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# **Pneumatic turret stop**

with 6, 8 and 12 stop positions for automation

PRVA 12MA left 30° division with absolute query of the positions and sensor





PRVA 8VM left 45° division with 3/2 way integrated micro valve and sensor

PRVA 6M right 60° division with sensor



## **Application:**

With our turret stop, many problems can be solved inexpensively in mechanical and plant engineering. For example, if one or more stops need to be adjusted at the same time, if stops are located in inaccessible places, or to make a work process more efficient and safer.

## **Operation:**

A 3/2 way valve is required to operate the stop, either fitted externally or as a direct installation on V and M stop types.

On the external variant, the cable should be kept as short as possible, otherwise the stop can only be adjusted with very low number of cycles.

When in operation, the stop remains under pressure because in its unpressurised condition the stop has a larger radial clearance. For switching forward, the air pressure is then only briefly interrupted and reapplied. The initiation of the switch operation lasts approximately 0.12 seconds. For V and VM stop types this lasts at least 0.17 seconds.

When used for sequential processing, the cycle time should be divided in such a way that approximately 2/3 of the time is used for deaeration and 1/3 of the time is used for aeration.

## **Design:**

The stop is designed for maintenance-free operation. It is recommended to use only clean and dry air. All aluminium parts (in so far as they represent and advantage) are anodized; the steel parts are burnished and the wearable parts hardened and ground.

## Service life of the stop:

Several factors play a role in the service life of the stop. For example:

- Amount of air pressure with which the stopper is operated
- Throttled or unthrottled operation of the stop
- Weight of the screwed stop pin
- Cycles per second

It is recommended that the stop is operated with an inlet restrictor, which is to be set in such a way that it does not produce any loud clicking noises. The operating pressure of a correctly installed inlet restrictor plays a minor role.

When selecting the clock frequency, it should be noted that the larger the weight of the screwed stop, the lower the clock frequency should be. This is preferably 4-6 cycles per second.

Endurance tests carried out on the stop have yielded the following results:

- At 7 bar unthrottled approx. 80,000 cycles.
- At 5 to 6 bar throttled approx. 4,000,000 cycles.

If in your case the stop is to be used in the extreme and these figures are insufficient, it is recommended that you carry out an endurance test yourself, taking into account the above points in order to determine whether the stop can withstand your requirements.

## Service life of the stop with integrated micro valve:

The same points as already mentioned above apply for service life of the stop fitted with an integrated micro valve. Under normal operating conditions, an inlet restrictor is not required here since the valve body already has a throttle bore of 0.7mm.

If the stop is to be operated at its full load limit, the use of an inlet restrictor can increase the service life in order to better match it to the application.

## **Turret stop series:**

The turret stop is available in the following variants:

- 6-fold, 8-fold and 12-fold (number of stop points)
- Right or left design (position of the cylinder housing) all subsequent illustrations are shown in the right design.
- According to the type of equipment, e.g. 3-fold binary coding for the sensor or valve seat for integrated micro valve.

## **Turret stop designations:**

PRVA 6 right	Pneumatic turret stop,	6-fold right, v	without the possibi	ility of quer	v
					,

- PRVA 6<u>M</u> right Pneumatic turret stop, 6-fold right, with binary coded <u>magnetic pins</u> for position query, but without the associated sensor
- PRVA 6<u>V</u> right Pneumatic turret stop, 6-fold right, with a <u>valve seat</u> for MV 1.5 integrated micro valve, but without the associated valve
- PRVA 6<u>VM</u> right Pneumatic turret stop, 6-fold right, with a <u>valve seat</u> for MV 1.5 integrated micro valve and binary coded <u>magnetic pins</u> for position query, but without the associated sensor and the associated valve

The same designations apply to the 8-fold and 12-fold turret stop, as well as for the left design. On the last page you will find all the accessories and respective item numbers listed for our turret stops.

## **Special versions for complete query:**

On 8-fold and 12-fold turret stops there are additional variants **MA** and **VMA**. Here, the designation **A** stands for an **absolute query of the positions**.

On an 8-fold stop, a zero position is thus avoided and on a 12-fold stop the 6 intermediate positions are omitted.

These special versions have a 4-fold binary encoding and are also equipped with a 4-fold sensor.

## **Position display:**

For the stops PRVA 6M or 6VM and PRVA 8M and 8VM, there is a single-digit digital display for decoding the positions.

Even on machines with no controller, this allows for the turret stop positions to be displayed on the control panel of the machine with very little effort.

The display is not required for machines with their own controller.



When ordering displaced stop holes please specify the item number  $\_\_\__90^\circ$  in addition.

#### **Technical data:**

Stop points: Mass shift: Impact mass:

Weight: Air consumption: Clock rate: 6 pieces approx. 150 g approx. 500 N at 3 - 4 m per min. undamped (approx. 1860 N at damped drives) approx. 450 g at 6 bar approx. 0.014 NL approx. 0.12 sec. (min. 0.09 sec.)



# PRVA 6V right for integrated micro valve



# PRVA 6VM right for integrated micro valve and sensor





# **Technical data:**

Stop points:	8 pieces
Mass shift:	approx. 500 g
Impact mass:	approx. 800 N at 3 - 4 m per min. undamped
	(approx. 4700 N at damped drives)
Weight:	approx. 600 g
Air consumption:	at 6 bar approx. 0.014 NL
Clock rate:	approx. 0.12 sec. (min. 0.09 sec.)





## **Technical data:**

Stop points:12 piecesMass shift:approx. 700 gImpact mass:approx. 800 N at 3 - 4 m per min. undamped<br/>(approx. 4700 N at damped drives)Weight:approx. 600 gAir consumption:at 6 bar approx. 0.014 NL<br/>approx. 0.12 sec. (min. 0.09 sec.)



PRVA 12V right for integrated micro valve



# PRVA 12VM right for integrated micro valve and sensor



#### Sensor with PUR cable for PRVA 6M; PRVA 8M; PRVA 12M Do not use for binder plug connection Signal output sensor = PNP normally open contact White = + White = + Brown = -Brown = -Sensor 1 = Green Sensor 1 = Green Sensor 2 = YellowSensor 2 = Yellow Sensor 3 = Grey Sensor 3 = GreyPower supply 12-24 V = Power supply 12-24 V = Left Right Sensor with 0.4m cable and binder plug – coupling plug S.423 7 pin. PG7 for PRVA 6M; PRVA 8M; PRVA 12M Right Left Signal output sensor = PNP normally open contact 5 + = Brown + ਯੂ ਯੂ S 1 Sensor 1 = GreenSB Sensor 2 = Yellow S2 S2 <u>ш'ш</u> Sensor 3 = GreySB S1 4 4 -1-= White $\overrightarrow{}$ <del>ل</del>\_ر Ś ſ Power supply 12-24 V = Processing the indexing plate and binary code positions Left design as mirror image Sensor 3 = bit 2 Sensor 2 = bit 1 Sensor 1 = bit 0 PRVA 6M Sensor 3 = bit 2 Sensor 2 = bit 1 Sensor 1 = bit 0 PRVA 8M Pos. 8 = 0PRVA 12M Sensor 3 = bit 2 Sensor 2 = bit 1 Sensor 1 = bit 0 Pos. 1



# Integrated micro valves with direct attachment for PRVA 6V; PRVA 8V; PRVA 12V or VM

# Valve cartridge and anchor MV 1.5 with radial swivel lid, cable length 3m coil body with detachable swivel lid



Valve cartridge with anchor MV 1.5 with fixed cover, cable length 3m



Technical data:	
Medium:	filtered air pressure, oiled or dry
Nominal width:	1.5 mm
Nominal flow at 6 bar:	70 Nl/min
Throttle bore on stop:	0.7 mm
Pressure range:	2 to 7 bar
Turn-on time te at 6 bar	
with silencer and suppressor diode:	арргох. 6 ms
Break time ta:	approx. 16 ms
Temperature range for valve cartridge:	-15° C to 100°
Temperature range for valve cover:	$-0^{\circ}$ C to $50^{\circ}$
Sealing material:	Viton
Protection type:	IP 54
Power consumption:	2.8 W
Voltage:	$24~V\pm10\%$

# Position display for PRVA 6M(VM) and PRVA 8M(VM)

The position display is suitable for stops 6M, 6VM, 8M and 8VM, as well as for 12M and 12VM. For machines which do not have a controller, it is a simple aid to display the positions. It requires only a power supply of 12 - 24 volts to operate, which can also simultaneously operate the sensor.



Description	Item no.	May be combined with
		accessory item no.
PRVA 6 right	1029	
PRVA 6 left	1042	
PRVA 6M right	1045	1179; 1171; 1047
PRVA 6M left	1046	1179; 1171; 1047
PRVA 6V right	1160	1177; 1178
PRVA 6V left	1161	1177; 1178
PRVA 6VM right	1162	1179; 1171; 1177; 1178; 1047
PRVA 6VM left	1163	1179; 1171; 1177; 1178; 1047
PRVA 8 right	1028	
PRVA 8 left	1041	
PRVA 8M right	1108	1180; 1172; 1047
PRVA 8M left	1109	1180; 1172; 1047
PRVA 8V right	1164	1177; 1178
PRVA 8V left	1165	1177; 1178
PRVA 8VM right	1167	1180; 1172; 1177; 1178; 1047
PRVA 8VM left	1168	1180; 1172; 1177; 1178; 1047
PRVA 12M right	1126	1181; 1173
PRVA 12M left	1146	1181; 1173
PRVA 12VM right	1169	1181; 1173; 1177; 1178
PRVA 12VM left	1170	1181; 1173; 1177; 1178

# Item – Numbers for turret stop 6-fold, 8-fold and 12-fold

Order example 1:	Turret stop 8-fold right with sensor and valve PRVA 8VM right
Item no.	1167
+Sensor	1180 or 1172
+valve	1177 or 1178
Order example 2:	Turret stop 8-fold right with sensor PRVA 8VM right
Item no.	1108
+Sensor	1180 or 1172
Order example 3:	Turret stop 8-fold right with valve PRVA 8V right
Item no.	1164
+valve	1177 or 1178
Order example 4:	Turret stop 8-fold right
Item no.	1028

# Item – Numbers for special – Turret stop

Description	Item no.	May be combined with accessory item no.
PRVA 8MA right	1185	1191·1192
PRVA 8MA left	1184	1191; 1192
PRVA 8VMA right	1186	1191; 1192; 1177; 1178
PRVA 8VMA left	1187	1191; 1192; 1177; 1178
PRVA 12MA right	1188	1194; 1195
PRVA 12MA left	1189	1194; 1195
PRVA 12VMA right	1182	1194; 1195; 1177; 1178
PRVA 12VMA left	1183	1194; 1195; 1177; 1178

Description	Item no.
Sensor with 3 m PUR cable	1179
for PRVA 6M right and left	
Sensor with binder plug and 0.4 m cable	1171
for PRVA 6M right and left	
Sensor with 3 m PUR cable	1180
for PRVA 8M right and left	
Sensor with binder plug and 0.4 m cable	1172
for PRVA 8M right and left	
Sensor with 3 m PUR cable	1181
for PRVA 12M right and left	
Sensor with binder plug and 0.4 m cable	1173
for PRVA 12MA right and left	
Valve cartridge and anchor MV 1.5	1177
with radial swivel lid, cable length 3 m	
Valve cartridge and anchor MV 1.5	1178
with <i>fixed lid</i> , cable length 3 m	
Digital display	1047
for PRVA 6M and 8M right and left	
Coupling for binder plug with 5 m cable	1107
for 3-fold / 4-fold sensor with binder plug	

# **Item – Numbers for accessories**

# Item – Numbers for special turret stop accessories

Description	Item no.
Sensor with 3 m PUR cable	1191
for PRVA 8MA right and left	
Sensor with binder plug and 0.4 m cable	1192
for PRVA 8MA right and left	
Sensor with 3 m PUR cable	1194
for PRVA 12MA right and left	
Sensor with binder plug and 0.4 m cable	1195
for PRVA 12MA right and left	