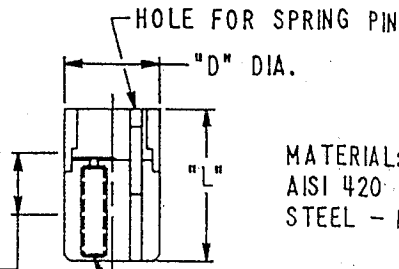


RUNNER SHUT-OFF INSERTS - METRIC

U.S. PATENT NO. 5,208,053

ALL DIMENSIONS ARE IN INCHES EXCEPT FOR A FEW METRIC REFERENCE DIMENSIONS WHICH ARE IN MILLIMETERS AND ARE SHOWN IN PARENTHESIS.

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



MATERIAL:
AISI 420 STAINLESS
STEEL - R/C 47-52

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

CAT. NO.	"D" DIAMETER	"L" LENGTH
MRS-0013	.5118 DIA. (13 MM DIA.)	.885 (22.5 MM)
MRS-0016	.6229 DIA. (16 MM DIA.)	.885 (22.5 MM)
MRS-0026	1.0236 DIA. (26 MM DIA.)	1.260 (32 MM)

RUNNER SHUT-OFF INSERTS ARE SUPPLIED ONLY AS COMPLETE ASSEMBLIES.

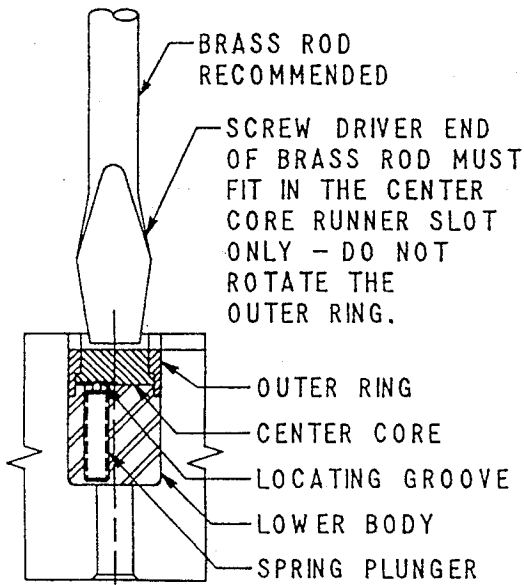
EACH INSERT INCLUDES:

- 1 - OUTER RING
- 1 - CENTER CORE
- 1 - LOWER BODY
- 1 - SPRING PIN
- 1 - SPRING PLUNGER

INSTALLATION AND OPERATION NOTES:

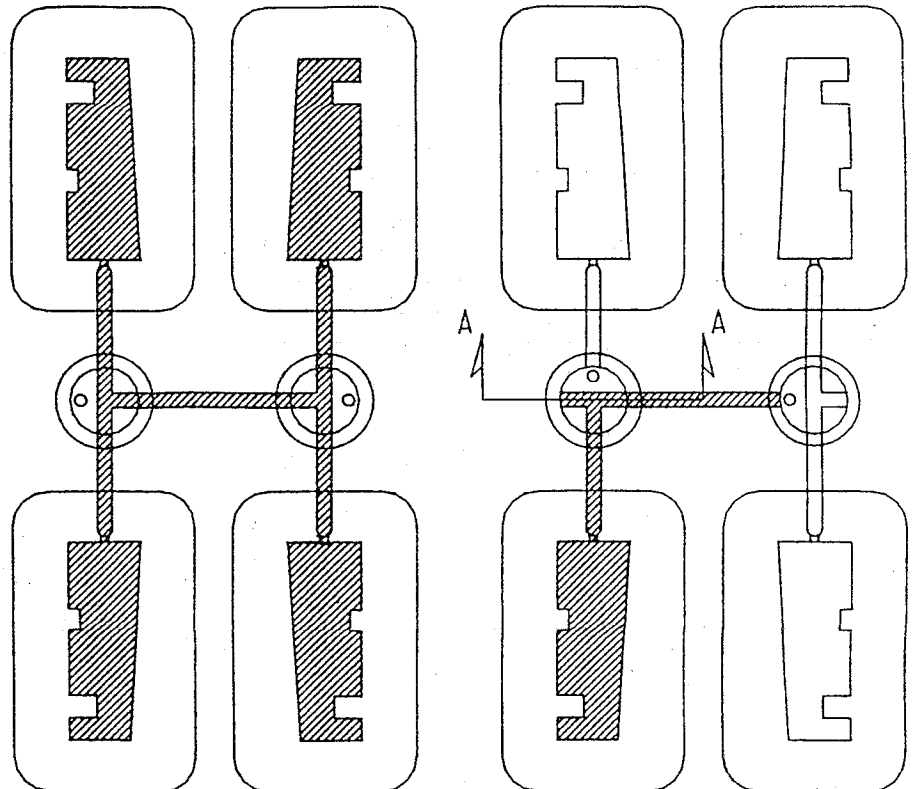
1. MAINTAIN A CLOSE TOLERANCE PRESS FIT, AS SPECIFIED. TOO LOOSE A FIT COULD ALLOW THE INSERT TO MOVE OUT OF POSITION, WHILE TOO TIGHT A PRESS FIT MIGHT PREVENT THE CENTER CORE FROM ROTATING WHEN REQUIRED.
2. POSITION INSERT WITH HOLE FOR SPRING PIN AWAY FROM AREA WHERE RUNNERS ARE TO BE MACHINED.
3. INSERT MUST BE BACKED-UP BY THE SHOULDER OF THE POCKET OR A SUPPORTING PLATE WHILE GRINDING OR MACHINING, AND WHEN ASSEMBLED IN THE MOLD.
4. FOR MACHINING RUNNERS SHARP CARBIDE CUTTERS ARE RECOMMENDED.
5. ALL RUNNERS SHOULD BE MACHINED ALONG THE CENTERLINE OF THE INSERT AND AT 90° TO THE CENTERLINE. UNLESS THIS IS DONE THE RUNNERS WILL NOT ALIGN CLOSELY WHEN ROTATED 90° OR 180° TO SHUT-OFF MATERIAL FLOW TO A CAVITY.

SHUTTING OFF THE RUNNER TO ONE OR SEVERAL CAVITIES



SECTION A A

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 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 SCREW DRIVER END OF A BRASS ROD, MATERIAL FLOW TO ONE OR SEVERAL CAVITIES CAN BE SHUT-OFF, AS SHOWN ABOVE.



29111 STEPHENSON HIGHWAY
MADISON HEIGHTS, MICHIGAN
48071 U.S.A.
1-800-626-6653

MRS-9999 5-96
ME-0516-PS-016-A

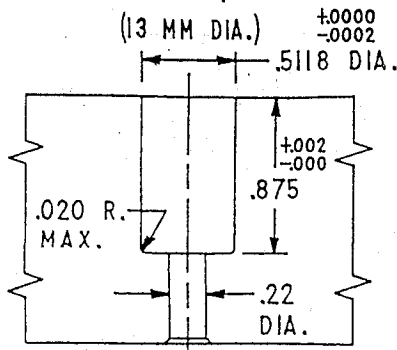
D-M-E

INSTALLATION DATA For: RUNNER SHUT-OFF INSERTS - METRIC
Please read carefully before installing components

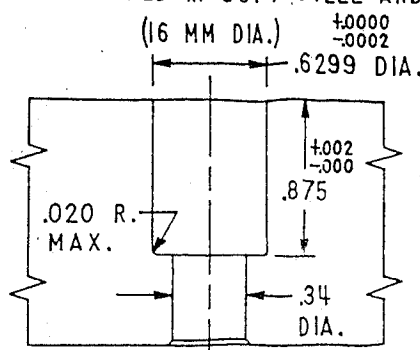
U.S. PATENT NUMBER 5,208,053

MRS-9999 5-96
ME-0516-PS-016-A

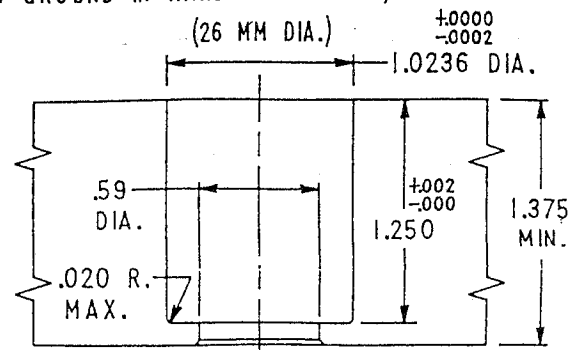
STEP #1 - DIMENSIONS FOR MACHINING POCKET FOR RUNNER SHUT-OFF INSERTS (POCKETS ARE TYPICALLY BORED IN SOFT STEEL AND JIG GROUND IN HARDENED STEEL.)



CAT. NO. MRS-0013



CAT. NO. MRS-0016



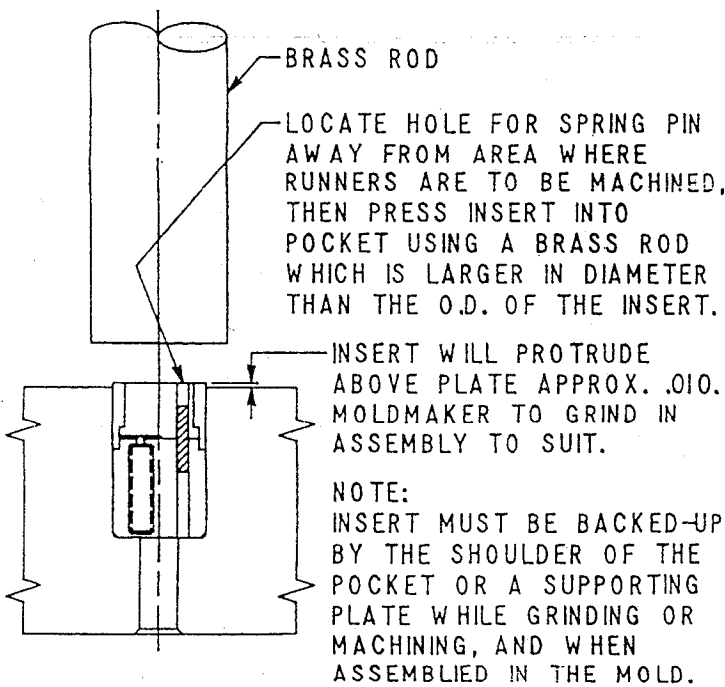
CAT. NO. MRS-0026

NOTE:

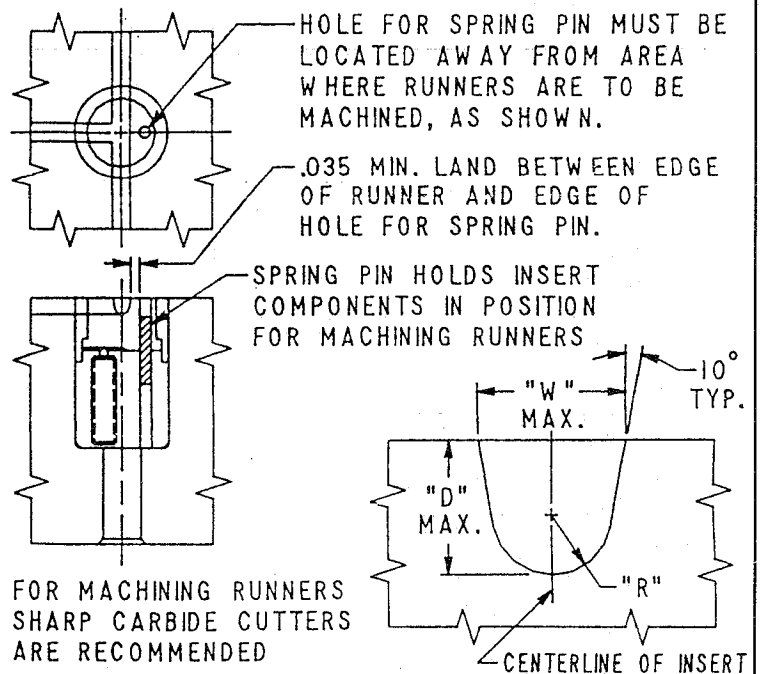
WHEN USING A 7/8 THICK PLATE WITH THE MRS-0013 OR MRS-0016 INSERTS, MACHINE THE .5118 OR .6299 DIAMETERS THRU THE PLATE. INSERT MUST SEAT AGAINST A SUPPORTING PLATE BEFORE ANY GRINDING OR MACHINING IS DONE.

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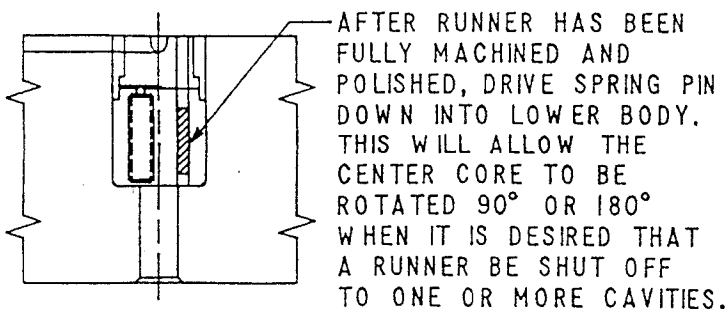
STEP #2 - PRESSING INSERT INTO POCKET



STEP #3 - DIMENSIONS FOR MACHINING RUNNERS



STEP #4 - RELEASING LOCKING FEATURE



RECOMMENDED RUNNER SIZES

USE INSERT CATALOG NO.	"W" WIDTH	"D" DEPTH	"R" RADIUS	EQUIV. DIA.	AREA SQ. IN.
MRS-0013	.099	.091	.040	.094	.007
(MRS-0016 & 26)	.128	.120	.050	.125	.012
MRS-0016 (MRS-0026)	.151	.131	.062	.141	.016
	.169	.144	.070	.156	.019
	.186	.157	.078	.172	.023
MRS-0026	.205	.175	.086	.187	.027
	.261	.218	.109	.218	.037
	.298	.250	.125	.250	.049
	.334	.281	.140	.281	.062
	.372	.312	.156	.312	.076
	.410	.343	.172	.343	.092
	.447	.375	.187	.375	.110