



Monroe Rubber & Plastic, Inc.

# FUNCTIONAL RANGE OF MOTION

The only moving parts on a cutting die are the ejection materials.

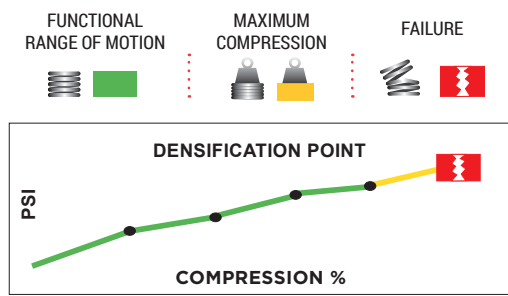


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LOWEST PSI AT COMPRESSION

HIGHEST PSI AT COMPRESSION

Products	Firmness	Typical Application		Compression/Deflection Force (PSI) at Various Percentages of Compression										Shore Value* For Reference Only	
		Rotary	Flat	10%	20%	25%	30%	40%	50%	60%	70%	80%	90%	00	A
KRUSE™	Xtra Soft	✓	✓	4	5	5.4	5.9	7.2	9.3	13.6	25	65	Failure	45-55	5-15
MR 50	Xtra Soft	✓		6	8.5	9	9.6	11.5	15	22.5	43.5	120	Failure	55-65	10-20
10000	Soft	✓	✓	7	9.6	10.5	11.5	13.8	17.6	25.6	47.4	132	Failure	65-75	15-25
12000	Soft	✓	✓	8	11.5	13	14.4	18	23.5	36.5	77.5	190	Failure	60-70	15-25
MR 1100	Medium	✓	✓	10.2	15	16.8	18.4	22.5	29	44.5	82	205	Failure	65-75	15-25
22000	Medium	✓	✓	11.3	16	17.8	19.5	24	31	46.3	90.4	220	Failure	65-75	15-25
Super Strip - 27	Medium	✓	✓	14.5	20.5	22.4	24.3	28.9	36	51.2	92.4	Failure	65-75	15-25	
MR 24	Medium	✓		13.6	20.3	22.7	25	32.2	44	77	191	Failure	70-80	20-30	
Red Rhino™	Medium	✓	✓	15.5	23	25.2	27.6	33	41.5	60	114	250	Failure	70-80	20-30
MR 35	Firm	✓	✓	19.5	29.8	33	36	43.3	55	80.5	155	Failure	75-85	25-35	
MR 75	Firm		✓	22.4	33	36.2	39.5	47.7	61	113.5	165	Failure	70-80	20-30	
MR 40	Firm	✓	✓	25.7	40	44.7	49.3	60.6	95	125	225	Failure	75-85	25-35	
Green G'rilla™	Firm		✓	31	49.4	56	62	78.2	106.4	166	291	Failure	80-90	35-45	
BK-85	Firm	✓	✓	32.4	52.5	59.5	66	82.8	110.5	167	300	Failure	80-90	35-45	
Super Strip - 45 (std.)	Xtra Firm	✓	✓	39.5	59.7	66.2	72.5	86.8	110	154.2	267	Failure	80-90	35-45	
Super Strip - 65	Xtra Firm	✓	✓	63.4	106.8	122.7	137.9	173.8	232.7	Failure			85-95	45-55	
13500 Cork	Xtra Firm		✓	60.9	99.2	119.9	145.3	225.9	Failure				-	-	



As with any moving mechanical or compressible part, there is a maximum functional range of motion. Once that range is exceeded, the item no longer functions properly, which will lead to failure.

This chart shows each product's maximum functional range of motion in green. Once the functional range is exceeded, it enters the yellow densification point, where the rubber becomes solid and can no longer compress. Go beyond this point, and the rubber will fail, breaking apart. For the ejection rubber to work properly, it must remain within the green.

*\*Durometer shore is the measure of the hardness of a material's surface. Since it only measures a small part of the material surface with limited penetration, the test method is less accurate in determining ejector performance. Our focus is on "Performance"! Compression Force Deflection, measured in pounds per square inch (PSI), is the accurate test method to measure material firmness at varying compressive levels—a true representation of performance as an ejector in an application.*