

### Series T400

#### General

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 technopolimer.

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 unic 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 pressured centres.

The solenoid values are supplied complete with coil (see Series 300) so that the tension has to be added to the solenoid value 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 (starting power 9 VA, rating power 6 VA)

M57 = Coil 110 V 50/60 HZ (starting power 9 VA, rating power 6 VA)

M58 = Coil 220 V 50/60 HZ (starting power 9 VA, rating power 6 VA)

The Solenoid valves series **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 12V D.C.

**B05** = coil 24V D.C.

B09 = coil 24V (2W) D.C.

B56 = coil 24V 50/60 Hz A.C.

B57 = coil 110V 50/60 Hz A.C.

B58 = coil 220V 50/60 Hz A.C.

#### **Construction characteristics**

Body	Technopolymer
Spacer	Technopolymer
Spacers	NBR
Piston seals	NBR
Springs	AISI 302 stainless steel
Operators	Technopolymer
Pistons	Technopolymer
Spools	Nickel - plated steel / Technopolymer

Thread	Maximum torque (Nm)
G 1/8"	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.

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

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

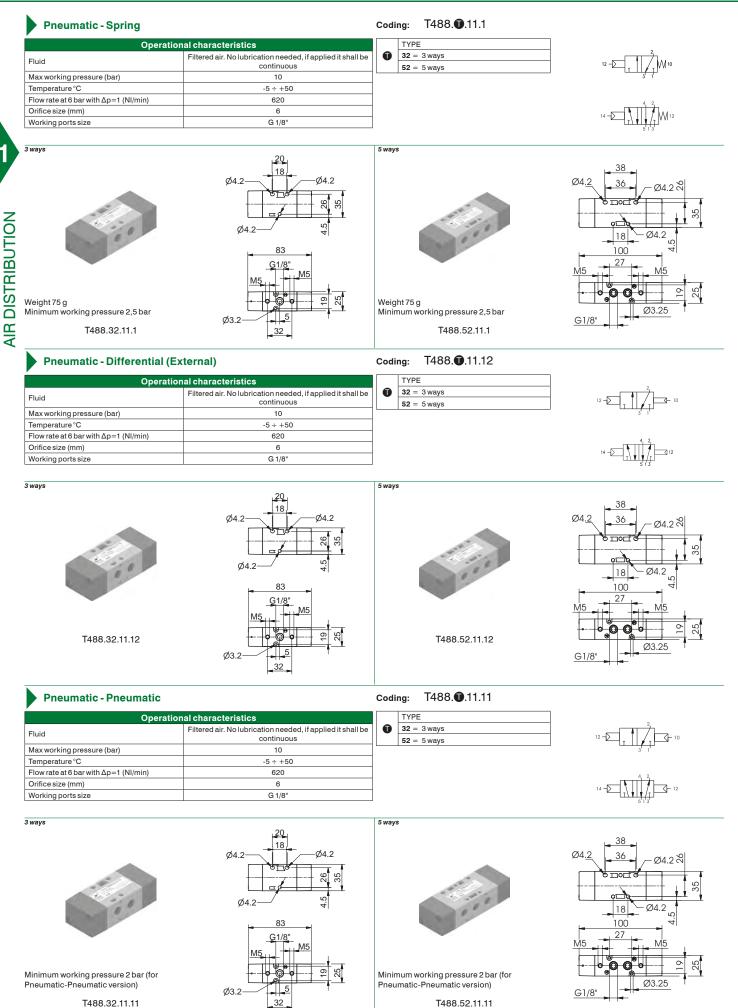
Repair kits including the spool complete with seals are available for overhauling the valves.

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 MAGNA GC 32 (Castrol).

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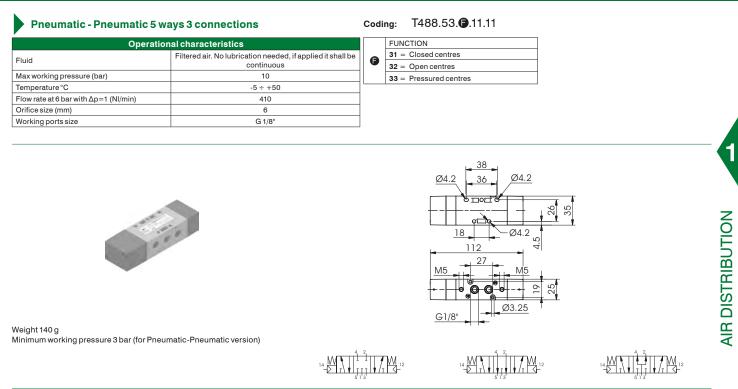




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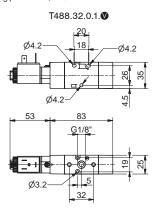
#### Solenoid - Spring (Self-feeding)

Operational characteristics			ТҮРЕ
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous		<b>32</b> = 3 ways
Max working pressure (bar)	10	í L	<b>52</b> = 5 ways
Temperature °C	-5 ÷ +50		VOLTAGE
Flow rate at 6 bar with $\Delta p=1$ (NI/min)	620		M9 = Solenoid - Spring
Orifice size (mm)	6	1	(Self-feeding)
Working ports size	G 1/8"		M11 = 24V D.C. (rating power
Responce time according to ISO 12238, activation time (ms)	23,4 (3 ways) 22,8 (5 ways)		3,8W) M56 = 24V 50/60Hz (starting
Responce time according to ISO 12238, deactivation time (ms)	41,0 (3 ways) 44,5 (5 ways)		power 9VA, rating power 6VA)
Shifting time of pneumatic directional control valves or moving parts, logic	devices were measured in accordance to ISO 12238:2001		M57 = 110 V 50/60Hz (starting power 9VA, rating power 6VA)
			M58 = 230V 50/60Hz (starting
			power 9VA, rating power 6VA)

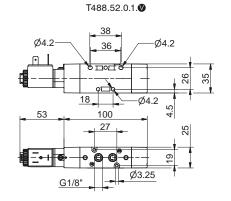




Weight 160 g Minimum working pressure 2,5 bar



Weight 190 g Minimum working pressure 2,5 bar



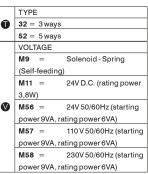


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Coding:

Solenoid - Spring (External-feeding)

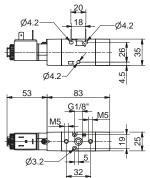
Operatio	onal characteristics	T
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous	32
Max working pressure (bar)	10	52
Temperature °C	-5 ÷ +50	VC
Flow rate at 6 bar with $\Delta p=1$ (NI/min)	620	MS
Orifice size (mm)	6	(S
Working ports size	G 1/8"	M
Responce time according to ISO 12238, activation time (ms)	23,4 (3 ways)	3,8
Responde time according to 150 12238, activation time (ms)	22,8 (5 ways)	M
Responce time according to ISO 12238, deactivation time (ms)	41,0 (3 ways)	po
	44,5 (5 ways)	M
Shifting time of pneumatic directional control valves or moving parts, logic	devices were measured in accordance to ISO 12238:2001	po
		 1 pc





Weight 160 g Minimum working pressure 2,5 bar

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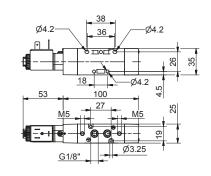


Weight 190 g Minimum working pressure 2,5 bar

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**AIR DISTRIBUTION** 



### Coding: T488.**①**.0.12.**♥**

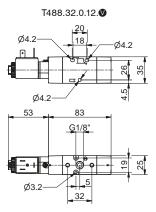


Operational characteristics			ТҮРЕ
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous		32 = 3 ways
Max working pressure (bar)	10		<b>52</b> = 5 ways
Temperature °C	-5 ÷ +50		VOLTAGE
Flow rate at 6 bar with $\Delta p=1$ (NI/min)	620		M9 = Solenoid - Spring
Orifice size (mm)	6		(Self-feeding)
Working ports size	G 1/8"		M11 = 24V D.C. (rating power
Responce time according to ISO 12238, activation time (ms)	31,1 (3 ways) 27,9 (5 ways)		3,8W) M56 = 24V 50/60Hz (starting
Responce time according to ISO 12238, deactivation time (ms)	35,0 (3 ways) 34,5 (5 ways)		power 9VA, rating power 6VA)
Shifting time of pneumatic directional control valves or moving parts, logic de	vices were measured in accordance to ISO 12238:2001	_	M57 = 110 V 50/60Hz (starting power 9VA, rating power 6VA)
			M58 = 230V 50/60Hz (starting power 9VA, rating power 6VA)

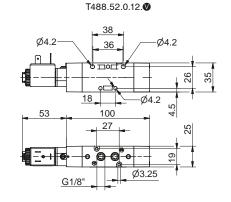


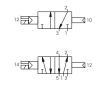


Weight 160 g Minimum working pressure 2,5 bar



Weight 190 g Minimum working pressure 2,5 bar





#### 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 $\Delta p=1$ (NI/min)	620	
Orifice size (mm)	6	
Working ports size	G 1/8"	
Responce time according to ISO 12238, activation time (ms)	31,1 (3 ways) 27,9 (5 ways)	
Responce time according to ISO 12238, deactivation time (ms)	35,0 (3 ways) 34,5 (5 ways)	

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



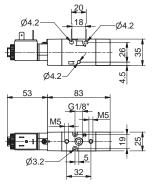
Weight 160 g

Minimum working pressure 2,5 bar

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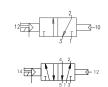
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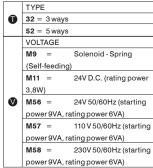


Weight 190 g Minimum working pressure 2,5 bar T488.52.0.12E.

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Coding: T488.0.0.12E.





Max working pressure (bar)

Flow rate at 6 bar with  $\Delta p=1$  (NI/min)

Temperature °C

Orifice size (mm)

Working ports size

Fluid

#### Solenoid - Solenoid (Self-feeding)

Responce time according to ISO 12238, activation time (ms)

	0	TYPE		
		32 =	3 ways	
		52 =	5 ways	
		VOLT	AGE	
		M9	=	Solenoid - Spring
		(Self-	feeding	)
		M11	=	24V D.C. (rating power
		3,8W)	)	
	V	M56	=	24V 50/60Hz (starting
		powe	r 9VA, ra	ating power 6VA)
		M57	=	110 V 50/60Hz (starting
		powe	r 9VA, ra	ating power 6VA)
		M58	=	230V 50/60Hz (starting
		powe	r 9VA, ra	ating power 6VA)





Filtered air. No lubrication needed, if applied it shall be continuous

10

-5 ÷ +50

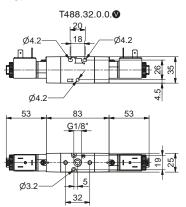
620

6

G 1/8' 18,8 (3 ways)

18,0 (5 ways) 18,0 (3 ways) 19,1 (5 ways)

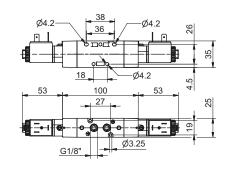
Weight 250 g Minimum working pressure 2 bar



Weight 290 g Minimum working pressure 2 bar

**Operational characteristics** 

T488.52.0.0.





#### Solenoid - Solenoid (External-feeding)

Operati	onal characteristics		٦
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous	◗╽	3
Max working pressure (bar)	10	$\rightarrow$	5
Temperature °C	-5 ÷ +50	-	1
Flow rate at 6 bar with $\Delta p=1$ (NI/min)	620		Ν
Orifice size (mm)	6	Ļ	(
Working ports size	G 1/8"		N
Responce time according to ISO 12238, activation time (ms)	18,8 (3 ways) 18,0 (5 ways)		3
Responce time according to ISO 12238, deactivation time (ms)	18,0 (3 ways) 19,1 (5 ways)		F
Shifting time of pneumatic directional control valves or moving parts, logic	devices were measured in accordance to ISO 12238:2001		N

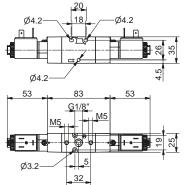
#### T488.0.0.0E. Coding:

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TYPE	
<b>32</b> = 3	vays
<b>52</b> = 5	vays
VOLTAG	E
M9 =	Solenoid - Spring
(Self-fee	ding)
M11 =	24V D.C. (rating power
3,8W)	
M56 =	24V 50/60Hz (starting
power 9	VA, rating power 6VA)
M57 =	110 V 50/60Hz (starting
power 9	VA, rating power 6VA)
M58 =	230V 50/60Hz (starting
power 9	VA, rating power 6VA)
	32 = 3 \ 52 = 5 \ VOLTAG M9 = (Self-fee M11 = 3,8W) M56 = power 9 M57 = power 9 M58 =



Weight 250 g Minimum working pressure 2 bar

T488.32.0.0E.

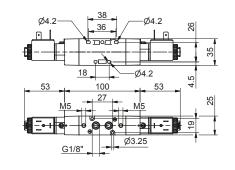


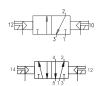
Weight 290 g Minimum working pressure 2 bar

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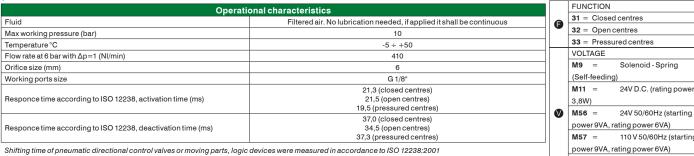


**AIR DISTRIBUTION** 



**AIR DISTRIBUTION** 

#### T488.53.6.0.0. Coding:

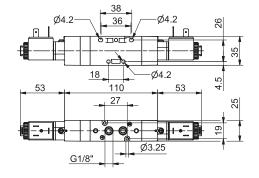


24V 50/60Hz (starting power 9VA, rating power 6VA) 110 V 50/60Hz (starting power 9VA, rating power 6VA) M58 = 230V 50/60Hz (starting power 9VA, rating power 6VA)

Minimum working pressure 3 bar Weight 330 g



Solenoid - Solenoid 5 ways 3 connections (Self-feeding)



T488.53.31.0.0.

T488.53.32.0.0.

T488.53.33.0.0.

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

Operati	onal characteristics		FUN
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous	6	31 =
Max working pressure (bar)	10		32 =
Temperature °C	-5 ÷ +50		33 =
Flow rate at 6 bar with $\Delta p=1$ (NI/min)	410		VOL
Orifice size (mm)	6		M9
Working ports size	G 1/8"		(Self
	21,3 (closed centres)		M11
Responce time according to ISO 12238, activation time (ms)	21,5 (open centres)		3,8W
	19,5 (pressured centres)	— Ø	M56
Responce time according to ISO 12238, deactivation time (ms)	37,0 (closed centres) 34,5 (open centres)		powe
	34,5 (open centres) 37,3 (pressured centres)		M57
Shifting time of pneumatic directional control valves or moving parts, logic	devices were measured in accordance to ISO 12238:2001		powe
ggg			

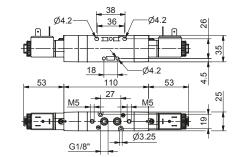
#### NCTION Closed centres Open centres Pressured centres LTAGE Solenoid - Spring If-feeding) 24V D.C. (rating power = W) 6 = 24V 50/60Hz (starting ver 9VA, rating power 6VA)

110 V 50/60Hz (starting = wer 9VA, rating power 6VA) M58 = 230V 50/60Hz (starting power 9VA, rating power 6VA) Minimum working pressure 3 bar

Weight 330 g

Coding:





T488.53.31.0.0E.



T488.53.32.0.0E.

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T488.53.33.0.0E.



T488.53.6.0E.

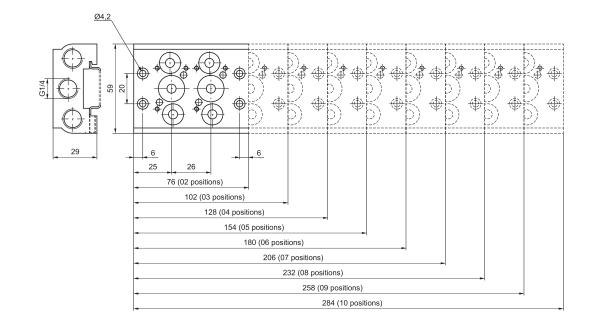
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### Coding: T488.

	N. POSITIONS
	<b>02</b> = 2 positions (220 g)
	<b>03</b> = 3 positions (290 g)
	<b>04</b> = 4 positions (360 g)
•	<b>05</b> = 5 positions (430 g)
P	<b>06</b> = 6 positions (500 g)
	<b>07</b> = 7 positions (570 g)
	<b>08</b> = 8 positions (640 g)
	<b>09</b> = 9 positions (710 g)
	<b>10</b> = 10 positions (780 g)



#### Modular base

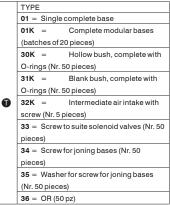


## Coding: T488.

Coding:

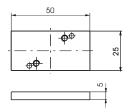
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T488.00



Closing plate





weight 25

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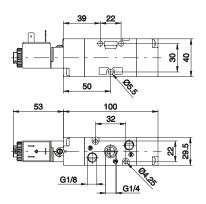
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#### Coding: T424.**0**.0.1.**0** Solenoid - Spring (Self-feeding) TYPE **Operational characteristics** Ū 32 = 3 ways Fluid Filtered air. No lubrication needed, if applied it shall be continuous 52 = 5 ways Max working pressure (bar) 10 VOLTAGE Temperature °C -5 ÷ +50 B04 = 12 V DC Flow rate at 6 bar with $\Delta p=1$ (NI/min) 1050 B05 = 24 V DC Orifice size (mm) 8.5 V B09 = 24 V DC (2 W) Working ports size G 1/4" B56 = 24 V 50-60 Hz B57 = 110 V 50-60 Hz B58 = 230 V 50-60 Hz 50 **AIR DISTRIBUTION** Weight 235 g Minimum piloting pressure 2,5 bar Weight 205 g Minimum piloting pressure 2,5 bar T424.52.0.1. T424.32.0.1. Ø5.3 39 22 61 h ສ \$ ଞ \$ **A** 7¢A 05.5 0 50 22 100 53 53 122 54 32 ιæ ส 12 ۲ ន Φ ð OF 13 G1/8 G1/8 र्रु G1/4 G1/4 Coding: T424.0.0.1.E. Solenoid - Spring (External-feeding) TYPE **Operational characteristics** O 32 = 3 ways Fluid Filtered air. No lubrication needed, if applied it shall be continuous 52 = 5 ways Max working pressure (bar) 10 VOLTAGE -5 ÷ +50 Temperature °C B04 12 V DC Flow rate at 6 bar with $\Delta p=1$ (NI/min) 1050 B05 = 24 V DC Orifice size (mm) 8.5 V B09 = 24 V DC (2 W) Working ports size G 1/4" B56 = 24 V 50-60 Hz Pilot ports size G 1/8 B57 = 110 V 50-60 Hz



Weight 205 g Minimum piloting pressure 2,5 bar

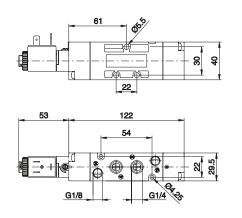




Weight 235 g Minimum piloting pressure 2,5 bar

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T424.52.0.1.E.





B58 =

230 V 50-60 Hz



### 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 $\Delta p=1$ (NI/min)	1050	
Orifice size (mm)	8.5	
Working ports size	G 1/4"	

	TYPE			
Û	32 =	3 ways		
	52 =	5 ways		
	VOLTAGE			
	B04	=	12VDC	
	B05	=	24 V DC	
V	B09	=	24 V DC (2 W)	
-	B56	=	24 V 50-60 Hz	

T424.0.12.





 B04
 =
 12 V DC

 B05
 =
 24 V DC

 B09
 =
 24 V DC (2 W)

 B56
 =
 24 V 50-60 Hz

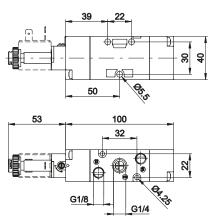
 B57
 =
 110 V 50-60 Hz

 B58
 =
 230 V 50-60 Hz

Coding:

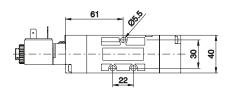
Weight 205 g Minimum piloting pressure 2 bar

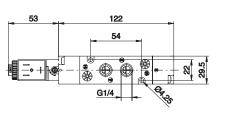
### T424.32.0.12.



Weight 235 g Minimum piloting pressure 2 bar

T424.52.0.12.







#### 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 $\Delta p=1$ (NI/min)	1050	
Orifice size (mm)	8.5	
Working ports size	G 1/4"	
Pilot ports size	G 1/8"	



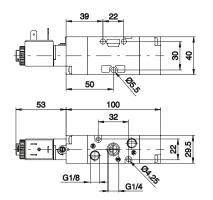


Coding: T424.0.0.12.E.0

<b>32</b> = 3 ways				
1		52 =	5 ways	
1		VOLT	AGE	
1		B04	=	12VDC
1		B05	=	24 V DC
1	V	B09	=	24 V DC (2 W)
1		B56	=	24 V 50-60 Hz
	1	B57	=	110 V 50-60 Hz
		B58	=	230 V 50-60 Hz

Weight 205 g Minimum piloting pressure 2 bar

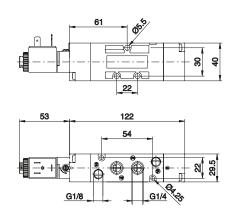


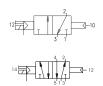


Weight 235 g Minimum piloting pressure 2 bar

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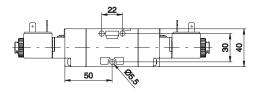
**AIR DISTRIBUTION** 

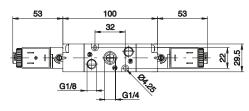
#### T424.**①**.0.0.**》** Coding: Solenoid - Solenoid (Self-feeding) TYPE **Operational characteristics** Ū 32 = 3 ways Fluid Filtered air. No lubrication needed, if applied it shall be continuous 52 = 5 ways Max working pressure (bar) 10 VOLTAGE Temperature °C -5 ÷ +50 B04 = 12 V DC Flow rate at 6 bar with $\Delta p=1$ (NI/min) 1050 B05 = 24 V DC Orifice size (mm) 8.5 V B09 = 24 V DC (2 W) Working ports size G 1/4" B56 = 24 V 50-60 Hz B57 = 110 V 50-60 Hz B58 = 230 V 50-60 Hz 100 1.000 Weight 240 g Weight 270 g Minimum piloting pressure 2 bar Minimum piloting pressure 2 bar T424.32.0.0. T424.52.0.0. 0<sup>55,5</sup> 61 22 ສ \$ 2 λÂ Æ - 05.5 22 50 100 53 53 53 122 53 32 54 τ¢ 29.5 ଷ୍ - + -ιŧ 12 10 ۲ ង ⊞ G1/4 Ð G1/8 ન્ડ G1/4 14 12 Coding: T424.0.0.E. Solenoid - Solenoid (External-feeding) TYPE **Operational characteristics** O 32 = 3 ways Fluid Filtered air. No lubrication needed, if applied it shall be continuous 52 = 5 ways Max working pressure (bar) 10 VOLTAGE Temperature °C -5 ÷ +50 B04 = 12 V DC Flow rate at 6 bar with $\Delta p=1$ (NI/min) 1050 B05 = 24 V DC Orifice size (mm) 8.5 V B09 = 24 V DC (2 W) Working ports size G 1/4" B56 = 24 V 50-60 Hz Pilot ports size G 1/8 B57 = 110 V 50-60 Hz B58 = 230 V 50-60 Hz



Weight 240 g Minimum piloting pressure 2 bar





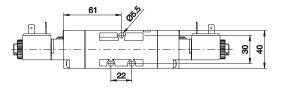


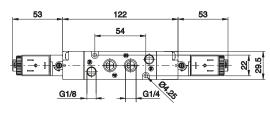


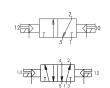
Weight 270 g Minimum piloting pressure 2 bar

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

T424.52.0.0.E.









Max working pressure (bar)

Flow rate at 6 bar with  $\Delta p=1$  (NI/min)

Temperature °C

Orifice size (mm)

Working ports size

Fluid

**Operational characteristics** 

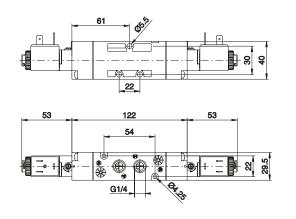
### Solenoid - Solenoid (Self-feeding)

#### T424.53.6.0.0. Coding:

9	FUNCTION				
	31 = Closed centres				
	32 = Open centres				
	33 = Pressured centres				
	VOLTAGE				
	B04 = 12 V DC				
	B05 = 24 V DC				
V	B09 = 24 V DC (2 W)				
	<b>B56</b> = 24 V 50-60 Hz				
	<b>B57</b> = 110 V 50-60 Hz				
	<b>B58</b> = 230 V 50-60 Hz				

1





Filtered air. No lubrication needed, if applied it shall be continuous

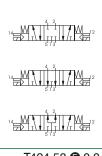
10

-5 ÷ +50

900

8.5

G 1/4'



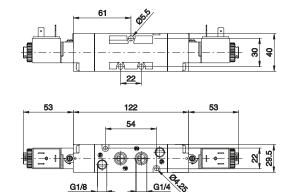
Weight 295 g Minimum piloting pressure 3 bar

### Solenoid - Solenoid (External-feeding)

	Operational characteristics		
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous	G	
Max working pressure (bar)	10		1
Temperature °C	-5 ÷ +50		_
Flow rate at 6 bar with $\Delta p=1$ (NI/min)	900		
Orifice size (mm)	8.5		
Working ports size	G 1/4"		
Pilot ports size	G 1/8"		)

#### T424.53.6.0.0.E. Coding: FUNCTION 31 = Closed centres 32 = Open centres 33 = Pressured centres VOLTAGE B04 = 12 V DC B05 24 V DC B09 = 24 V DC (2 W) B56 = 24 V 50-60 Hz B57 = 110 V 50-60 Hz B58 = 230 V 50-60 Hz

and a second second

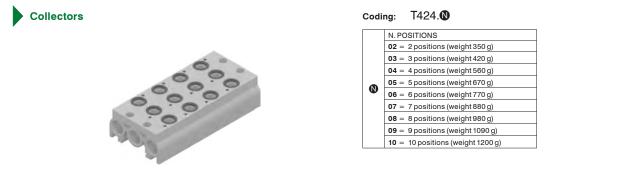


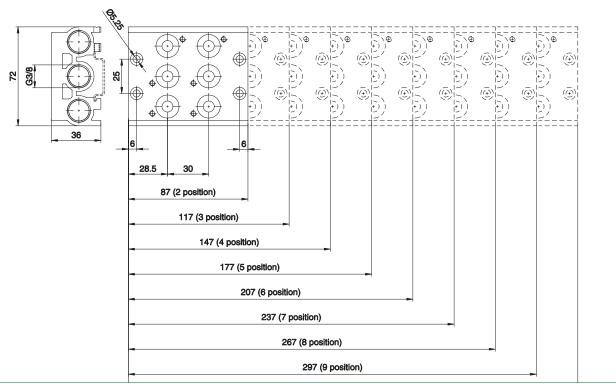
Overall dimensions and technical information are provided solely for informative purposes and may be modified without notice

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Weight 295 g Minimum piloting pressure 3 bar







#### Modular collectors



## Coding: T424.

Coding:

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

T424.00

	TYPE			
	01 = Single complete base			
	01K	=	Complete modular bases	
	(batches of 15 pieces)			
	30K	=	Hollow bush, complete with	
	O-rings (Nr. 50 pieces)			
	31K	=	Blank bush, complete with	
	O-rings (Nr. 50 pieces)			
Ū	32K	=	Intermediate air intake with	
	screw (Nr. 5 pieces)			
33 = Screwt		Screwt	o suite solenoid valves (Nr. 50	
	pieces)			
	34 = Screw for joning bases (Nr. 50			
	pieces)			
	35 = Washer for screw for joning bases			
	(Nr. 50 pieces)			
	<b>36</b> = OR (50 pz)			

**Closing plate** 

