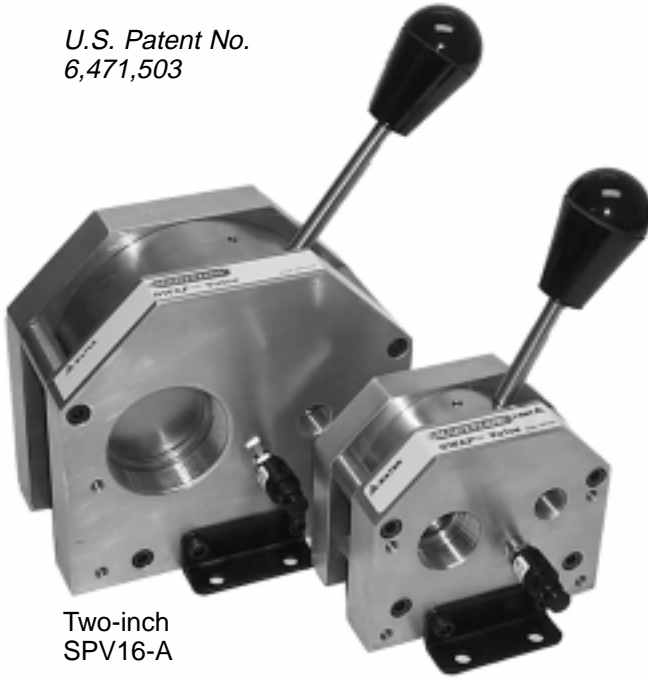


Swap[®] Valve Water Purge

Pneumatic Mold Cooling Water Purge

U.S. Patent No.
6,471,503



Two-inch
SPV16-A

One-inch
SPV8-A

General Description

The Smartflow[®] Swap[®] Valve is a simple, manually selectable device that supplies cooling water to the mold during processing. Secondly, it supplies air to purge the water from the mold, cooling lines, Supply and Return manifolds prior to tool change. And, it provides a manual vent to release built-up air pressure within the cooling loop, after purging.

The 3-position shear valve is a proven design. Ball detents, with approximately 15 pounds breakaway force, retain the valve selector handle in the chosen position. (WATER, PURGE or VENT).

An included check valve should be installed in the return line downstream from the Return manifold to prevent backflow to the mold.

Tubing may be connected to the manual vent-drain port so any residual water after the purge cycle can be drained into a suitable container or drain. An Optional spring-loaded, locking mechanism on the valve selector assembly is available for molders who require additional protection from accidental valve movement.

Application

The Swap[®] Valve is well suited for cooling water Supply lines up to 2 inch NPT on frequently changed tools that are hung on injection molding machines. It is permissible to adapt 3/4, 1-1/4, and 1-1/2 inch line sizes providing adequate cooling water flow can be achieved.

Typical mounting is on the press frame or the safety door frame. Mounting on any suitable surface, such as platen, mold or manifold stand is acceptable.

Operation

For Normal Processing:	-Select Water . -Cooling water is available to the Supply manifold. -Purge Air is blocked.
To Evacuate Cooling Water:	-Select Purge . -Purge Air is available to the Supply manifold. -Cooling water is blocked.
To Bleed-Off Trapped Pressure and Drain Residual Water:	-Select Vent . -Press Manual Vent-Drain Valve. -Purge Air is blocked. -Cooling water is blocked.

Molder Benefits

- Timesaving:** Saves 15-20 minutes of unproductive tool change time by eliminating the tasks of draining multiple Supply and Return hoses plus cleaning up water spills.
- Tool Condition:** Protects tools from corrosion build-up during downtime and storage by evacuating water quickly and thoroughly.
- Supply Line ID:** Permits fast identification of Supply lines by noting which manifold is connected to the Swap[®] valve.
- Water Shut-Off:** Swap[®] Valve shuts-off Supply water conveniently near the machine controls, rather than with conventional ball valves on the water drops/risers or Supply manifold, typically located at the opposite side of the press.
- Full Port Design:** Permits maximum cooling water flow at minimum pressure drop.
- Safety/Housekeeping:** Eliminates root cause of accidents around the press by keeping personnel and floors dry.
- Optional Positive Lock:** Eliminates accidental movement of valve selector handle.

Pneumatic Mold Cooling Water Purge

Specifications

Maximum Pressure.....150 psi (10.3 bar)
 Maximum Operating Temperature.....250° F (121° C)
 Normal Working Air Pressure.....80 to 100 psi

(Internal snubber prevents hose "whip" during purging)

Shipping Weight:

1".....13 lbs (5.9 kg)
 2".....35 lbs (15.8 kg)
 Pressure Drop Across Purge Valve.....1 psi at 50gpm

Ordering Information

Part Number	Water Connection Size	Accessories	Price
SPV8-A-A	1" NPT (F)	Standard	328.00
SPV8-L-A	1" NPT (F)	w/ Lock Pin	360.00
SPV16-A-A	2" NPT (F)	Standard	512.00
SPV16-L-A	2" NPT (F)	w/ Lock Pin	554.00
Call for units with British threads			

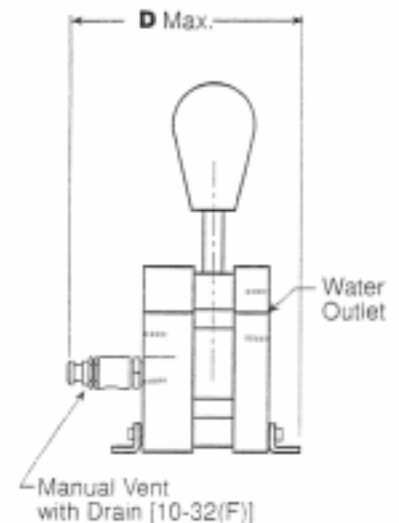
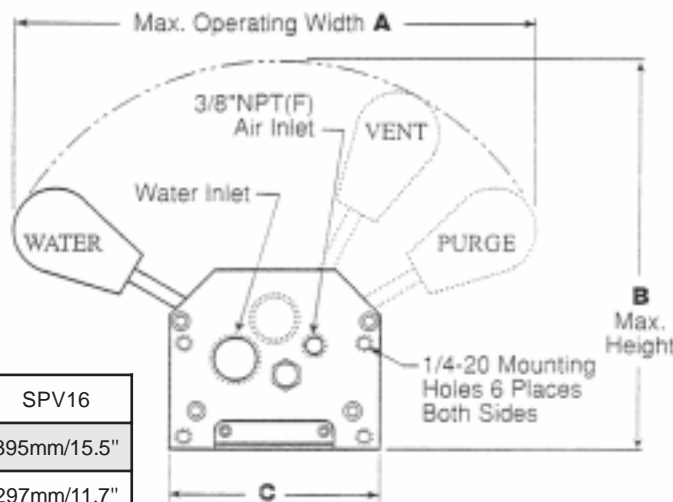
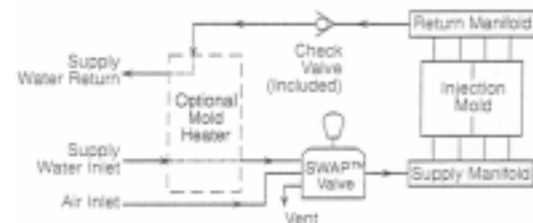
Connection Sizes

Water in/out.....1" NPT (F)
 1" BSPP (F)
 2" NPT (F)
 2" BSPP (F)
 Air inlet.....3/8" NPT (F)
 3/8" BSPP (F)
 Manual Vent Drain.....10-32 (F)

Wetted Parts

Body & Valve Disc.....T6061 Aluminum
 PTFE Impregnated
 Hard Anodize Coating
 O-Rings.....EPDM
 Check Valve.....Brass

Typical Hook-Up Schematic



Dimension	SPV8	SPV16
A	295mm/11.6"	395mm/15.5"
B	221mm/8.7"	297mm/11.7"
C	119mm/4.7"	173mm/6.8"
D	130mm/5.1"	160mm/6.3"

drawing not to scale

Linear = $\frac{\text{mm}}{\text{inch}}$