



## Series T400

The Series **T400** involves a wide range of valves and solenoid valves, with several type of acting, with connections from **G1/8" (T488)** and **G1/4" (T424)**, are manufactured with high performance technopolymer.

The use of technopolymer has resulted in a light weight product which can be offered to the market at very interesting prices.

The gang mounted solenoid valves are available with the traditional manifold obtained from bored square bar of series 600 and with the extruded aluminium base allowing a unique inlet port conveying the exhausts. The base is also prearranged to be fixed on DIN 46277/3 guide.

The Valves and Solenoid valves **G1/8" (T488)** are: 5 ways function, pneumatically operated, single solenoid (monostable) mechanical or pneumatic spring return, spring or pneumatic return, with 2 coils (bistable) and in 5 ways 3 positions version with closed, open and pressurized centres.

The solenoid valves are supplied complete with coil (see Series 300) so that the tension has to be added to the solenoid valve code:

**M9** = coil 24 V D.C. (rating power 2 Watt)  
**M11** = coil 24 V D.C. (rating power 3.8 watt)  
**M56** = coil 24 V 50/60 Hz (rating power 9 VA)  
**M57** = coil 110 V 50/60 Hz (rating power 9 VA)  
**M58** = coil 230 V 50/60 Hz (rating power 9 VA)

The Solenoid valves **G1/4" (T424)**, are manufactured, depending on version and actuation (manual, pneumatic, or electrical), and self aligning (pneumatic-electric or spring) 3/2, 5/2 and 5/3 ways function, (monostable), (bistable).

The solenoid valves are supplied complete with coil so that the tension has to be added to the solenoid valve code.

**B04** = coil 12 V D.C.  
**B05** = coil 24 V D.C.  
**B09** = coil 24 V (2W) D.C.  
**B56** = coil 24 V 50/60 Hz  
**B57** = coil 110 V 50/60 Hz  
**B58** = coil 230 V 50/60 Hz

"Shifting time of pneumatic directional control valves or moving parts, logic devices were measured in accordance to ISO 12238:2001"

### Construction characteristics

Body	Technopolymer
Spacers	Technopolymer
Seals	NBR
Pistons seal	NBR
Springs	AISI 302 stainless steel
Operators	Technopolymer
Pistons	Technopolymer
Spools	Nickel - plated steel / Technopolymer

### Maximum fitting torque

Thread	Maximum torque (Nm)
G1/8"	4
G1/4"	9

### Use and maintenance

This valves have an average life of 15 million cycles depending on the application and air quality.

Filtered and lubricated air using specified lubricants will reduce the wear of the seals and ensures long and trouble free operation.

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.

Repair kits including the spool complete with seals are available for overhauling the valves.

However, although this is a simple operation it should be carried out by a competent person.

**ATTENTION:** use hydraulic oil class H for lubrication such as CASTROL MAGNA SW32.

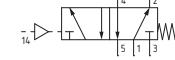
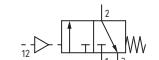
### Pneumatic - Spring

#### Operational characteristics

Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p = 1$ (NL/min)	620
Orifice size (mm)	6
Working ports size	G 1/8"

Coding: T488.11.11

T	TYPE
	32 = 3 ways, 2 positions
	52 = 5 ways, 2 positions

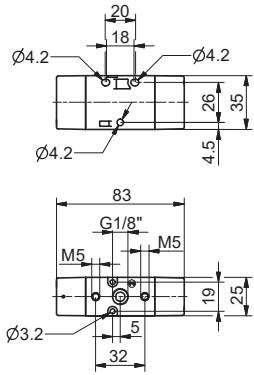


3/2 ways



Weight 69 g  
Minimum working pressure 2,5 bar

T488.32.11.1

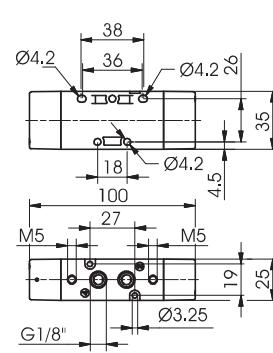


5/2 ways



Weight 83 g  
Minimum working pressure 2,5 bar

T488.52.11.1



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AIR DISTRIBUTION

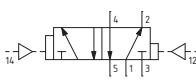
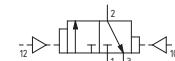
### Pneumatic-Differential

#### Operational characteristics

Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p = 1$ (NL/min)	620
Orifice size (mm)	6
Working ports size	G 1/8"

Coding: T488.11.12

T	TYPE
	32 = 3 ways, 2 positions
	52 = 5 ways, 2 positions

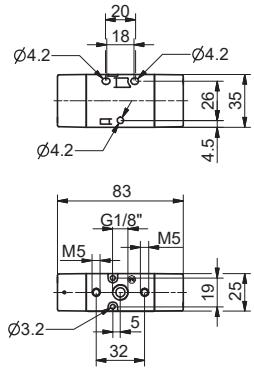


3/2 ways



Weight 69 g

T488.32.11.12

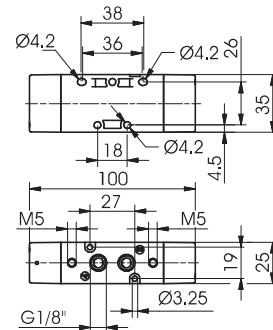


5/2 ways



Weight 83 g

T488.52.11.12



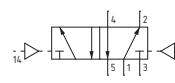
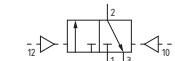
### Pneumatic - Pneumatic

#### Operational characteristics

Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p = 1$ (NL/min)	620
Orifice size (mm)	6
Working ports size	G 1/8"

Coding: T488.11.11

T	TYPE
	32 = 3 ways, 2 positions
	52 = 5 ways, 2 positions

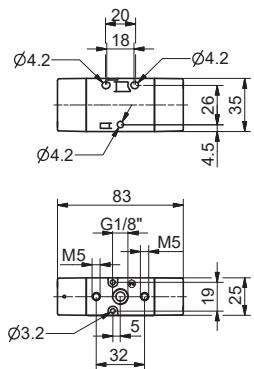


3/2 ways



Weight 68 g  
Minimum working pressure 2 bar

T488.32.11.11

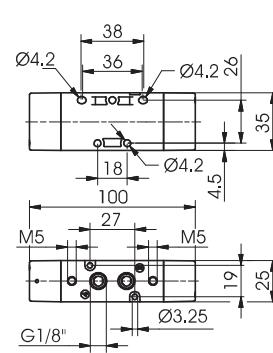


5/2 ways



Weight 83 g  
Minimum working pressure 2 bar

T488.52.11.11





## Spool type valves and solenoid valves

Series T400 - G1/8"

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AIR DISTRIBUTION

### Pneumatic-Pneumatic 5/3

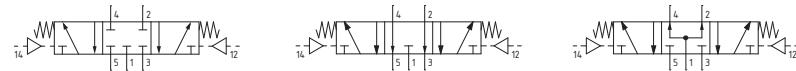
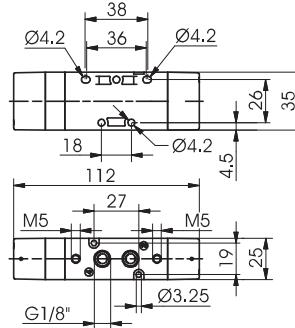
Coding: T488.53.F.11.11

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p = 1$ (NL/min)	410
Orifice size (mm)	6
Working ports size	G 1/8"

F	FUNCTION
	31 = Closed centres
32 = Open centres	
33 = Pressured centres	



Weight 140 g  
Minimum working pressure 3 bar



► Solenoid-Spring (Self feeding)

Coding: T488.T.0.1.V

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p = 1$ (NL/min)	620
Orifice size (mm)	6
Working ports size	G 1/8"
Response time according to ISO 12238, activation time (ms)	23,4 (3 ways) 22,8 (5 ways)
Response time according to ISO 12238, deactivation time (ms)	41,0 (3 ways) 44,5 (5 ways)

TYPE
T
32 = 3 ways, 2 positions
52 = 5 ways, 2 positions
VOLTAGE
M9 = 24 V.D.C.
M11 = 24 V.D.C.
M56 = 24 V 50/60 Hz
M57 = 110 V 50/60 Hz
M58 = 230 V 50/60 Hz



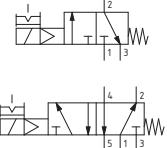
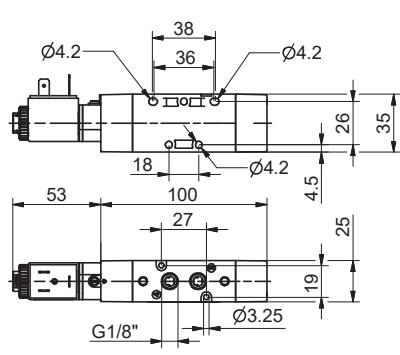
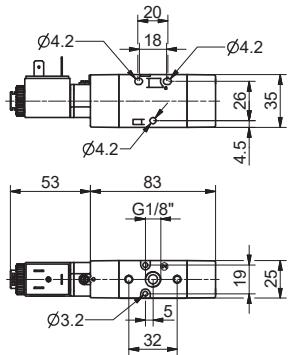
Weight 160 g  
Minimum working pressure 2,5 bar

T488.32.0.1.V



Weight 190 g  
Minimum working pressure 2,5 bar

T488.52.0.1.V



► Solenoid-Spring (External feeding)

Coding: T488.T.0.1.E.V

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p = 1$ (NL/min)	620
Orifice size (mm)	6
Working ports size	G 1/8"
Response time according to ISO 12238, activation time (ms)	23,4 (3 ways) 22,8 (5 ways)
Response time according to ISO 12238, deactivation time (ms)	41,0 (3 ways) 44,5 (5 ways)

TYPE
T
32 = 3 ways, 2 positions
52 = 5 ways, 2 positions
VOLTAGE
M9 = 24 V.D.C.
M11 = 24 V.D.C.
M56 = 24 V 50/60 Hz
M57 = 110 V 50/60 Hz
M58 = 230 V 50/60 Hz



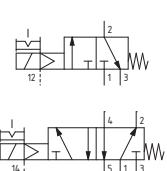
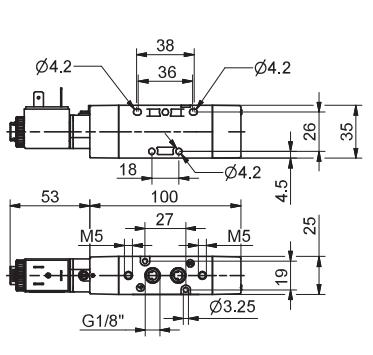
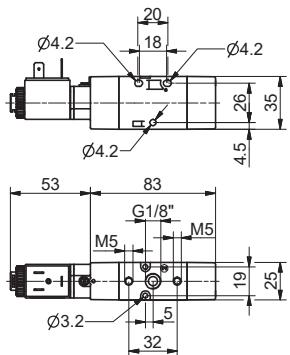
Weight 160 g  
Minimum working pressure 2,5 bar

T488.32.0.1.E.V



Weight 190 g  
Minimum working pressure 2,5 bar

T488.52.0.1.E.V





## Spool type valves and solenoid valves

### Series T400 - G1/8"

#### Solenoid-Differential (Self feeding)

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p = 1$ (NL/min)	620
Orifice size (mm)	6
Working ports size	G 1/8"
Response time according to ISO 12238, activation time (ms)	31.1 (3 ways) 27.9 (5 ways)
Response time according to ISO 12238, deactivation time (ms)	35.0 (3 ways) 34.5 (5 ways)

Coding: T488.T.0.12.V

TYPE	
<b>T</b>	32 = 3 ways, 2 positions 52 = 5 ways, 2 positions
VOLTAGE	
<b>M9</b>	= 24V D.C.
<b>M11</b>	= 24V D.C.
<b>M56</b>	= 24V 50/60Hz
<b>M57</b>	= 110V 50/60Hz
<b>M58</b>	= 230V 50/60Hz



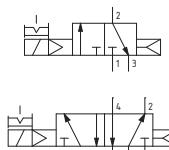
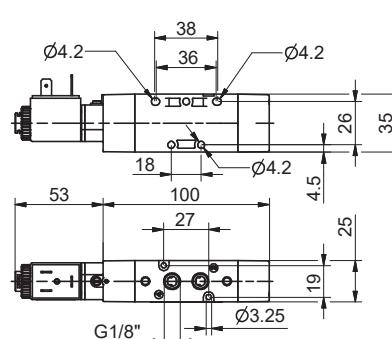
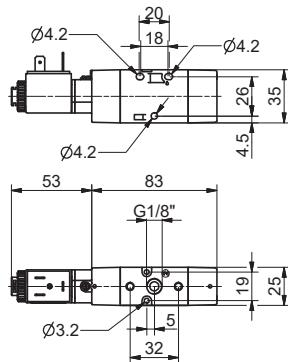
Weight 160 g  
Minimum working pressure 2,5 bar

T488.32.0.12.V



Weight 190 g  
Minimum working pressure 2,5 bar

T488.52.0.12.V



#### Solenoid-Differential (External feeding)

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p = 1$ (NL/min)	620
Orifice size (mm)	6
Working ports size	G 1/8"
Response time according to ISO 12238, activation time (ms)	31.1 (3 ways) 27.9 (5 ways)
Response time according to ISO 12238, deactivation time (ms)	35.0 (3 ways) 34.5 (5 ways)

Coding: T488.T.0.12E.V

TYPE	
<b>T</b>	32 = 3 ways, 2 positions 52 = 5 ways, 2 positions
VOLTAGE	
<b>M9</b>	= 24V D.C.
<b>M11</b>	= 24V D.C.
<b>M56</b>	= 24V 50/60Hz
<b>M57</b>	= 110V 50/60Hz
<b>M58</b>	= 230V 50/60Hz



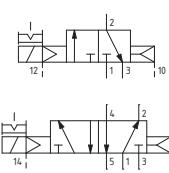
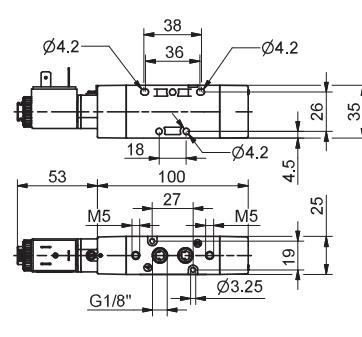
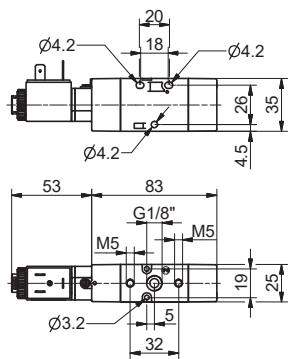
Weight 160 g  
Minimum working pressure 2,5 bar

T488.32.0.12.E.V



Weight 190 g  
Minimum working pressure 2,5 bar

T488.52.0.12.E.V



Coding: T488.T.0.0.V

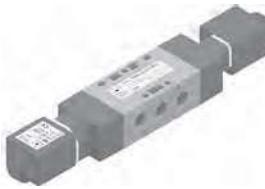
Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p = 1$ (NL/min)	620
Orifice size (mm)	6
Working ports size	G 1/8"
Response time according to ISO 12238, activation time (ms)	18,8 (3 ways) 18,0 (5 ways)
Response time according to ISO 12238, deactivation time (ms)	18,0 (3 ways) 19,1 (5 ways)

TYPE
<input checked="" type="checkbox"/> <b>T</b> 32 = 3 ways, 2 positions 52 = 5 ways, 2 positions
<b>VOLTAGE</b>
<input checked="" type="checkbox"/> <b>M9</b> = 24V.D.C.
<input checked="" type="checkbox"/> <b>M11</b> = 24V.D.C.
<input checked="" type="checkbox"/> <b>M56</b> = 24V 50/60Hz
<input checked="" type="checkbox"/> <b>M57</b> = 110V 50/60Hz
<input checked="" type="checkbox"/> <b>M58</b> = 230V 50/60Hz



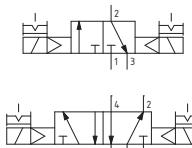
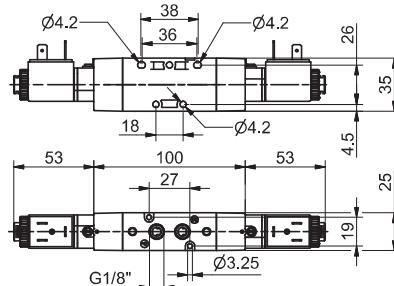
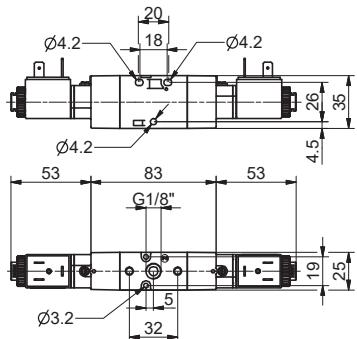
Weight 250 g  
Minimum working pressure 2 bar

T488.32.0.0.V



Weight 290 g  
Minimum working pressure 2 bar

T488.52.0.0.V



### Solenoid-Solenoid (External feeding)

Coding: T488.T.0.0.E.V

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p = 1$ (NL/min)	620
Orifice size (mm)	6
Working ports size	G 1/8"
Response time according to ISO 12238, activation time (ms)	18,8 (3 ways) 18,0 (5 ways)
Response time according to ISO 12238, deactivation time (ms)	18,0 (3 ways) 19,1 (5 ways)

TYPE
<input checked="" type="checkbox"/> <b>T</b> 32 = 3 ways, 2 positions 52 = 5 ways, 2 positions
<b>VOLTAGE</b>
<input checked="" type="checkbox"/> <b>M9</b> = 24V.D.C.
<input checked="" type="checkbox"/> <b>M11</b> = 24V.D.C.
<input checked="" type="checkbox"/> <b>M56</b> = 24V 50/60Hz
<input checked="" type="checkbox"/> <b>M57</b> = 110V 50/60Hz
<input checked="" type="checkbox"/> <b>M58</b> = 230V 50/60Hz



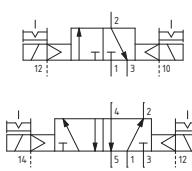
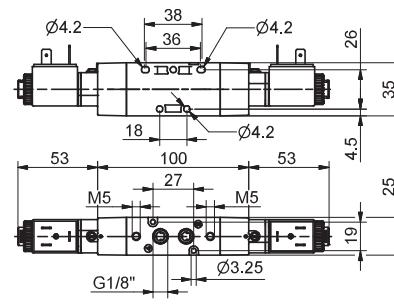
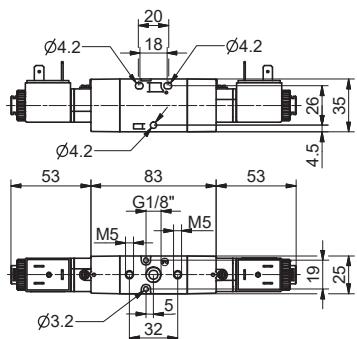
Weight 250 g  
Minimum working pressure 2 bar

T488.32.0.0.E.V



Weight 290 g  
Minimum working pressure 2 bar

T488.52.0.0.E.V





## Spool type valves and solenoid valves

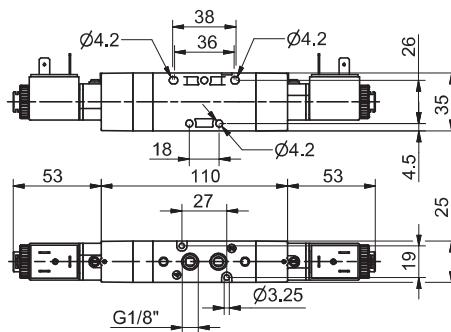
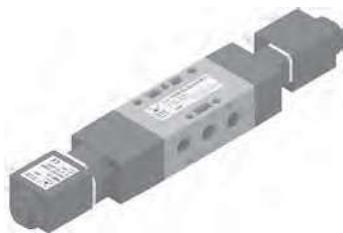
### Series T400 - G1/8"

#### Solenoid-Solenoid 5/3 (Self feeding)

Coding: T488.53.F.0.0.V

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p = 1$ (NL/min)	410
Orifice size (mm)	6
Working ports size	G 1/8"
Response time according to ISO 12238, activation time (ms)	21,3 (closed centres) 21,5 (open centres) 19,5 (pressured centres)
Response time according to ISO 12238, deactivation time (ms)	37,0 (closed centres) 34,5 (open centres) 37,3 (pressured centres)

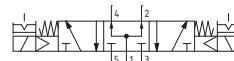
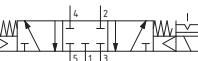
FUNCTION	
<b>F</b>	31 = Closed centres
	32 = Open centres
	33 = Pressured centres
VOLTAGE	
<b>V</b>	M9 = 24VDC.
	M11 = 24VDC.
	M56 = 24V 50/60Hz
	M57 = 110V 50/60Hz
	M58 = 230V 50/60Hz
Minimum working pressure 3 bar	
Weight 330 g	



T488.53.31.0.0.V

T488.53.32.0.0.V

T488.53.33.0.0.V

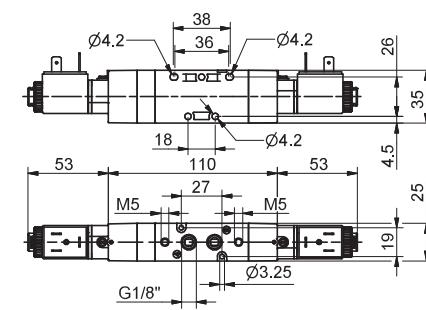
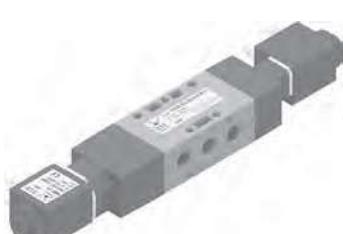


#### Solenoid-Solenoid 5/3 (External feeding)

Coding: T488.53.F.0.0.E.V

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p = 1$ (NL/min)	410
Orifice size (mm)	6
Working ports size	G 1/8"
Response time according to ISO 12238, activation time (ms)	21,3 (closed centres) 21,5 (open centres) 19,5 (pressured centres)
Response time according to ISO 12238, deactivation time (ms)	37,0 (closed centres) 34,5 (open centres) 37,3 (pressured centres)

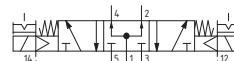
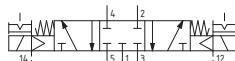
FUNCTION	
<b>F</b>	31 = Closed centres
	32 = Open centres
	33 = Pressured centres
VOLTAGE	
<b>V</b>	M9 = 24VDC.
	M11 = 24VDC.
	M56 = 24V 50/60Hz
	M57 = 110V 50/60Hz
	M58 = 230V 50/60Hz
Minimum working pressure 3 bar	
Weight 330 g	



T488.53.31.0.0.E.V

T488.53.32.0.0.E.V

T488.53.33.0.0.E.V

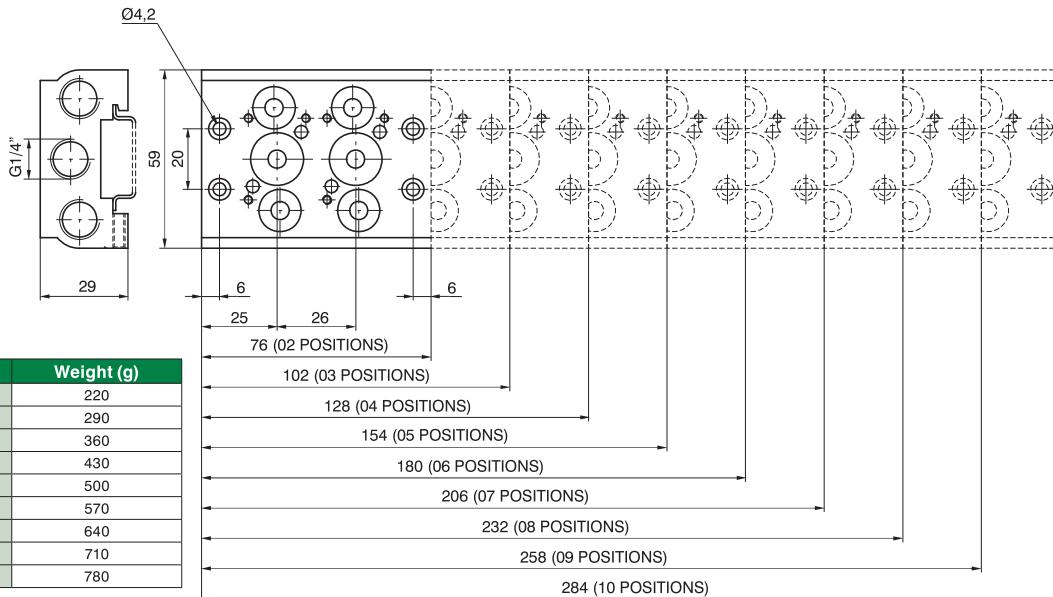


► Collectors

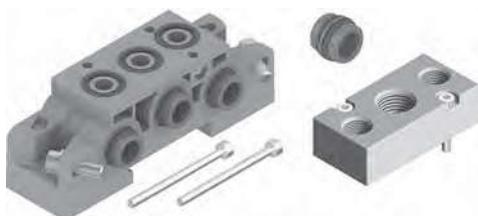


Coding: T488.N

N	NO. POSITIONS
	02 = 2 positions
	03 = 3 positions
	04 = 4 positions
	05 = 5 positions
	06 = 6 positions
	07 = 7 positions
	08 = 8 positions
	09 = 9 positions
	10 = 10 positions



► Modular base

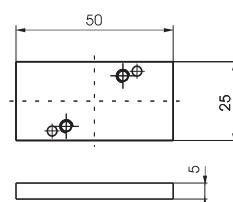


Coding: T488.T

T	TYPE
	01 = Single complete base
	01K = Complete modular bases (batches of 20 pieces)
	30K = Hollow bush, complete with O-rings (No. 50 pieces)
	31K = Blank bush, complete with O-rings (No. 50 pieces)
	32K = Intermediate air intake with screw (No. 5 pieces)
	33 = Screw to suite solenoid valves (No. 50 pieces)
	34 = Screw for joining bases (No. 50 pieces)
	35 = Washer for screw for joining bases (No. 50 pieces)
	36 = OR (No. 50 pieces)

► Closing plate

Coding: T488.00



Weight 25 g

### Solenoid-Spring (Self feeding)

**Coding: T424.T.0.1.V**

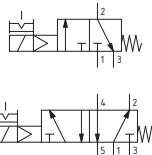
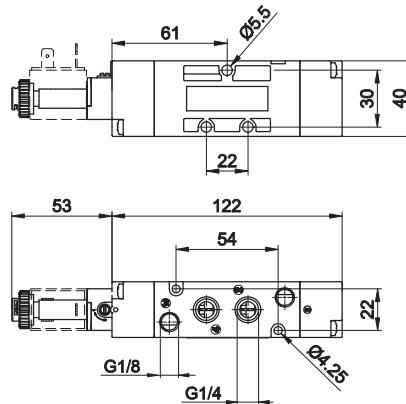
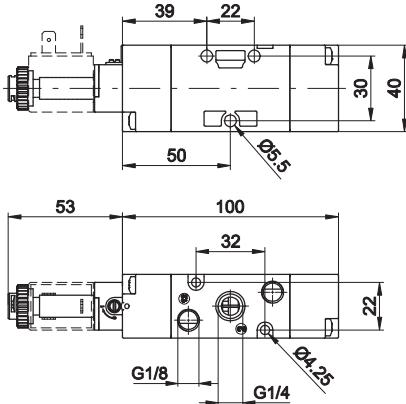
Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p=1$ (NL/min)	1050
Orifice size (mm)	8.5
Working ports size	G 1/4"


Weight 205 g  
Minimum pilot pressure 2,5 bar

T424.32.0.1.V


Weight 235 g  
Minimum pilot pressure 2,5 bar

T424.52.0.1.V



### Solenoid-Spring (External feeding)

**Coding: T424.T.0.1.E.V**

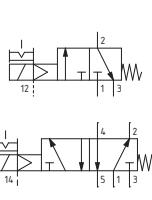
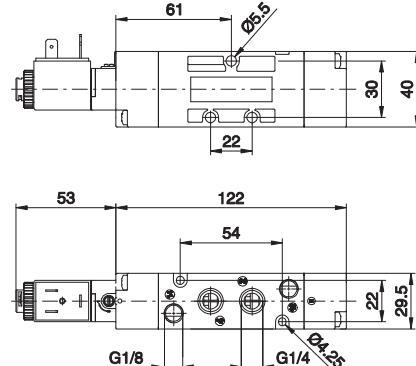
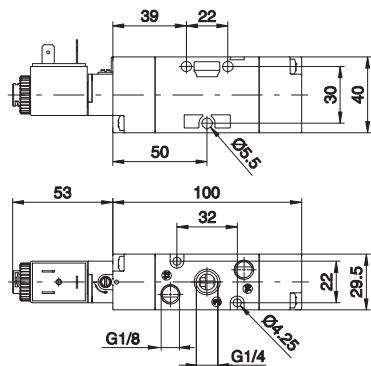
Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p=1$ (NL/min)	1050
Orifice size (mm)	8.5
Working ports size	G 1/4"
Pilot ports size	G 1/8"


Weight 205 g  
Minimum pilot pressure 2,5 bar

T424.32.0.1.E.V


Weight 235 g  
Minimum pilot pressure 2,5 bar

T424.52.0.1.E.V



► Solenoid-Differential (Self feeding)

Coding: T424.T.0.12.V

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p = 1$ (NL/min)	1050
Orifice size (mm)	8.5
Working ports size	G 1/4"



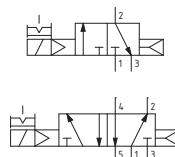
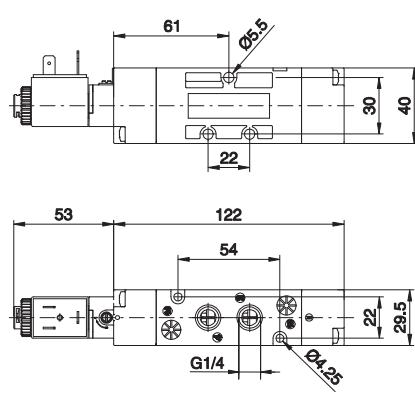
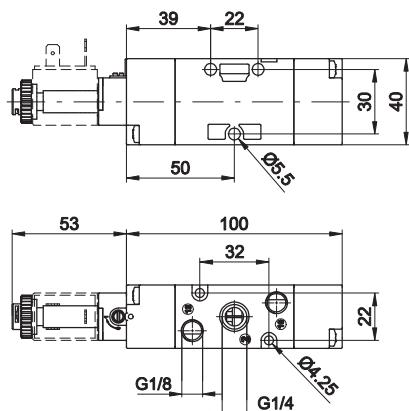
Weight 205 g  
Minimum pilot pressure 2 bar

T424.32.0.12.V



Weight 235 g  
Minimum pilot pressure 2 bar

T424.52.0.12.V



► Solenoid-Differential (External feeding)

Coding: T424.T.0.12.E.V

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p = 1$ (NL/min)	1050
Orifice size (mm)	8.5
Working ports size	G 1/4"
Pilot ports size	G 1/8"



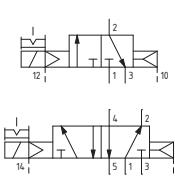
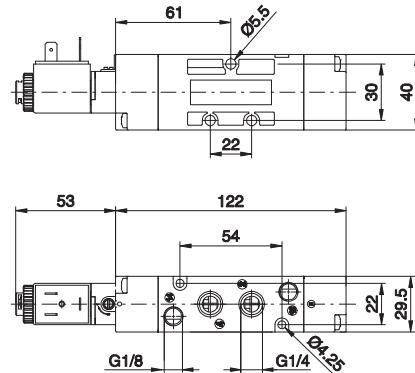
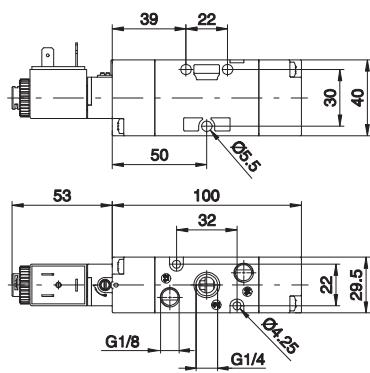
Weight 205 g  
Minimum pilot pressure 2 bar

T424.32.0.12.E.V



Weight 235 g  
Minimum pilot pressure 2 bar

T424.52.0.12.E.V





## Spool type valves and solenoid valves

### Series T400 - G1/4"

#### Solenoid-Solenoid (Self feeding)

Coding: T424.T.0.0.V

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p = 1$ (NL/min)	1050
Orifice size (mm)	8.5
Working ports size	G 1/4"

<b>T</b>	TYPE
	32 = 3 ways, 2 positions
	52 = 5 ways, 2 positions
<b>V</b>	VOLTAGE
	B04 = 12 V DC
	B05 = 24 V DC
	B09 = 24 V DC (2 W)
	B56 = 24 V 50-60 Hz
<b>V</b>	B57 = 110 V 50-60 Hz
	B58 = 230 V 50-60 Hz

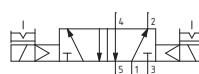
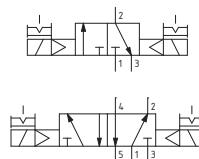
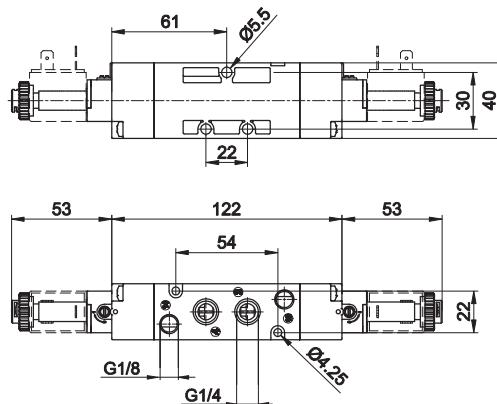
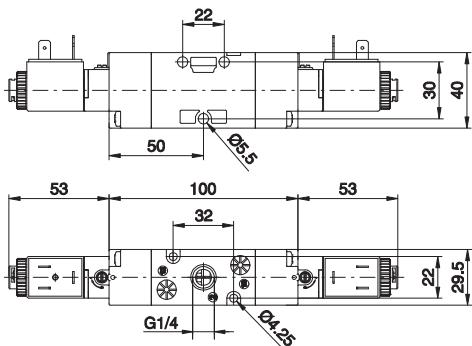


Weight 240 g  
Minimum pilot pressure 2 bar

T424.32.0.0.V

Weight 270 g  
Minimum pilot pressure 2 bar

T424.52.0.0.V



#### Solenoid-Solenoid (External feeding)

Coding: T424.T.0.0.E.V

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p = 1$ (NL/min)	1050
Orifice size (mm)	8.5
Working ports size	G 1/4"
Pilot ports size	G 1/8"

<b>T</b>	TYPE
	32 = 3 ways, 2 positions
	52 = 5 ways, 2 positions
<b>V</b>	VOLTAGE
	B04 = 12 V DC
	B05 = 24 V DC
	B09 = 24 V DC (2 W)
	B56 = 24 V 50-60 Hz
<b>V</b>	B57 = 110 V 50-60 Hz
	B58 = 230 V 50-60 Hz

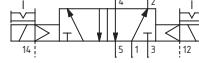
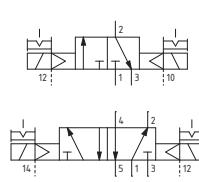
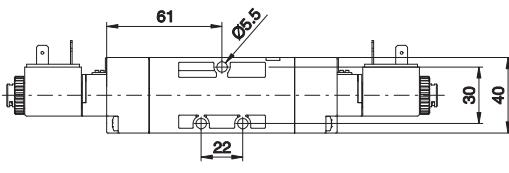
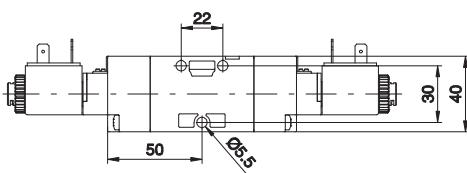


Weight 240 g  
Minimum pilot pressure 2 bar

T424.32.0.0.E.V

Weight 270 g  
Minimum pilot pressure 2 bar

T424.52.0.0.E.V







## Spool type valves and solenoid valves

### Series T400 - G1/4" - Accessories

1

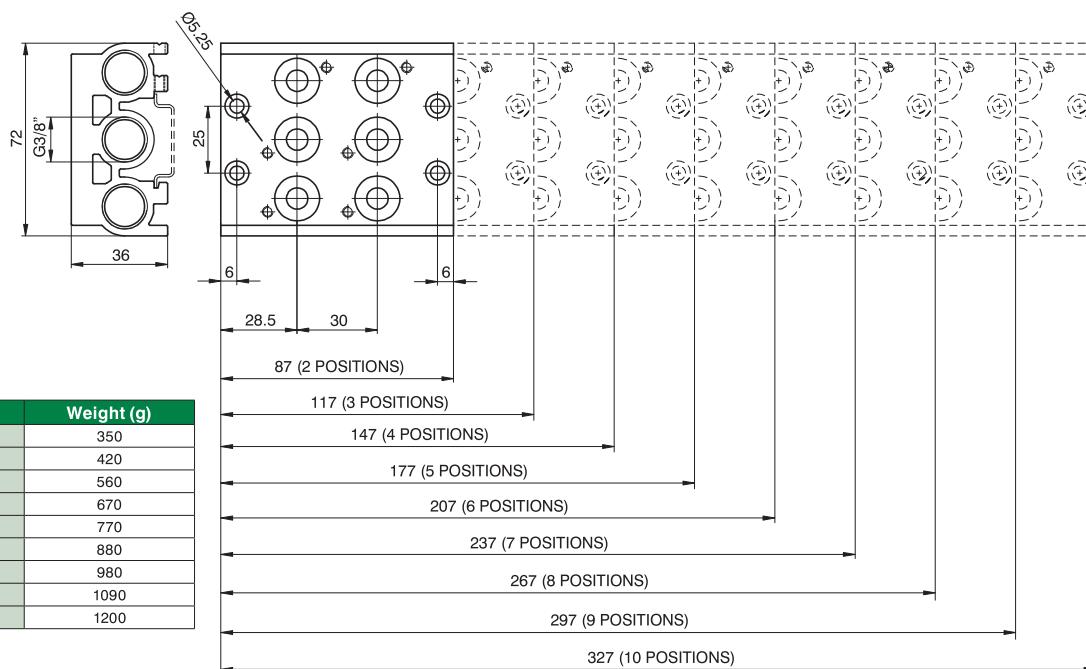
## AIR DISTRIBUTION

### Collectors



Coding: T424.N

NO. POSITIONS	
02	= 2 positions
03	= 3 positions
04	= 4 positions
05	= 5 positions
06	= 6 positions
07	= 7 positions
08	= 8 positions
09	= 9 positions
10	= 10 positions



### Modular base



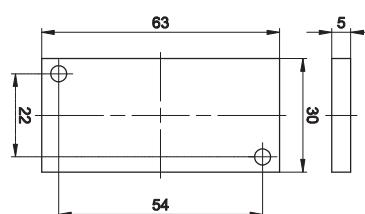
Coding: T424.T

TYPE	
01	= Single complete base
01K	= Complete modular bases (batches of 15 pieces)
30K	= Hollow bush, complete with O-rings (No. 50 pieces)
31K	= Blank bush, complete with O-rings (No. 50 pieces)
32K	= Intermediate air intake with screw (No. 5 pieces)
33	= Screw to suite solenoid valves (No. 50 pieces)
34	= Screw for joining bases (No. 50 pieces)
35	= Washer for screw for joining bases (No. 50 pieces)
36	= OR (No. 50 pieces)

### Closing plate



Coding: T424.00



Weight 25 g