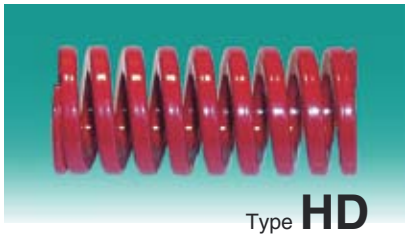
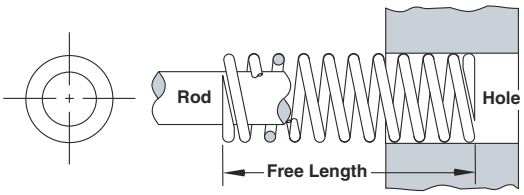
Heavy Duty
Metric–ISO





HOW TO ORDER

Specify:	Qty.	Catalog #
Example:	78	HD10-64
	12	HD12-305

Note: Efficient Operating Range is 15% to 25% of the free length. (Maximum deflection = 25%; long life = 20%; and optimum life = 15%.) "Travel to Solid" is for reference only. Deflection beyond the Efficient Operating Range could create a safety hazard, and result in premature spring failure..

Load shown in Newtons (N).

Hole Dia.	Rod Dia.	Free Length	Catalog Number	LOAD DEFLECTION TABLE							Load @ 1 mm Deflection (*N)
				25% Deflection		20% Deflection		15% Deflection		Travel to Solid	
				Load (*N)	Deflection (mm)	Load (*N)	Deflection (mm)	Load (*N)	Deflection (mm)	Deflection (mm)	
10.0	5.0	25	HD10-25	139.2	6.3	110.5	5.0	84.0	3.8	7.5	22.1
		32	HD10-32	140.0	8.0	112.0	6.4	84.0	4.8	9.6	17.5
		38	HD10-38	162.5	9.5	130.0	7.6	97.5	5.7	11.4	17.1
		44	HD10-44	165.0	11.0	132.0	8.8	99.0	6.6	13.2	15.0
		51	HD10-51	163.8	12.8	130.6	10.2	98.6	7.7	15.3	12.8
		64	HD10-64	171.2	16.0	137.0	12.8	102.7	9.6	19.2	10.7
		76	HD10-76	142.5	19.0	114.0	15.2	85.5	11.4	22.8	7.5
		305	HD10-305	160.2	76.3	128.1	61.0	96.2	45.8	91.5	2.1
12.5	6.3	25	HD12-25	265.2	6.3	210.5	5.0	160.0	3.8	7.5	42.1
		32	HD12-32	265.6	8.0	212.5	6.4	159.4	4.8	9.6	33.2
		38	HD12-38	278.4	9.5	222.7	7.6	167.0	5.7	11.4	29.3
		44	HD12-44	272.8	11.0	218.2	8.8	163.7	6.6	13.2	24.8
		51	HD12-51	253.4	12.8	202.0	10.2	152.5	7.7	15.3	19.8
		64	HD12-64	240.0	16.0	192.0	12.8	144.0	9.6	19.2	15.0
		76	HD12-76	250.8	19.0	200.6	15.2	150.5	11.4	22.8	13.2
		89	HD12-89	254.2	22.3	202.9	17.8	152.8	13.4	26.7	11.4
		305	HD12-305	213.6	76.3	170.8	61.0	128.2	45.8	91.5	2.8
16.0	8.0	25	HD16-25	472.5	6.3	375.0	5.0	285.0	3.8	7.5	75.0
		32	HD16-32	422.4	8.0	337.9	6.4	253.4	4.8	9.6	52.8
		38	HD16-38	460.8	9.5	368.6	7.6	276.5	5.7	11.4	48.5
		44	HD16-44	470.8	11.0	376.6	8.8	282.5	6.6	13.2	42.8
		51	HD16-51	474.9	12.8	378.4	10.2	285.7	7.7	15.3	37.1
		64	HD16-64	484.8	16.0	387.8	12.8	290.9	9.6	19.2	30.3
		76	HD16-76	488.3	19.0	390.6	15.2	293.0	11.4	22.8	25.7
		89	HD16-89	483.9	22.3	386.3	17.8	290.8	13.4	26.7	21.7
		102	HD16-102	492.2	25.5	393.7	20.4	295.3	15.3	30.6	19.3
		305	HD16-305	541.7	76.3	433.1	61.0	325.2	45.8	91.5	7.1
20.0	10.0	25	HD20-25	1360.8	6.3	1080.0	5.0	820.8	3.8	7.5	216.0
		32	HD20-32	1504.0	8.0	1203.2	6.4	902.4	4.8	9.6	188.0
		38	HD20-38	1225.5	9.5	980.4	7.6	735.3	5.7	11.0	129.0
		44	HD20-44	1232.0	11.0	985.6	8.8	739.2	6.6	13.0	112.0
		51	HD20-51	1203.2	12.8	958.8	10.2	723.8	7.7	15.0	94.0
		64	HD20-64	1153.6	16.0	922.9	12.8	692.2	9.6	19.0	72.1
		76	HD20-76	1134.3	19.0	907.4	15.2	680.6	11.4	23.0	59.7
		89	HD20-89	1126.2	22.3	898.9	17.8	676.7	13.4	27.0	50.5
		102	HD20-102	1127.1	25.5	901.7	20.4	676.3	15.3	31.0	44.2
		115	HD20-115	1105.9	28.8	883.2	23.0	664.3	17.3	35.0	38.4
		127	HD20-127	1084.4	31.8	866.1	25.4	651.3	19.1	38.0	34.1
		139	HD20-139	1078.8	34.8	861.8	27.8	647.9	20.9	42.0	31.0
		152	HD20-152	1071.6	38.0	857.3	30.4	643.0	22.8	46.0	28.2
		305	HD20-305	1144.5	76.3	915.0	61.0	687.0	45.8	91.0	15.0

*Newtons Note: Newtons (N) to pounds force (lb.f.) = (N) x 0.225.

FDS® FIRM DELIVERY SCHEDULE
1 Day

Heavy Duty
Metric–ISO

Hole Dia.	Rod Dia.	Free Length	Catalog Number	LOAD DEFLECTION TABLE							Load @ 1 mm Deflection (*N)
				25% Deflection		20% Deflection		15% Deflection		Travel to Solid	
				Load (*N)	Deflection (mm)	Load (*N)	Deflection (mm)	Load (*N)	Deflection (mm)	Deflection (mm)	
25.0	12.5	25	HD25-25	2362.5	6.3	1875.0	5.0	1425.0	3.8	7.5	375.0
		32	HD25-32	2376.0	8.0	1900.8	6.4	1425.6	4.8	9.6	297.0
		38	HD25-38	2080.5	9.5	1664.4	7.6	1248.3	5.7	11.0	219.0
		44	HD25-44	2057.0	11.0	1645.6	8.8	1234.2	6.6	13.0	187.0
		51	HD25-51	1996.8	12.8	1591.2	10.2	1201.2	7.7	15.0	156.0
		64	HD25-64	1968.0	16.0	1574.4	12.8	1180.8	9.6	19.0	123.0
		76	HD25-76	1881.0	19.0	1504.8	15.2	1128.6	11.4	23.0	99.0
		89	HD25-89	1873.2	22.3	1495.2	17.8	1125.6	13.4	27.0	84.0
		102	HD25-102	1861.5	25.5	1489.2	20.4	1116.9	15.3	31.0	73.0
		115	HD25-115	1872.0	28.8	1495.0	23.0	1124.5	17.3	35.0	65.0
		127	HD25-127	1834.9	31.8	1465.6	25.4	1102.1	19.1	38.0	57.7
		139	HD25-139	1834.0	34.8	1465.1	27.8	1101.4	20.9	42.0	52.7
		152	HD25-152	1816.4	38.0	1453.1	30.4	1089.8	22.8	46.0	47.8
		178	HD25-178	1824.5	44.5	1459.6	35.6	1094.7	26.7	53.0	41.0
		203	HD25-203	1818.6	50.8	1453.5	40.6	1091.9	30.5	61.0	35.8
		305	HD25-305	1747.3	76.3	1396.9	61.0	1048.8	45.8	91.0	22.9
32.0	16.0	38	HD32-38	3686.0	9.5	2948.8	7.6	2211.6	5.7	11.0	388.0
		44	HD32-44	3564.0	11.0	2851.2	8.8	2138.4	6.6	13.0	324.0
		51	HD32-51	3481.6	12.8	2774.4	10.2	2094.4	7.7	15.0	272.0
		64	HD32-64	3392.0	16.0	2713.6	12.8	2035.2	9.6	19.0	212.0
		76	HD32-76	3268.0	19.0	2614.4	15.2	1960.8	11.4	23.0	172.0
		89	HD32-89	3144.3	22.3	2509.8	17.8	1889.4	13.4	27.0	141.0
		102	HD32-102	3111.0	25.5	2488.8	20.4	1866.6	15.3	31.0	122.0
		115	HD32-115	3081.6	28.8	2461.0	23.0	1851.1	17.3	35.0	107.0
		127	HD32-127	2957.4	31.8	2362.2	25.4	1776.3	19.1	38.0	93.0
		139	HD32-139	2992.8	34.8	2390.8	27.8	1797.4	20.9	42.0	86.0
		152	HD32-152	3340.2	38.0	2672.2	30.4	2004.1	22.8	46.0	87.9
		178	HD32-178	3310.8	44.5	2648.6	35.6	1986.5	26.7	53.0	74.4
		203	HD32-203	3291.8	50.8	2630.9	40.6	1976.4	30.5	61.0	64.8
		254	HD32-254	3232.2	63.5	2585.7	50.8	1939.3	38.1	76.0	50.9
		305	HD32-305	3258.0	76.3	2604.7	61.0	1955.7	45.8	91.0	42.7
40.0	20.0	51	HD40-51	4480.0	12.8	3570.0	10.2	2695.0	7.7	15.0	350.0
		64	HD40-64	4304.0	16.0	3443.2	12.8	2582.4	9.6	19.0	269.0
		76	HD40-76	4161.0	19.0	3328.8	15.2	2496.6	11.4	23.0	219.0
		89	HD40-89	4237.0	22.3	3382.0	17.8	2546.0	13.4	27.0	190.0
		102	HD40-102	4156.5	25.5	3325.2	20.4	2493.9	15.3	31.0	163.0
		115	HD40-115	4089.6	28.8	3266.0	23.0	2456.6	17.3	35.0	142.0
		127	HD40-127	4070.4	31.8	3251.2	25.4	2444.8	19.1	38.0	128.0
		139	HD40-139	4002.0	34.8	3197.0	27.8	2403.5	20.9	42.0	115.0
		152	HD40-152	3990.0	38.0	3192.0	30.4	2394.0	22.8	46.0	105.0
		178	HD40-178	3960.5	44.5	3168.4	35.6	2376.3	26.7	53.0	89.0
		203	HD40-203	3911.6	50.8	3126.2	40.6	2348.5	30.5	61.0	77.0
		254	HD40-254	3873.5	63.5	3098.8	50.8	2324.1	38.1	76.0	61.0
		305	HD40-305	3891.3	76.3	3111.0	61.0	2335.8	45.8	91.0	51.0
50.0	25.0	64	HD50-64	6608.0	16.0	5286.4	12.8	3964.8	9.6	19.0	413.0
		76	HD50-76	6441.0	19.0	5152.8	15.2	3864.6	11.4	23.0	339.0
		89	HD50-89	6422.4	22.3	5126.4	17.8	3859.2	13.4	27.0	288.0
		102	HD50-102	6247.5	25.5	4998.0	20.4	3748.5	15.3	31.0	245.0
		115	HD50-115	6192.0	28.8	4945.0	23.0	3719.5	17.3	35.0	215.0
		127	HD50-127	6105.6	31.8	4876.8	25.4	3667.2	19.1	38.0	192.0
		139	HD50-139	5846.4	34.8	4670.4	27.8	3511.2	20.9	42.0	168.0
		152	HD50-152	5852.0	38.0	4681.6	30.4	3511.2	22.8	46.0	154.0
		178	HD50-178	5963.0	44.5	4770.4	35.6	3577.8	26.7	53.0	134.0
		203	HD50-203	5943.6	50.8	4750.2	40.6	3568.5	30.5	61.0	117.0
		254	HD50-254	5651.5	63.5	4521.2	50.8	3390.9	38.1	76.0	89.0
		305	HD50-305	5569.9	76.3	4453.0	61.0	3343.4	45.8	91.0	73.0

*Newtons

MaxLife Die Springs

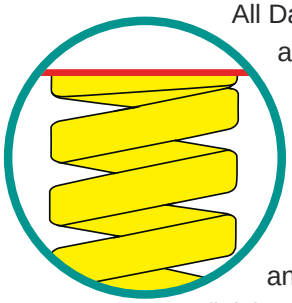
Product Applications

Dayton MaxLife® Die Springs are designed to the highest quality standards, and manufactured to outperform and outlast other major brands. All Dayton die springs are available in a wide range of lengths, diameters, and load classifications in both inch and metric sizes. In addition, all springs are color-coded for easy identification of load range.

Corrosion-resistant Dayton die springs are made from pre-tempered chrome silicon wire to improve dimensional accuracy, minimize high-stress cracking, optimize the working life of press and mold dies, and help reduce downtime. Many manufacturers specify Dayton die springs to ensure optimum operation in heavy industry applications, including: automotive; aircraft; appliance; electrical; and electronic.

Quality & Performance

From the incoming raw material (tested for tensile strength, dimensional accuracy, and surface quality) to the finished product, every Dayton die spring undergoes continuous quality control to ensure optimum product performance. In comparison testing, Dayton die springs consistently outperform and outlast other major brands.



All Dayton die springs are stress relieved after coiling, then compressed to solid to enhance fatigue life. Further, they are ground square at both ends (see insert), then shot-peened. (Shot-peening supplements compressive strength to reduce stress and extend spring life.) Finally, all finished springs are electro-statically coated with a durable, anti-corrosive vinyl, and color-coded for easy identification of load ranges.

Ordering Information

Dayton die springs are ordered according to: the amount of pressure applied to the spring (see "Load Deflection Table"); the hole diameter (which determines the rod diameter); and, the free length of the spring (see drawing on usage category page). On each order, please specify quantity and "Catalog Number."

In the example below, the first "Catalog Number" is DMD37-100. "DMD" refers to Medium Duty Inch. "37" refers to a $^{3}/_{8}$ hole diameter and $^{3}/_{16}$ rod diameter. The "100" designation further defines the product with a free length of 1. The "Load Deflection Table" on each catalog page provides percentage of deflection, travel to solid, and load @ 1" or 1mm deflection to help determine the exact spring to select. The second product code shown is for an extra heavy duty metric spring.

The "Efficient Operating Range" of any spring should not be exceeded. For safe operation, when changing from another manufacturer to a Dayton die spring, verify that the travel of both springs is the same.

HOW TO ORDER

Specify:	Qty.	Catalog Number
Example:	16	DMD37-1200

Worldwide Distribution, On-time Delivery

Dayton maintains a large inventory of Dayton MaxLife® Die Springs in all standard categories throughout our system. There are no minimum size orders, and on-time delivery is a top priority. A Firm Delivery Schedule (FDS) is provided in each catalog section.

Industry Standards

All Dayton MaxLife® Die Springs are designed to meet or exceed technical specifications and other criteria as established by industry guidelines. Designated springs are manufactured to meet or exceed The International Organization for Standardization (ISO) and/or Japanese Industrial Standards (JIS).

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