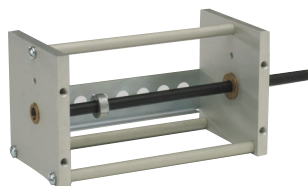




MECHANICAL SEQUENCER

MSP-□

Center shaft replaceable cam miniature **sequence** programmer



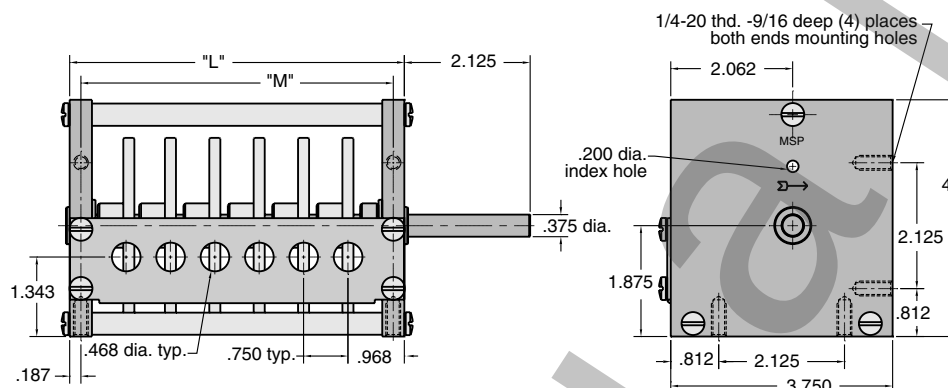
Use:** Power may be by machine controlled or by any small geared-down motor. Cams mounted on shaft operate up to 14 Clippard standard 2, 3, or 4-way valves (using cam follower 11925), and snap action switches such as Clippard ES-1. Valves on unit may control large pilot operated valves, or may be connected directly to cylinders, air limits, or circuitry, eliminating costly switches and solenoid valves. **** Cams not included**

Recommended Torque: approx. 2 in. lbs. per cam.

Timing: Cams aligned originally using rod through holes in end blocks and cams. Once locked to shaft, timing is permanently established, rotation of cams actuates valves according to lobes provided. (see cam data)

Construction Features:

- Self-lubricating bronze bearings
- 1/8" black oxidized steel shaft-extendible either end
- One-piece phenolic cams - extendible either end
- Easy cam adjustment - one set screw
- Endplates tapped for mounting bottom or rear
- Positive cam indexing
- Heavy aluminum end blocks
- Rigid channel steel mounting bracket for valves, switches

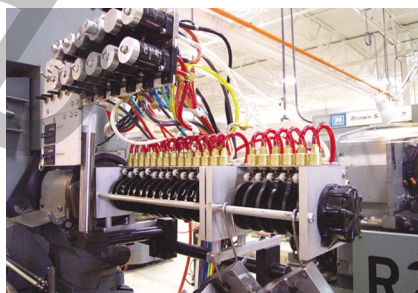


Furnished with valve mounting bracket and Allen wrench. May be used with standard, adjustable or special cut cams at extra charge. Please specify desired cams when ordering. Use Clippard wrench #11751 for Valve mounting.

Part #	# of Cams	"L"	"M"
MSP-4	4	4.156	3.781
MSP-6	6	5.656	5.281
MSP-8	8	7.156	6.781
MSP-10	10	8.656	8.281
MSP-12	12	10.156	9.781
MSP-14	14	11.656	11.281

DSP-□

Center shaft replaceable cam detect **sequence** programmer.



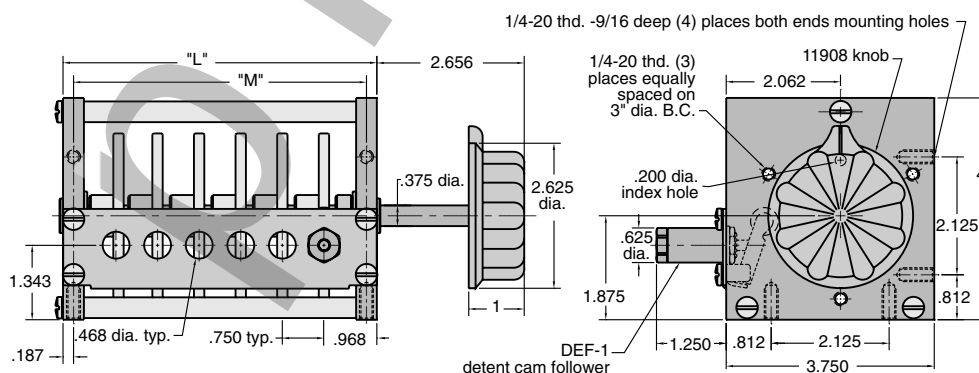
Construction: Basically the same as the MSP programmers with the addition of a spring plunger detent mechanism, an extended shaft with hand knob, and tapped mounting holes for panel mounting

No. Of Cams*: 3 to 13, depending upon model; six standard models (3, 5, 7, 9, 11 and 13 valve stations respectively)

Mounting: Mount on panel, or by bottom or rear, as required; three (3) 1/4-20 tapped holes provided on front plate for flush mount to panel; additional holes provided on front plate for flush mount to panel; additional holes at bottom and sides of end plates

*Cams not included

Use: Manually to set a predetermined sequence; or as a stepping switch



Part #	# of Cams	"L"	"M"
DSP-3	3	4 5/32	3 25/32
DSP-5	5	5 21/32	5 9/32
DSP-7	8	7 5/32	6 25/32
DSP-9	9	8 21/32	8 9/32
DSP-11	11	10 5/32	9 25/32
DSP-13	13	11 21/32	11 9/32

Specify desired standard Clippard programmer cams plus one detent cam. Use Clippard wrench #11751 for Valve mounting.

MECHANICAL SEQUENCER CAMS

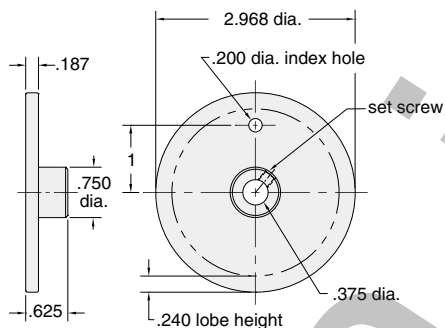


C-33-□

Minimatic® sequence programmer cams. Use with Clippard MSP or DSP sequence programmers. Available in 8 models pre-cut with lobes from 15° to 340°, also blank 360° cam for custom machining.

Construction: Cam body - one-piece phenolic; center hub - cadmium plated brass; set screw has Nylon tip

Alignment: 3/16" alignment hole located at 0° position; align through holes in programmer end blocks; degrees of cam lobes denotes approximate ON TIME using Clippard 11925 cam follower head



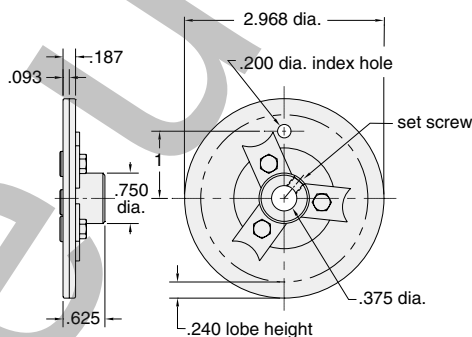
Model #	Lobe
C-33-15	15°
C-33-30	30°
C-33-60	60°
C-33-90	90°
C-33-120	120°
C-33-180	180°
C-33-270	270°
C-33-340	340°
C-33-360	uncut*

Special cuts available at nominal cost; send a drawing on a 3" dia. circle. *uncut blank cams may be ordered if your own machining is preferred; easily machined with end-mill saw, or belt-sander, and touched up with a file

A-33-□

Adjustable programmer cams. Use with Clippard MSP or DSP sequence programmers. Available in five models with adjustable lobes covering from 30° to 360°, also as a blank for custom machining.

Construction: cam body consists of two phenolic discs with common center point; may be rotated and locked for extended lobe; to set loosen three center screws, rotate cam to desired point and tighten



Lobe Adjustment

Model #	From	To
A-33-30	30°	50°
A-33-45	45°	80°
A-33-70	70°	130°
A-33-120	120	230°
A-33-210	210°	360°
A-33-360	uncut	

DC-□

One standard phenolic detent cam with 4, 6, 8, 10 or 12 evenly spaced cuts is required with each DSP. Special cut detent cams are available at nominal cost

Model #	Number of Positions
DC-4	4
DC-6	6
DC-8	8
DC-10	10
DC-12	12

