

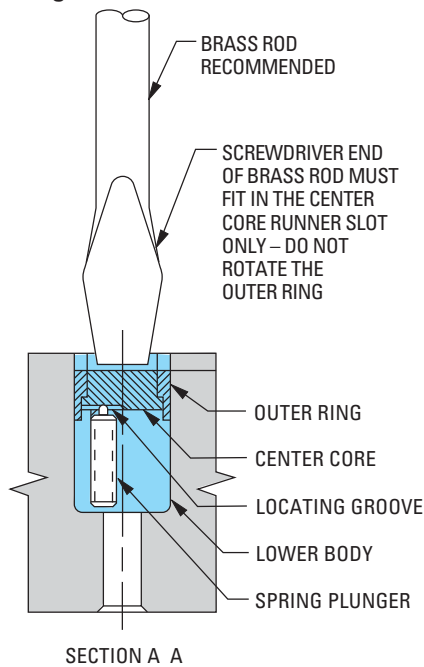
# Runner Shut-Off Inserts – Applications

U.S. Patent No. 5,208,053



## Typical Applications

### Shutting Off the Runner to One or Several Cavities



**NOTE:** Spring plunger in Runner Shut-Off Insert engages a locating groove in the center core. This holds the center core in position at each 90° rotation of the center core, thus providing several combinations of runner shut-off positions.

### Runner Shut-Off Inserts – MRS

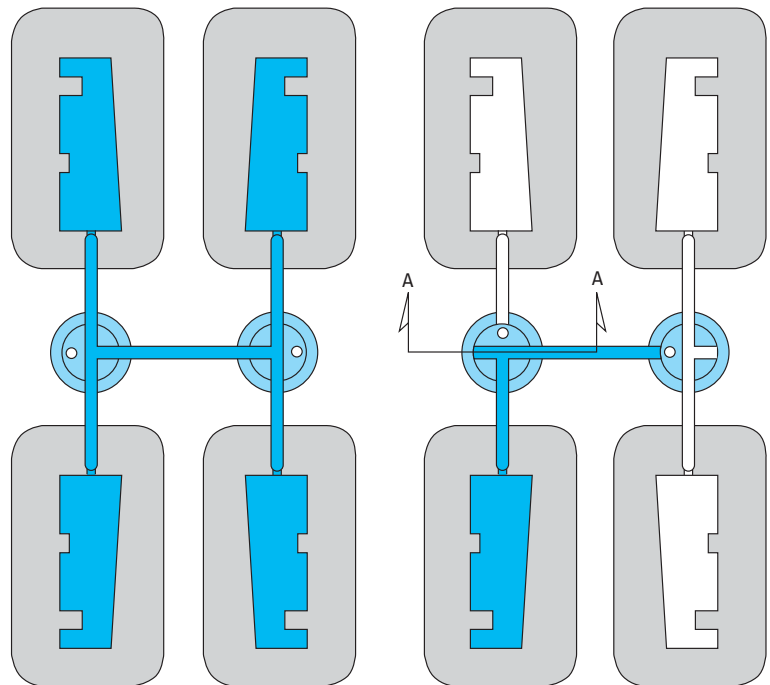
ITEM NUMBER	Ø D	L LENGTH
MRS 0013	.5118 (13mm)	.885 (22.5mm)
MRS 0016	.6299 (16mm)	.885 (22.5mm)
MRS 0026	1.0236 (26mm)	1.260 (32mm)

All dimensions are in inches except for several parenthetical reference dimensions in millimeters.

D-M-E Runner Shut-Off Inserts provide a precise method of blocking or directing material flow to one or more cavities in multi-cavity or family molds.

- Safer and more positive than the use of brass or ejector pins
- Saves material
- Reduces scrap and sorting
- Improves cycle time

Inserts are supplied unmachined as shown in background of photo. Foreground shows sample runner machining, typically done with insert installed in mold.



Runner Shut-Off Inserts are shown above in the open position, which allows material to flow to all cavities.

By rotating the center core of the Runner Shut-Off Insert 90° or 180° with the screwdriver end of a brass rod, material flow to one or several cavities can be shut off, as shown above.

#### INFORMATION KEY:

C = Depth of Runner

D = Diameter

L = Length

R = Radius

W = Width of Runner

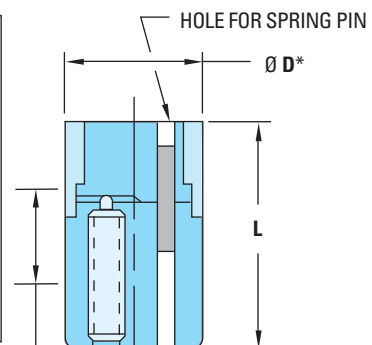
**Material:** Stainless Steel

**Hardness:** 50 ± 3 HRC

**Max. Temp:** 120°C (250°F)

**Dimensions:** All dimensions are in inches, except as noted

\*MEASURE Ø D IN THIS AREA ONLY. TOP AND BOTTOM OF INSERT HAVE A VERY SLIGHT RELIEF FOR PROPER INSTALLATION AND OPERATION.

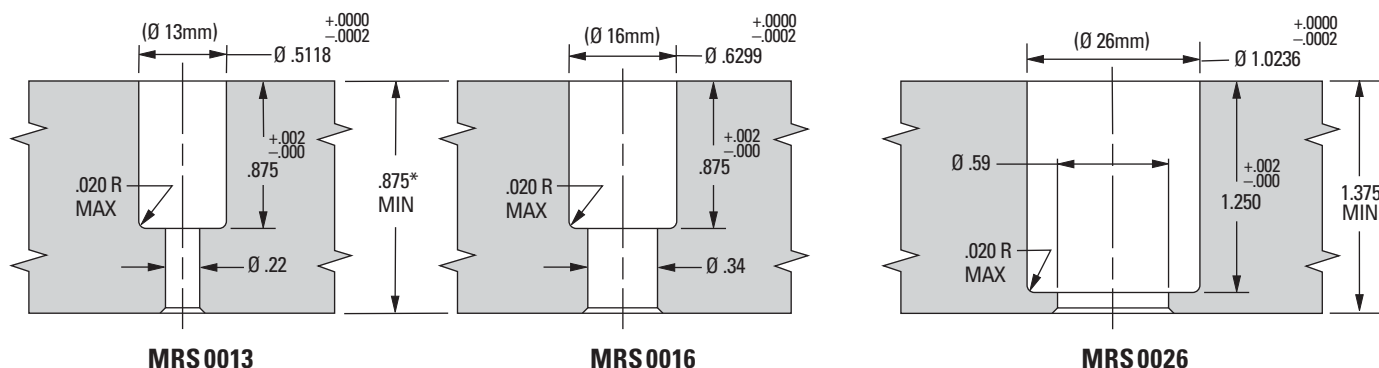


DO NOT ADJUST SPRING PLUNGER. IT HAS BEEN SUPPLIED INSTALLED TO THE CORRECT POSITION.

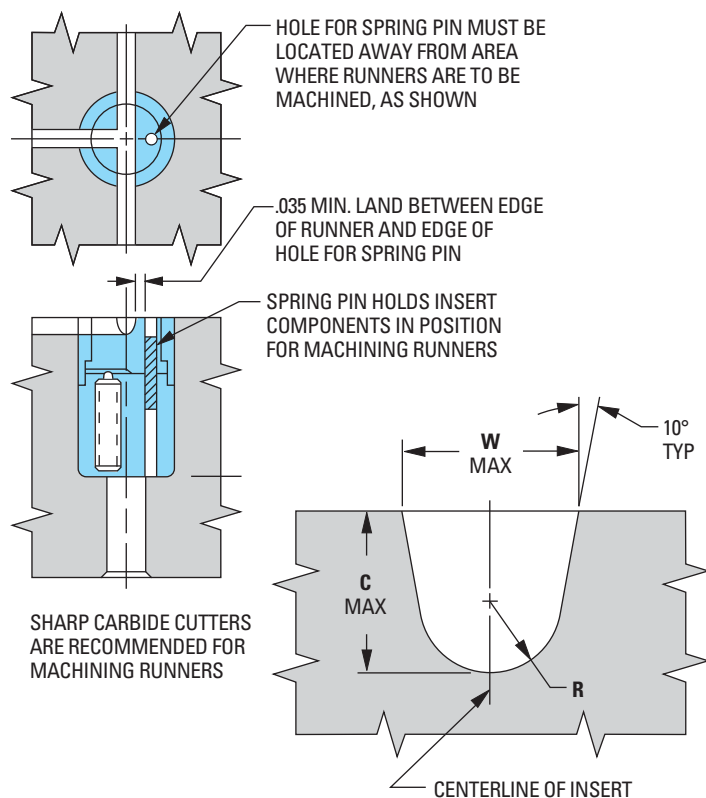
# Runner Shut-Off Inserts – Machining Information

## Dimensions for Machining Pocket for Runner Shut-off Inserts

- Pockets are typically bored in soft steel and jig ground in hardened steel
- Maintain a close tolerance press fit, as specified. Too loose a fit could allow the insert to move out of position, while too tight a press fit might prevent the center core from rotating when required



\* When using a 7/8 thick plate with the MRS0013 or MRS0016 inserts, machine the .5118 or .6299 diameters through the plate. Inserts must seat against a supporting plate before any grinding or machining is done and during the molding process.



## Dimensions for Machining Runners

RECOMMENDED RUNNER SIZES					
USE INSERT ITEM NUMBER	W MAX	C MAX	R RADIUS	EQUIV DIA	AREA SQ IN
MRS 0013 (MRS 0016 & 26)	.099	.091	.040	.095	.007
	.126	.120	.050	.123	.012
MRS 0016 (MRS 0026)	.150	.131	.062	.141	.016
	.168	.144	.070	.156	.019
	.186	.157	.078	.172	.023
	.206	.175	.086	.191	.029
MRS 0026	.260	.218	.109	.239	.045
	.298	.250	.125	.274	.059
	.334	.281	.140	.308	.074
	.372	.312	.156	.342	.092
	.410	.343	.172	.377	.112
	.446	.375	.187	.411	.133

**NOTE:** All runners should be machined along the center line of the insert and at 90° to the center line. If this is not done the runners will not align closely when rotated 90° or 180° to shut-off material flow to a cavity. All runners should be machined with inserts installed in the mold.

## Mold and Runner Machining/Installation Data

Additional machining and installation data available. Contact D-M-E.

All dimensions are in inches except for a few metric reference dimensions that are in millimeters and are shown in parentheses.