP Coding:

Bistable for vacuum - G1/2"

| Operational characteristics | | |
|---------------------------------|----------|--|
| Fluid | Vacuum | |
| Minimum piloting pressure (bar) | 2,5 | |
| Temperature °C | -5 ÷ +50 | |
| Orifice size (mm) | 15 | |
| Working ports size | G1/2" | |
| Pilot ports size | G1/8" | |



For vacuum - N.C. Pump 1 Outlet port 2 Exhaust port 3

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For vacuum - N.O. Pump 3 Outlet port 2 Outlet port 1

10 ? **F** M١

Weight 550 g

T773/V.32.0.1.BP Coding:

Bistable for vacuum - G3/4"

| Operational characteristics | |
|---------------------------------|----------|
| Fluid | Vacuum |
| Minimum piloting pressure (bar) | 2,5 |
| Temperature °C | -5 ÷ +50 |
| Orifice size (mm) | 15 |
| Working ports size | G3/4" |
| Pilot ports size | G1/8" |

Weight 550 g





Overall dimensions and technical information are provided solely for informative purposes and may be modified without notice

For vacuum - N.C. Pump 1 Outlet port 2 . Exhaust port 3



For vacuum - N.O. Pump 3 Outlet port 2 . Outlet port 1



Bistable for vacuum with quick exhaust - G1/2"

G 1/8"

T772/VS.32.0.1.BP Coding:

| Operational characteristics | |
|---------------------------------|----------|
| Fluid | Vacuum |
| Minimum piloting pressure (bar) | 2,5 |
| Temperature °C | -5 ÷ +50 |
| Orifice size (mm) | 15 |
| Working ports size | G1/2" |
| Pilot ports size | G1/8" |







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For vacuum - N.O. Pump 3 Outlet port 2 Exhaust port 3

Coding:



T773/VS.32.0.1.BP

Weight 550 g

Pilot ports size

Bistable for vacuum with quick exhaust - G3/4" **Operational characteristics** Fluid Vacuum Minimum piloting pressure (bar) 2.5 Temperature °C -5 ÷ +50 Orifice size (mm) 15 Working ports size G3/4"





Overall dimensions and technical information are provided solely for informative purposes and may be modified without notice

G1/8"

For vacuum - N.C. Pump 1 Outlet port 2 . Exhaust port 3



For vacuum - N.O. Pump 3 Outlet port 2 Outlet port 1



Weight 550 g