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日本大同模具彈簧



STAR DIE SPRING

未来を見つめるしかない技術

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NIPPON YAKIN KOGYO CO.,LTD



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日本大同
Japan Daido



台灣總公司 Taiwan Headquarter

機元公司自1974年創立至今41年歷史，為一家五金衝模設計製造及一站式對外加工的配套企業，職工總人數1200餘人，總部位於台灣新北市。機元的行銷網遍及華南、華東、華北、環渤海灣、台灣等地區，擁有優秀的銷售隊伍分工負責，高素質的工程人員專人專管與客戶溝通專業技術問題，以符合客戶訂單要求。在1997年10月取得日本大同模具彈簧台灣、香港、大陸，總代理。模具鋼材主要供應中國的高質量特殊鋼、日本日立特殊鋼，為中國優秀企業長期戰略合作夥伴服務。

核心競爭力從模具設計製造、模具鋼材供應、光板銑磨加工、CNC銑床加工、CNC自動車床加工、真空熱處理加工、熱後研磨加工、進口綫切割加工、成型研磨加工及大量模具零組件製造供應，並能根據客戶的要求，無論單一的製造過程，還是全程復式的製造，在廠內百分之百自製完成。解決了客戶委外流程的繁瑣程序，提升客戶模具製造的速度及效率，並降低客戶人力資源，降低客戶管理成本，處處以提高客戶整體利益考量。

Established in 1974, Jiyuan Enterprise Co., Ltd. has about 41 years of experiences in stamping and pressing tool design, manufacture, and one-stop processing services. With a total workforce of over 1,200 employees, the company's headquarter is located in New Taipei City, Taiwan and has now set up marketing and sales channels spread over South China, East China, North China, the rim of Bohai Sea, and around the island in Taiwan. Together with high quality technicians and management, excellent sales team works are able to communicate with clients to meet stringent order requirements. In October 1997, Jiyuan became the exclusive agent for Japan Daido Star Die Springs and engaged distributions in Taiwan, Hong Kong and China regions thereafter.

Core competitiveness of Jiyuan Enterprise includes tool design/ manufacture, steel supply, milling/ grinding, CNC machining, CNC automatic lathing, vacuum heat treatment, post heat treatment grinding, EDM/wire cutting, and supply of tool parts and accessories. Jiyuan has the capability of 100% in-house productions ranging from single step processing to full orientation processing. This helps clients simplify complicated outsourcing procedures to reduce overall tool development cycle and costs. Jiyuan always consider how to create win-win situation for mutually beneficial stand point of view for our clients.



防偽商標
Anti-fake Trade Mark



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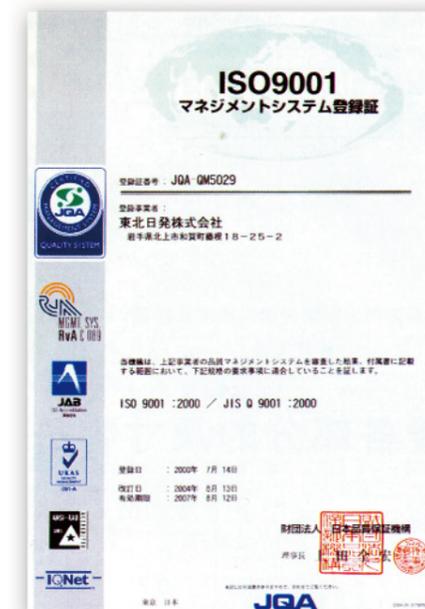
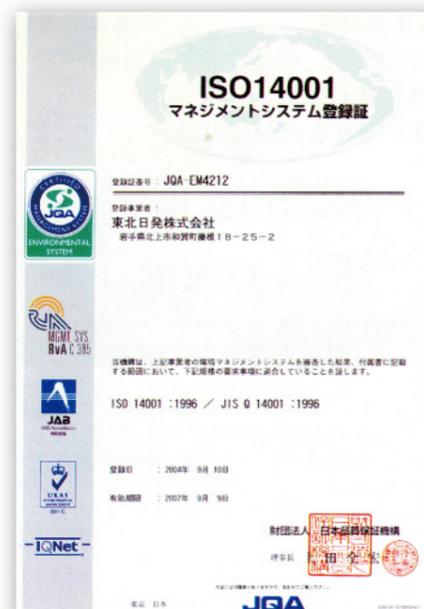
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日本東北日發株式會社製作

日本大同模具彈簧
台灣、香港、大陸總代理
DAIDO Die Springs

Exclusive Agent in Taiwan, Hong Kong and Mainland China



適用範圍 Applications

本模具彈簧是用於衝床五金模具的扁平線圈彈簧，但也能用於五金模具以外，其必要特性可在書中自由選擇。
This die spring is mainly used for stamping & pressing tools and is also suitable for other hardware molds.
Customers are advised to refer its features in this manual.

特色 Features

本模具彈簧依據日本JIS工業協會制定的規格，在嚴格的品質管理下製作而成，對高應力，高速振動，耐熱性可發揮優異的效果，對五金模具的小型化和延長壽命有所助益。
This spring product abides to specifications formulated by JIS of Japan and is made under stringent quality procedures. It proves excellent effects in high press, high speed vibration, and heat-resistance, benefiting the minimization of hardware molds and their life spans.

種類 Product Types

本模具彈簧分輕小荷重(DF)、輕荷重(DL)、中荷重(DM)、重荷重(DH)、極重荷重(DB)、塑膠模用耐熱彈簧(DR)、塑膠模用耐熱彈簧(DY)、圓線彈簧(DLR)八大類。
Lighter Load (DF), Light Load (DL), Medium Load (DM), Heavy Load (DH), Super Heavy Load (DB), Heat-proof Springs for Plastic Molds (DR), Heat-proof Springs for Plastic Molds (DY), and Lifter Pin Round Wire Springs (JIS)

材料 Materials

本模具彈簧是為耐高強度、高應力而特別開發的SPO-X材料。
SPO-X materials are specially developed for strength-proof and high press mold springs.

本模具彈簧的選擇方式 Selection Methods

請選擇以下四點決定 Please refer to following steps for selection method

從必要荷重選定彈簧的尺寸方法(例) To select the size of spring from necessary loading (example)

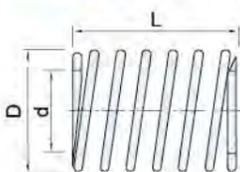
項目 Item	內容 Content
① 使用荷重 Loading	600Kgf
② 彈簧外徑 Spring External Dia.	D 50
③ 使用回數 Number of Times	100萬回 One million
④ 壓縮量 Compression	48mm

- 依左表條件用以下順序選擇
Based on the left chart conditions, select the following options :
- 參照100萬回荷重曲綫圖 Refer to the loading curve diagram for one million loading.
- 縱軸 ① 使用荷重600Kgf、橫軸 ② 彈簧的外徑D50看其交叉點
Vertical axis ① use loading 600Kgf; Horizontal axis ② spring external dia. 50D and see its intersection point.
- 接下來再看綠綫，重荷重彈簧的規格表
Next, refer to the green bar for specifications of heavy loading spring
- ③ 在使用100萬回時其最大壓縮量為48mm
③ Maximum compression is 48mm for one million number of times

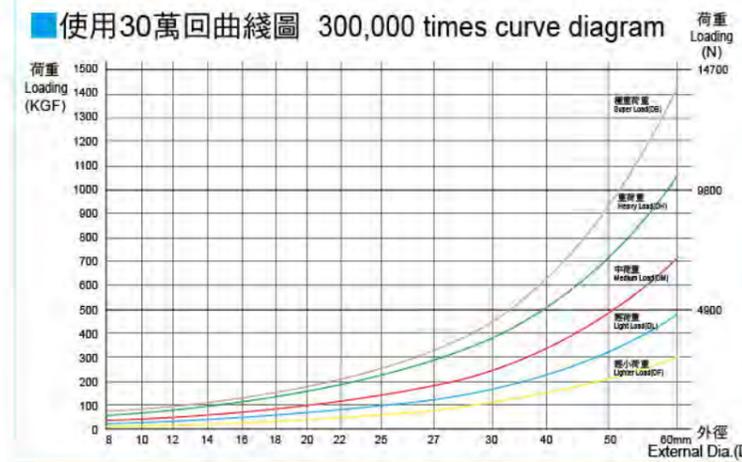
選擇DH50X250為例 Selection Example : DH50 x 250

規格 Specifications	外徑 External Dia.	內徑 Internal Dia.	自由長 Free Length	定數 Fixed Number	100萬回 One Million Times	
	D	d	L	kgf/mm	壓縮量 Compression	荷重 Loading
DH50X250	50	25	250	12.5	48.0	600

彈簧各部分的尺寸容許公差 Allowed tolerances for individual spring sizes

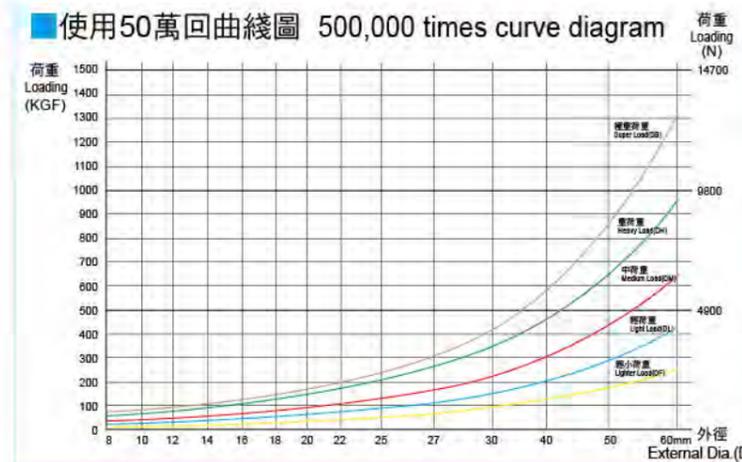


外徑(D) External Dia. (D)	內徑(d) Internal Dia. (d)	自由長L50以下 Free length below L50	自由長L50以上 Free length over L50	荷重Kgf Loading Kgf	旋轉方向 Spin Direction
0 -0.7	+0.7 +0.1	±0.5	±1%	±10%	右 Right



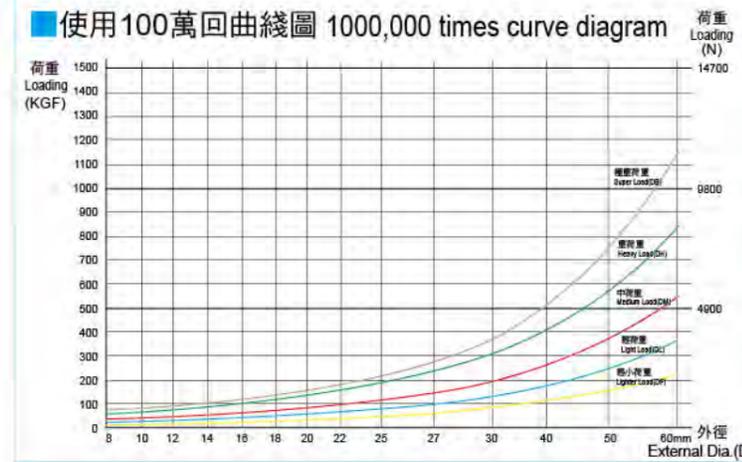
彈簧使用回數與壓縮比的關係 Spring use times and its compression ratio

種類 Type	使用回數 Use Times	30萬回 300,000 times
輕小荷重 DF Lighter Load DF		自由長的50.0% 50.0% of free length
輕荷重 DL Light Load DL		自由長的40.0% 40.0% of free length
中荷重 DM Medium Load DM		自由長的32.0% 32.0% of free length
重荷重 DH Heavy Load DH		自由長的24.0% 24.0% of free length
極重荷重 DB Super Heavy Load DB		自由長的20.0% 20.0% of free length



彈簧使用回數與壓縮比的關係 Spring use times and its compression ratio

種類 Type	使用回數 Use Times	50萬回 500,000 times
輕小荷重 DF Lighter Load DF		自由長的45.0% 50.0% of free length
輕荷重 DL Light Load DL		自由長的36.0% 40.0% of free length
中荷重 DM Medium Load DM		自由長的28.8% 32.0% of free length
重荷重 DH Heavy Load DH		自由長的21.6% 24.0% of free length
極重荷重 DB Super Heavy Load DB		自由長的18.0% 20.0% of free length



彈簧使用回數與壓縮比的關係 Spring use times and its compression ratio

種類 Type	使用回數 Use Times	100萬回 300,000 times
輕小荷重 DF Lighter Load DF		自由長的40.0% 50.0% of free length
輕荷重 DL Light Load DL		自由長的32.0% 40.0% of free length
中荷重 DM Medium Load DM		自由長的25.6% 32.0% of free length
重荷重 DH Heavy Load DH		自由長的19.2% 24.0% of free length
極重荷重 DB Super Heavy Load DB		自由長的16.0% 20.0% of free length

彈簧的正確使用方式

東北日發的彈簧有最佳之斷面設計，我們一直致力於耐久性的研發，請各位安心使用，但請避免下述的不當使用方式。

1 無彈簧導引的使用

如在無彈簧導引的使用情況使用時，很容易造成彈簧底部及本體之扭曲，其扭曲部之局部高壓力是導致彈簧斷裂的要因，一定要使用內徑導梢或外徑導引等裝置。

2 有關彈簧內徑及導梢

與導梢間隙過小時，會造成內徑之碰撞磨耗，其磨耗部是造成彈簧斷裂的要因，相反如間隙太大造成彈簧扭曲斷裂，最佳之間隙為彈簧內徑-1.0mm左右。及自由長較長的彈簧（自由長/外徑大與4以上）請用如圖-1所示般的段階式導梢，以避免彈簧本體扭曲時與導梢內碰撞。

3 彈簧外徑與沈頭孔

沈頭孔與彈簧間隙太小時，會因彈簧壓縮致使外側膨大與沈頭孔磨擦造成力集中斷裂。較佳的沈頭孔徑為彈簧外徑+1.5mm。自由長較長的彈簧請用圖-1所示之沈頭孔形狀。

4 導梢長度及沈頭孔深度較短時

導梢太短，會造成導梢頭部與彈簧損面斷裂。導梢的理想長度設定為彈簧長之1/2以上，並請倒C3之倒角。

5 超過最大壓縮量的使用（30萬回條件，接近密著之使用）

壓力產生進而造成折損，接近密著長使用時，會使彈簧綫部逐漸密著如此，因為彈簧定數變高造成如圖所示荷重曲綫隨之升高，近而產生高壓力使彈簧斷裂，請不要使用超過30萬回。

6 無預壓的使用

因有間隙造成彈簧上下震動導致彈簧扭曲，如有預壓時彈簧較為穩定。

7 碎片、異物夾雜使用時

夾雜異物部分會造成有效卷部無作用（圖-3所示）僅其他部分之壓縮，實質的有效卷數變小近而造成高應力並斷裂，請勿將異物夾雜於彈簧內。

8 裝配面平行度不良時

裝配面之平行度不良時會造成彈簧扭曲局部產生高應力斷裂。及如圖-4所示平行度不良之場合造成彈簧扭曲與超過30萬回使用造成彈簧斷裂。請在不超過30萬回使用條件下改善裝配面的平行度。

9 彈簧串聯的使用

串聯方式使用時（圖-5所示）致使彈簧彎曲，並超越導梢或沈頭孔長度，進而造成與相同原因之斷裂，及因彈簧本身荷重之稍許差異造成荷重較弱者承受更大的壓縮量而斷裂（圖-6所示）

10 變方式使用

如圖-7所示使用變彈簧時，彈簧受力扭曲致使內圈彈簧插入至外圈內（或外圈插入內圈）造成如4所示之斷裂。

11 彈簧橫置使用

彈簧橫置使用時造成導梢與彈簧之磨損並斷裂。

東北日發耐久試驗條件

- 彈簧導引方式
導梢貫穿
導梢徑：d-1.0mm
- 預壓
1.0mm
- 壓縮量
30萬回條件的壓縮量
- 速度
*180spm
依使用條件不同，耐久次數不益相同。

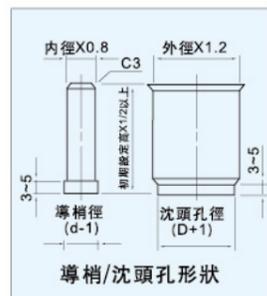


圖 1

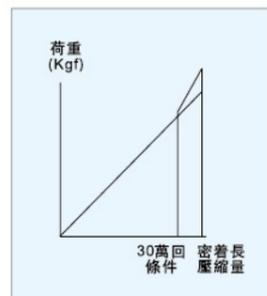


圖 2

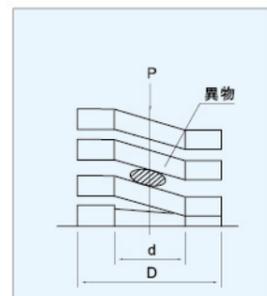


圖 3



圖 4

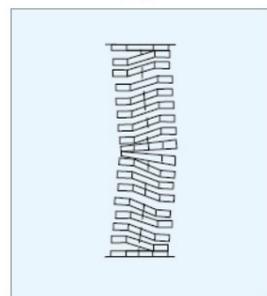


圖 5

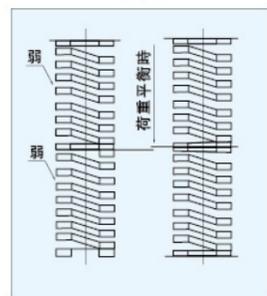


圖 6

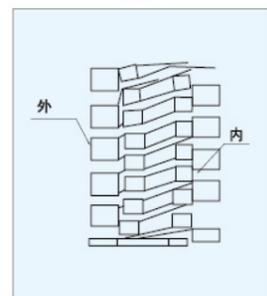
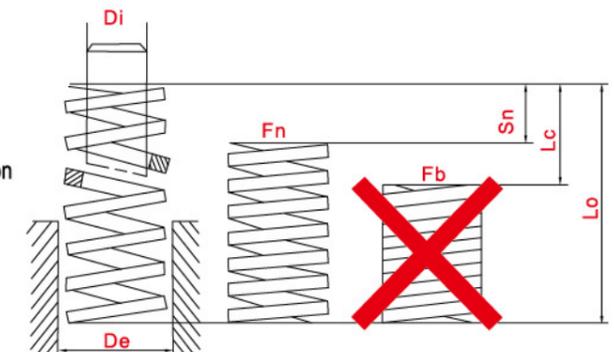
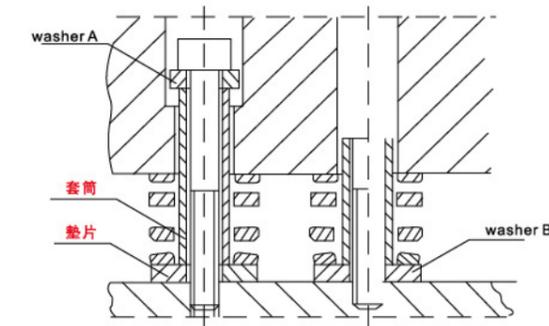
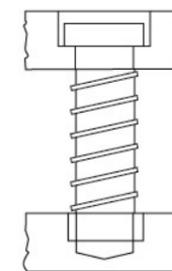


圖 7

- De 模孔徑 De horizontal hole dia.
- Di 螺栓徑 Di Screw dia.
- Lo 自由長 Lo Free length
- Lc 最大壓縮變形量 Lc Maximum compressed transformation
- Fb 密著荷重 Fb Density Load
- Sn 最大使用壓深長度 Sn Maximum use length
- Fn 最大使用荷重 Fn Maximum use load



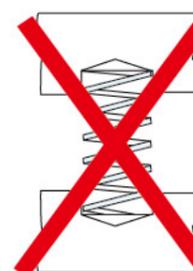
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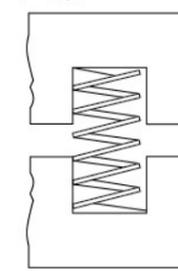
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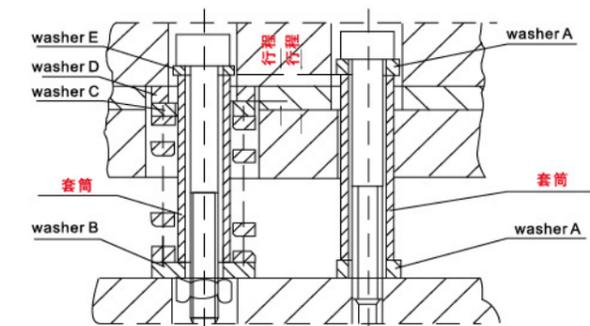
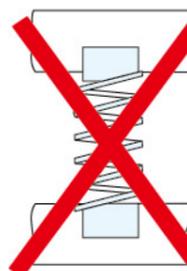
錯誤 Wrong



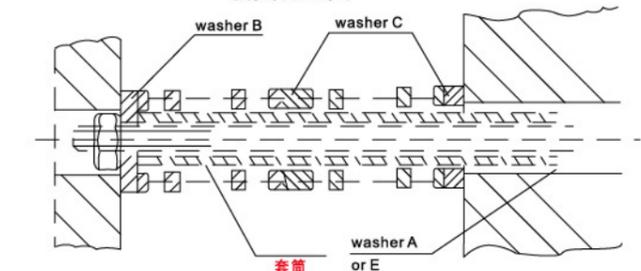
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錯誤 Wrong

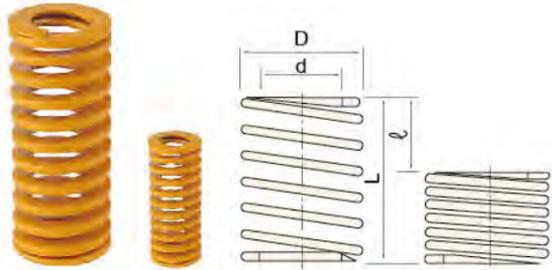


兩條彈簧同時用





DF輕小荷重彈簧 Lighter Load (DF)



訂購方式 DF 8 X 15 = 100
 Purchase method 代號 外徑D 自由長L 數量
 Code number External dia. Free length Volume

DF彈簧使用回數與壓縮比的關係

DF spring use times and compression ratio

彈簧種類 Spring Type	使用回數 Use Times			
	100萬回 1 million	50萬回 500,000 times	30萬回 300,000 times	最大壓縮量 maxi. compressed volume
DF	自由長的40% 40% of free length	自由長的45% 45% of free length	自由長的50% 50% of free length	自由長的58% 58% of free length

荷重計算方式
 彈簧定數 Kg/mm X l (壓縮量) = Kg (荷重)
 (例) 代號DF10X20 (30萬回時)

Load calculation method
 spring fixed number kgf x l (compression volume) = Kg (loading weight)
 (Ex.) Code DF 10 x 20 (300,000 times)

定數 Kg/mm X 壓縮量 = 荷重
 fixed number x compressed volume = loading weight
1X10=10

單位: 條/元
 Unit piece/NTS

稱呼 Item No.	單價 NTS Price	外徑 External dia. D	內徑 Internal dia. d	自由長 Free length L	定數 Fixed number Kgf/mm	30萬(300,000)		50萬(500,000)		100萬(1000,000)						
						壓縮量 Compressed volume mm	荷重 Loading Kg(N)	壓縮量 Compressed volume mm	荷重 Loading Kg(N)	壓縮量 Compressed volume mm	荷重 Loading Kg(N)					
DF8X15	47	8	4	15	1.04	7.5	6.8	6.0	8	7	6					
20	47			20	0.78	10.0	9.0	8.0								
25	54			25	0.62	12.5	11.2	10.0								
30	56			30	0.52	15.0	13.5	12.0								
35	62			35	0.44	17.5	15.7	14.0								
40	66			40	0.39	20.0	18.0	16.0								
45	70			45	0.35	22.5	20.2	18.0								
50	75			50	0.31	25.0	22.5	20.0								
55	79			55	0.28	27.5	24.7	22.0								
60	86			60	0.26	30.0	27.0	24.0								
65	90			65	0.23	32.5	29.2	26.0								
DF10X20	46			10	5	20	1.00	10.0				9.0	8.0	10	9	8
25	46					25	0.80	12.5				11.2	10.0			
30	46	30	0.67			15.0	13.5	12.0								
35	46	35	0.57			17.5	15.7	14.0								
40	52	40	0.50			20.0	18.0	16.0								
45	57	45	0.44			22.5	20.2	18.0								
50	62	50	0.40			25.0	22.5	20.0								
55	68	55	0.36			27.5	24.7	22.0								
60	73	60	0.33			30.0	27.0	24.0								
65	75	65	0.31			32.5	29.2	26.0								
70	75	70	0.29			35.0	31.5	28.0								
75	84	75	0.27			37.5	33.7	30.0								
80	96	80	0.25			40.0	36.0	32.0								
DF12X20	49	12	6	20	1.40	10.0	11.2	8.0	14	12.5	11					
25	54			25	1.12	12.5	13.5	10.0								
30	58			30	0.93	15.0	15.7	12.0								
35	58			35	0.80	17.5	18.0	14.0								
40	64			40	0.70	20.0	20.2	16.0								
45	69			45	0.62	22.5	22.5	18.0								
50	71			50	0.56	25.0	24.7	20.0								
55	75			55	0.51	27.5	27.0	22.0								
60	79			60	0.47	30.0	29.2	24.0								
65	86			65	0.43	32.5	31.5	26.0								
70	90			70	0.40	35.0	33.7	28.0								
75	94			75	0.37	37.5	36.0	30.0								
80	105			80	0.35	40.0	40.5	32.0								
DF14X20	69	14	7	20	1.80	10.0	9.0	8.0	18	16	14.5					
25	69			25	1.44	12.5	11.2	10.0								
30	71			30	1.20	15.0	13.5	12.0								
35	75			35	1.03	17.5	15.7	14.0								
40	79			40	0.90	20.0	18.0	16.0								
45	86			45	0.80	22.5	20.2	18.0								
50	80			50	0.72	25.0	22.0	20.0								
55	94			55	0.65	27.5	24.0	22.0								
60	99			60	0.60	30.0	26.0	24.0								
65	105			65	0.55	32.5	28.0	26.0								
70	105			70	0.51	35.0	30.0	28.0								
75	110			75	0.48	37.5	32.0	30.0								
80	114			80	0.45	40.0	36.0	32.0								
90	122	90	0.40	45.0	40.5	36.0										



DF輕小荷重彈簧 Lighter Load (DF)

稱呼 Item No.	單價 NTS Price	外徑 External dia. D	內徑 Internal dia. d	自由長 Free length L	定數 Fixed number Kgf/mm	30萬(300,000)		50萬(500,000)		100萬(1000,000)						
						壓縮量 Compressed volume mm	荷重 Loading Kg(N)	壓縮量 Compressed volume mm	荷重 Loading Kg(N)	壓縮量 Compressed volume mm	荷重 Loading Kg(N)					
DF16X25	69	16	8	25	1.68	12.5	11.2	10.0	21	19	17					
30	74			30	1.40	15.0	13.5	12.0								
35	78			35	1.20	17.5	15.7	14.0								
40	84			40	1.05	20.0	18.0	16.0								
45	88			45	0.94	22.5	20.2	18.0								
50	92			50	0.84	25.0	22.5	20.0								
55	101			55	0.77	27.5	24.7	22.0								
60	105			60	0.70	30.0	27.0	24.0								
65	111			65	0.65	32.5	29.2	26.0								
70	113			70	0.60	35.0	31.5	28.0								
75	120			75	0.56	37.5	33.7	30.0								
80	124			80	0.53	40.0	36.0	32.0								
90	132			90	0.47	45.0	40.5	36.0								
100	151			100	0.42	50.0	45.0	40.0								
DF18X20	71			18	9	20	2.55	10.0				9.0	8.0	26	23	21
25	71					25	2.08	12.5				11.2	10.0			
30	75					30	1.74	15.0				13.5	12.0			
35	79					35	1.49	17.5				15.7	14.0			
40	86	40	1.30			20.0	18.0	16.0								
45	90	45	1.16			22.5	20.2	18.0								
50	92	50	1.04			25.0	22.5	20.0								
55	101	55	0.95			27.5	24.7	22.0								
60	105	60	0.87			30.0	27.0	24.0								
65	111	65	0.80			32.5	29.2	26.0								
70	113	70	0.74			35.0	31.5	28.0								
75	120	75	0.70			37.5	33.7	30.0								
80	124	80	0.65			40.0	36.0	32.0								
90	132	90	0.58			45.0	40.5	36.0								
100	151	100	0.52			50.0	45.0	40.0								
DF20X20	68	20	11			20	3.20	10.0	9.00	8.00	32	29	26			
25	68					25	2.56	12.5	11.2	10.0						
30	73					30	2.13	15.0	13.5	12.0						
35	79			35	1.83	17.5	15.7	14.0								
40	83			40	1.60	20.0	18.0	16.0								
45	89			45	1.42	22.5	20.2	18.0								
50	93			50	1.28	25.0	22.5	20.0								
55	100			55	1.16	27.5	24.7	22.0								
60	104			60	1.07	30.0	27.0	24.0								
65	110			65	0.98	32.5	29.2	26.0								
70	112			70	0.91	35.0	31.5	28.0								
75	118			75	0.85	37.5	33.7	30.0								
80	122			80	0.80	40.0	36.0	32.0								
90	131			90	0.71	45.0	40.5	36.0								
100	143			100	0.64	50.0	45.0	40.0								
125	149			125	0.51	62.5	56.2	50.0								
150	200			150	0.43	75.0	67.5	60.0								
DF22X25	80			22	11	25	3.20	12.5	11.2	10.0				40	36	32
30	85	30	2.67			15.0	13.5	12.0								
35	89	35	2.29			17.5	15.7	14.0								
40	97	40	2.50			20.0	18.0	16.0								
45	101	45	1.78			22.5	20.2	18.0								
50	108	50	1.60			25.0	22.5	20.0								
55	113	55	1.46			27.5	24.7	22.0								
60	118	60	1.33			30.0	27.0	24.0								
65	125	65	1.23			32.5	29.2	26.0								
70	130	70	1.14			35.0	31.5	28.0								
75	134	75	1.07			37.5	33.7	30.0								
80	138	80	1.00			40.0	36.0	32.0								
90	150	90	0.89			45.0	40.5	36.0								
100	162	100	0.80			50.0	45.0	40.0								
125	208	125	0.64			62.5	56.2	50.0								
150	232	150	0.53			75.0	67.5	60.0								
DF25X25	76	25	13.5			25	4.00	12.5	11.2	10.0	50	45	40			
30	80					30	3.33	15.0	13.5	12.0						
35	87			35	2.85	17.5	15.7	14.0								
40	91			40	2.50	20.0	18.0	16.0								
45	98			45	2.22	22.5	20.2	18.0								
50	102			50	2.00	25.0	22.5	20.0								
55	107			55	1.80	27.5	24.7	22.0								
60	111			60	1.67	30.0	27.0	24.0								
65	118			65	1.54	32.5	29.2	26.0								



DF輕小荷重彈簧 Lighter Load (DF)

稱呼 Item No.	單價 NT\$ Price	外徑 External dia. D	內徑 Internal dia. d	自由長 Free length L	定數 Fixed number Kgf/mm	30萬(300,000)		50萬(500,000)		100萬(1,000,000)						
						壓縮量 2mm Compressed volume	荷重Kg(N) Loading	壓縮量 2mm Compressed volume	荷重Kg(N) Loading	壓縮量 2mm Compressed volume	荷重Kg(N) Loading					
DF25X70	122	25	13.5	70	1.43	35.0	50 {490}	31.5	45 {441}	28.0	40 {392}					
75	127			75	1.33	37.5		33.7		30.0						
80	131			80	1.25	40.0		36.0		32.0						
90	142			90	1.11	45.0		40.5		36.0						
100	154			100	1.00	50.0		45.0		40.0						
125	176			125	0.80	62.5		56.2		50.0						
150	194			150	0.67	75.0		67.5		60.0						
175	280			175	0.57	87.5		78.7		70.0						
DF27X25	83			27	13.5	25		4.80		12.5		60 {588.4}	11.2	54 {529.6}	10.0	48 {470.7}
30	88					30		4.00		15.0			13.5		12.0	
35	90	35	3.42			17.5	15.7	14.0								
40	95	40	3.00			20.0	18.0	16.0								
45	100	45	2.67			22.5	20.2	18.0								
50	105	50	2.40			25.0	22.5	20.0								
55	110	55	2.18			27.5	24.7	22.0								
60	115	60	2.00			30.0	27.0	24.0								
65	125	65	1.85			32.5	29.2	26.0								
70	130	70	1.71			35.0	31.5	28.0								
75	135	75	1.60			37.5	33.7	30.0								
80	140	80	1.50			40.0	36.0	32.0								
90	150	90	1.33			45.0	40.5	36.0								
100	160	100	1.20			50.0	45.0	40.0								
125	185	125	0.96			62.5	56.2	50.0								
150	210	150	0.80			75.0	67.5	60.0								
175	240	175	0.68			87.5	78.7	70.0								
DF30X25	88	30	16	25	5.80	12.5	72 {706}	11.2	65 {637}	10.0	58 {569}					
30	93			30	4.80	15.0		13.5		12.0						
35	100			35	4.13	17.5		15.7		14.0						
40	105			40	3.60	20.0		18.0		16.0						
45	113			45	3.21	22.5		20.2		18.0						
50	118			50	2.88	25.0		22.5		20.0						
55	123			55	2.63	27.5		24.7		22.0						
60	128			60	2.40	30.0		27.0		24.0						
65	133			65	2.22	32.5		29.2		26.0						
70	138			70	2.05	35.0		31.5		28.0						
75	145			75	1.93	37.5		33.7		30.0						
80	150			80	1.80	40.0		36.0		32.0						
90	160			90	1.60	45.0		40.5		36.0						
100	173			100	1.44	50.0		45.0		40.0						
125	203			125	1.15	62.5		56.2		50.0						
150	233			150	0.96	75.0		67.5		60.0						
175	263			175	0.82	87.5		78.7		70.0						
200	280	200	0.72	100.0	90.0	80.0										
DF35X40	108	35	19	40	4.90	20.0	98 {961}	18.0	88 {863}	16.0	78 {765}					
45	115			45	4.36	22.5		20.2		18.0						
50	122			50	3.92	25.0		22.5		20.0						
55	130			55	3.56	27.5		24.7		22.0						
60	137			60	3.26	30.0		27.0		24.0						
65	146			65	3.02	32.5		29.2		26.0						
70	151			70	2.80	35.0		31.5		28.0						
75	161			75	2.61	37.5		33.7		30.0						
80	186			80	2.45	40.0		36.0		32.0						
90	193			90	2.17	45.0		40.5		36.0						
100	199			100	1.96	50.0		45.0		40.0						
125	238	125	1.54	62.5	56.2	50.0										
150	279	150	1.30	75.0	67.5	60.0										
175	317	175	1.12	87.5	78.7	70.0										
200	358	200	0.98	100.0	90.0	80.0										
DF40X40	135	40	22	40	6.38	20.0	128 {1255}	18.0	15 {1128}	16.0	102 {1000}					
50	149			50	5.12	25.0		22.5		20.0						
60	170			60	4.26	30.0		27.0		24.0						
70	193			70	3.65	35.0		31.5		28.0						
80	215			80	3.20	40.0		36.0		32.0						
90	241			90	2.84	45.0		40.5		36.0						
100	263			100	2.56	50.0		45.0		40.0						
125	309			125	2.04	62.5		56.2		50.0						
150	362			150	1.70	75.0		67.5		60.0						
175	416			175	1.46	87.5		78.7		70.0						
200	469			200	1.28	100.0		90.0		80.0						
250	579	250	1.02	125.0	112.5	100.0										



DF輕小荷重彈簧 Lighter Load (DF)

稱呼 Item No.	單價 NT\$ Price	外徑 External dia. D	內徑 Internal dia. d	自由長 Free length L	定數 Fixed number Kgf/mm	30萬(300,000)		50萬(500,000)		100萬(1,000,000)						
						壓縮量 2mm Compressed volume	荷重Kg(N) Loading	壓縮量 2mm Compressed volume	荷重Kg(N) Loading	壓縮量 2mm Compressed volume	荷重Kg(N) Loading					
DF50X50	245	50	27.5	50	8.00	25.0	200 {1961}	22.5	180 {1765}	20.0	160 {1569}					
60	263			60	6.66	30.0		27.0		24.0						
70	297			70	5.71	35.0		31.5		28.0						
80	331			80	5.00	40.0		36.0		32.0						
90	365			90	4.44	45.0		40.5		36.0						
100	399			100	4.00	50.0		45.0		40.0						
125	480			125	3.20	62.5		56.2		50.0						
150	521			150	2.66	75.0		67.5		60.0						
175	641			175	2.28	87.5		78.7		70.0						
200	725			200	2.00	100.0		90.0		80.0						
250	886			250	1.06	125.0		112.5		100.0						
300	1048			300	1.33	150.0		135.0		120.0						
DF60X60	413			60	33	60		9.59		30.0		288 {2824}	27.0	259 {2540}	24.0	230 {2256}
70	451					70		8.22		35.0			31.5		28.0	
80	440					80		7.19		40.0			36.0		32.0	
90	483					90		6.40		45.0			40.5		36.0	
100	530					100		5.76		50.0			45.0		40.0	
125	645	125	4.60			62.5	56.2	50.0								
150	760	150	3.84			75.0	67.5	60.0								
175	875	175	3.29			87.5	78.7	70.0								
200	990	200	2.88			100.0	90.0	80.0								
250	1195	250	2.30			125.0	112.5	100.0								
300	1405	300	1.92			150.0	135.0	120.0								



DL輕荷重彈簧 Light Load (DL)

DL 彈簧使用回數與壓縮比的關係

DL spring use times and compression ratio

使用回數 Use times	100萬回 1 million	50萬回 500,000 times	30萬回 300,000 times	最大壓縮量 max. compressed volume
DL	自由長的32% 32% of free length	自由長的36% 36% of free length	自由長的40% 40% of free length	自由長的48% 48% of free length

荷重計算方式

彈簧定數 Kgf/mm X ℓ (壓縮量) = Kgf (荷重)

(例) 代號 DL10X20 (30萬回時)

Load calculation method

spring fixed number kgf x ℓ (compression volume) = Kgf (loading weight)

(Ex.) Code DL 10 x 20 (300,000 times)

定數 Kgf/mm X 壓縮量 = 荷重

fixed number x compressed volume = loading weight

$$1.80 \times 8 = 14.5$$

單位: 條/元

Unit piece/NT\$

訂購方式 DL 8 X 15 = 100
 Purchase method Code number External dia. Free length Volume

稱呼 Item No.	單價 NT\$ Price	外徑 External dia. D	內徑 Internal dia. d	自由長 Free length L	定數 Fixed number Kgf/mm	30萬(300,000)		50萬(500,000)		100萬(1,000,000)	
						壓縮量 ℓ mm Compressed volume	荷重 Kg(N) Loading	壓縮量 ℓ mm Compressed volume	荷重 Kg(N) Loading	壓縮量 ℓ mm Compressed volume	荷重 Kg(N) Loading
DL8X15	45	8	4	15	1.67	6.0	5.4	4.8	10 {98.1}	9 {88.3}	8 {78.5}
20	44			20	1.25	8.0	7.2	6.4			
25	44			25	1.00	10.0	9.0	8.0			
30	46			30	0.83	12.0	10.8	9.6			
35	51			35	0.71	14.0	12.6	11.2			
40	52			40	0.63	16.0	14.4	12.8			
45	58			45	0.56	18.0	16.2	14.4			
50	62			50	0.50	20.0	18.0	16.0			
55	65			55	0.46	22.0	19.8	17.6			
60	74			60	0.42	24.0	21.6	19.2			
DL10X20	45	10	5	20	1.81	8.0	7.2	6.4	14.5 {142.2}	13 {127.5}	11.5 {112.8}
25	45			25	1.45	10.0	9.0	8.0			
30	45			30	1.21	12.0	10.8	9.6			
35	45			35	1.03	14.0	12.6	11.2			
40	51			40	0.90	16.0	14.4	12.8			
45	56			45	0.80	18.0	16.2	14.4			
50	60			50	0.73	20.0	18.0	16.0			
55	67			55	0.66	22.0	19.8	17.6			
60	71			60	0.60	24.0	21.6	19.2			
65	73			65	0.55	26.0	23.4	20.8			
DL12X20	49	12	6	20	2.63	8.0	7.2	6.4	21 {206}	19 {186.3}	17 {166.7}
25	54			25	2.10	10.0	9.0	8.0			
30	58			30	1.75	12.0	10.8	9.6			
35	58			35	1.50	14.0	12.6	11.2			
40	64			40	1.32	16.0	14.4	12.8			
45	69			45	1.17	18.0	16.2	14.4			
50	71			50	1.05	20.0	18.0	16.0			
55	75			55	0.96	22.0	19.8	17.6			
60	79			60	0.88	24.0	21.6	19.2			
65	86			65	0.81	26.0	23.4	20.8			
DL14X20	67	14	7	20	3.50	8.0	7.2	6.4	28 {275}	25 {245}	22 {216}
25	67			25	2.80	10.0	9.0	8.0			
30	69			30	2.34	12.0	10.8	9.6			
35	74			35	2.00	14.0	12.6	11.2			
40	78			40	1.75	16.0	14.4	12.8			
45	84			45	1.56	18.0	16.2	14.4			
50	88			50	1.40	20.0	18.0	16.0			
55	92			55	1.27	22.0	19.8	17.6			
60	97			60	1.17	24.0	21.6	19.2			
65	103			65	1.08	26.0	23.4	20.8			



DL輕荷重彈簧 Light Load (DL)

稱呼 Item No.	單價 NT\$ Price	外徑 External dia. D	內徑 Internal dia. d	自由長 Free length L	定數 Fixed number Kgf/mm	30萬(300,000)		50萬(500,000)		100萬(1,000,000)						
						壓縮量 ℓ mm Compressed volume	荷重 Kg(N) Loading	壓縮量 ℓ mm Compressed volume	荷重 Kg(N) Loading	壓縮量 ℓ mm Compressed volume	荷重 Kg(N) Loading					
DL16X25	69	16	8	25	3.50	10.0	9.0	8.0	35 {343}	32 {314}	28 {275}					
30	74			30	2.92	12.0	10.8	9.6								
35	78			35	2.50	14.0	12.6	11.2								
40	84			40	2.19	16.0	14.4	12.8								
45	88			45	1.95	18.0	16.2	14.4								
50	92			50	1.75	20.0	18.0	16.0								
55	103			55	1.60	22.0	19.8	17.6								
60	107			60	1.46	24.0	21.6	19.2								
65	111			65	1.35	26.0	23.4	20.8								
70	113			70	1.25	28.0	25.2	22.4								
75	120			75	1.17	30.0	27.0	24.0								
80	126			80	1.10	32.0	28.8	25.6								
90	132			90	0.98	36.0	32.4	28.8								
100	151			100	0.88	40.0	36.0	32.0								
DL18X20	71			18	9	20	5.38	8.0				7.2	6.4	43 {422}	39 {382}	34 {333}
25	71					25	4.30	10.0				9.0	8.0			
30	75					30	3.58	12.0				10.8	9.6			
35	79					35	3.07	14.0				12.6	11.2			
40	86					40	2.69	16.0				14.4	12.8			
45	90					45	2.39	18.0				16.2	14.4			
50	93	50	2.15			20.0	18.0	16.0								
55	103	55	1.96			22.0	19.8	17.6								
60	107	60	1.79			24.0	21.6	19.2								
65	111	65	1.66			26.0	23.4	20.8								
70	113	70	1.54			28.0	25.2	22.4								
75	120	75	1.44			30.0	27.0	24.0								
80	126	80	1.35			32.0	28.8	25.6								
90	139	90	1.20			36.0	32.4	28.8								
100	151	100	1.07			40.0	36.0	32.0								
DL20X25	73	20	10			25	5.40	10.0	9.0	8.0	54 {530}	49 {481}	43 {422}			
30	77					30	4.50	12.0	10.8	9.6						
35	83					35	3.86	14.0	12.6	11.2						
40	87					40	3.38	16.0	14.4	12.8						
45	93					45	3.00	18.0	16.2	14.4						
50	100			50	2.70	20.0	18.0	16.0								
55	104			55	2.45	22.0	19.8	17.6								
60	108			60	2.25	24.0	21.6	19.2								
65	112			65	2.08	26.0	23.4	20.8								
70	119			70	1.93	28.0	25.2	22.4								
75	123			75	1.80	30.0	27.0	24.0								
80	127			80	1.69	32.0	28.8	25.6								
90	137			90	1.50	36.0	32.4	28.8								
100	150			100	1.35	40.0	36.0	32.0								
125	164			125	1.08	50.0	45.0	40.0								
150	212			150	0.90	60.0	54.0	48.0								
DL22X25	77			22	11	25	6.70	10.0	9.0	8.0				67 {657}	60 {588}	54 {530}
30	81					30	5.60	12.0	10.8	9.6						
35	88					35	4.80	14.0	12.6	11.2						
40	92					40	4.20	16.0	14.4	12.8						
45	101	45	3.72			18.0	16.2	14.4								
50	106	50	3.35			20.0	18.0	16.0								
55	110	55	3.05			22.0	19.8	17.6								
60	116	60	2.80			24.0	21.6	19.2								
65	123	65	2.58			26.0	23.4	20.8								
70	124	70	2.40			28.0	25.2	22.4								
75	129	75	2.23			30.0	27.0	24.0								
80	134	80	2.10			32.0	28.8	25.6								
90	146	90	1.86			36.0	32.4	28.8								
100	159	100	1.68			40.0	36.0	32.0								
125	179	125	1.34			50.0	45.0	40.0								
150	256	150	1.12			60.0	54.0	48.0								
DL25X25	77	25	12.5			25	8.40	10.0	9.0	8.0	84 {824}	75 {735}	67 {657}			
30	84					30	7.00	12.0	10.8	9.6						
35	88					35	6.00	14.0	12.6	11.2						
40	94					40	5.25	16.0	14.4	12.8						
45	101			45	4.67	18.0	16.2	14.4								
50	103			50	4.20	20.0	18.0	16.0								
55	110			55	3.82	22.0	19.8	17.6								
60	114			60	3.50	24.0	21.6	19.2								
65	120			65	3.23	26.0	23.4	20.8								
70	122			70	3.00	28.0	25.2	22.4								



DL輕荷重彈簧 Light Load (DL)

稱呼 Item No.	單價 NT\$ Price	外徑 External dia.	內徑 Internal dia.	自由長 Free length	定數 Fixed number	30萬(300,000)		50萬(500,000)		100萬(1000,000)	
		D	d	L	Kgf/mm	壓縮量 Compressed volume mm	荷重Kg(N)	壓縮量 Compressed volume mm	荷重Kg(N)	壓縮量 Compressed volume mm	荷重Kg(N)
DL25X75	129	25	12.5	75	2.80	30.0	84 {824}	27.0	75 {735}	24.0	67 {657}
80	133			80	2.63	32.0		28.8		25.6	
90	146			90	2.33	36.0		32.4		28.8	
100	159			100	2.10	40.0		36.0		32.0	
125	180			125	1.68	50.0		45.0		40.0	
150	206			150	1.40	60.0		54.0		48.0	
175	304			175	1.20	70.0		63.0		56.0	
DL27X25	82	27	13.5	25	10.0	10.0	100 {980.7}	9.0	90 {882.6}	8.0	80 {784.5}
30	84			30	8.33	12.0		10.8		9.6	
35	94			35	7.14	14.0		12.6		11.2	
40	98			40	6.25	16.0		14.4		12.8	
45	103			45	5.55	18.0		16.2		14.4	
50	112			50	5.00	20.0		18.0		16.0	
55	117			55	4.55	22.0		19.8		17.6	
60	122			60	4.17	24.0		21.6		19.2	
65	131			65	3.85	26.0		23.4		20.8	
70	136			70	3.57	28.0		25.2		22.4	
75	145			75	3.33	30.0		27.0		24.0	
80	145			80	3.13	32.0		28.8		25.6	
90	159			90	2.78	36.0		32.4		28.8	
100	173			100	2.50	40.0		36.0		32.0	
125	197			125	2.00	50.0		45.0		40.0	
150	225	150	1.67	60.0	54.0	48.0					
175	253	175	1.43	70.0	63.0	56.0					
DL30X25	84	30	15	25	11.21	10.0	121 {1187}	9.0	109 {1069}	8.0	97 {951}
30	94			30	10.08	12.0		10.8		9.6	
35	103			35	8.65	14.0		12.6		11.2	
40	110			40	7.56	16.0		14.4		12.8	
45	116			45	6.73	18.0		16.2		14.4	
50	121			50	6.05	20.0		18.0		16.0	
55	130			55	5.50	22.0		19.8		17.6	
60	137			60	5.04	24.0		21.6		19.2	
65	144			65	4.65	26.0		23.4		20.8	
70	151			70	4.32	28.0		25.2		22.4	
75	160			75	4.03	30.0		27.0		24.0	
80	167			80	3.78	32.0		28.8		25.6	
90	180			90	3.36	36.0		32.4		28.8	
100	196			100	3.02	40.0		36.0		32.0	
125	235			125	2.42	50.0		45.0		40.0	
150	276	150	2.01	60.0	54.0	48.0					
175	319	175	1.72	70.0	63.0	56.0					
200	351	200	1.51	80.0	72.0	64.0					
DL35X40	125	35	17.5	40	10.31	16.0	165 {1618}	14.4	149 {1461}	12.8	132 {1294}
45	137			45	9.17	18.0		16.2		14.4	
50	146			50	8.25	20.0		18.0		16.0	
55	157			55	7.50	22.0		19.8		17.6	
60	169			60	6.87	24.0		21.6		19.2	
65	178			65	6.35	26.0		23.4		20.8	
70	189			70	5.89	28.0		25.2		22.4	
75	198			75	5.50	30.0		27.0		24.0	
80	210			80	5.15	32.0		28.8		25.6	
90	230			90	4.58	36.0		32.4		28.8	
100	251			100	4.12	40.0		36.0		32.0	
125	306			125	3.30	50.0		45.0		40.0	
150	360			150	2.75	60.0		54.0		48.0	
175	415			175	2.35	70.0		63.0		56.0	
200	470			200	2.06	80.0		72.0		64.0	
DL40X40	164	40	20	40	13.5	16.0	216 {2118}	14.4	194 {1902}	12.8	173 {1697}
50	180			50	10.8	20.0		18.0		16.0	
60	210			60	9.00	24.0		21.6		19.2	
70	240			70	7.71	28.0		25.2		22.4	
80	269			80	6.75	32.0		28.8		25.6	
90	299			90	6.00	36.0		32.4		28.8	
100	329			100	5.40	40.0		36.0		32.0	
125	395			125	4.32	50.0		45.0		40.0	
150	461			150	3.60	60.0		54.0		48.0	
175	529			175	3.08	70.0		63.0		56.0	
200	598			200	2.70	80.0		72.0		64.0	
250	721	250	2.16	100.0	90.0	80.0					
DL50X50	310	50	25	50	16.89	20.0	338{3315}	18.0	304{2981}	16.0	270{2648}



DL輕荷重彈簧 Light Load (DL)

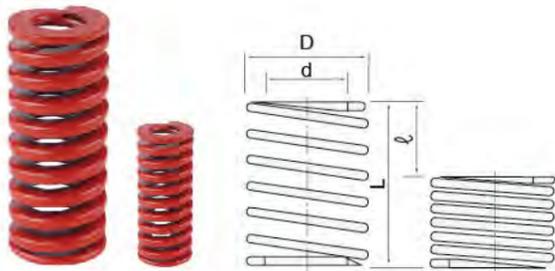
稱呼 Item No.	單價 NT\$ Price	外徑 External dia.	內徑 Internal dia.	自由長 Free length	定數 Fixed number	30萬(300,000)		50萬(500,000)		100萬(1000,000)						
		D	d	L	Kgf/mm	壓縮量 Compressed volume mm	荷重Kg(N)	壓縮量 Compressed volume mm	荷重Kg(N)	壓縮量 Compressed volume mm	荷重Kg(N)					
DL50X60	332	50	25	60	14.08	24.0	338 {3315}	21.6	304 {2981}	19.2	270 {2648}					
70	374			70	12.07	28.0		25.2		22.4						
80	416			80	10.56	32.0		28.8		25.6						
90	461			90	9.38	36.0		32.4		28.8						
100	505			100	8.45	40.0		36.0		32.0						
125	604			125	6.76	50.0		45.0		40.0						
150	702			150	5.63	60.0		54.0		48.0						
175	800			175	4.82	70.0		63.0		56.0						
200	898			200	4.22	80.0		72.0		64.0						
250	1100			250	3.38	100.0		90.0		80.0						
300	1296			300	2.81	120.0		108.0		96.0						
DL60X60	594			60	30	60		20.25		24.0		486 {4766}	21.6	437 {4286}	19.2	389 {3815}
70	608					70		17.35		28.0			25.2		22.4	
80	633					80		5.18		32.0			28.8		25.6	
90	653					90		13.50		36.0			32.4		28.8	
100	674	100	12.15			40.0	36.0	32.0								
125	814	125	9.72			50.0	45.0	40.0								
150	950	150	8.10			60.0	54.0	48.0								
175	1090	175	6.94			70.0	63.0	56.0								
200	1226	200	6.07			80.0	72.0	64.0								
250	1502	250	4.86			100.0	90.0	80.0								
300	1778	300	4.05			120.0	108.0	96.0								



DM中荷重彈簧 Medium Load (DM)



DM中荷重彈簧 Medium Load (DM)



DM彈簧使用回數與壓縮比的關係

DM spring use times and compression ratio

使用回數 Use times	100萬回 1 million	50萬回 500,000 times	30萬回 300,000 times	最大壓縮量 max. compressed volume
DM	自由長的25.6% 25.6% of free length	自由長的28.8% 28.8% of free length	自由長的32% 32% of free length	自由長的38% 38% of free length

■ 荷重計算方式
彈簧定數 Kg/mm x L (壓縮量) = Kgf (荷重)
(例) 代號DM8X15 (30萬回時)

■ Load calculation method
spring fixed number kgf x l (compression volume) = Kgf (loading weight)
(Ex.) Code DM 8 x 15 (300,000 times)

定數 Kg/mm x 壓縮量 = 荷重
fixed number x compressed volume = loading weight

$$2.90 \times 4.8 = 14$$

訂購方式 Purchase method
代號 Code number: DM 8 X 15 = 100
外徑 D External dia. 自由長 L Free length 數量 Volume

單位: 條/元 Unit piece/NT\$

稱呼 Item No.	單價 NT\$ Price	外徑 External dia. D	內徑 Internal dia. d	自由長 Free length L	定數 Fixed number Kg/mm	30萬(300,000)		50萬(500,000)		100萬(1,000,000)	
						壓縮量 mm Compressed volume	荷重 Kg(N) Loading	壓縮量 mm Compressed volume	荷重 Kg(N) Loading	壓縮量 mm Compressed volume	荷重 Kg(N) Loading
DM8X15	37	8	4	15	2.90	4.8	4.3	13	11		
20	41			20	2.19	6.4	5.8	13	11		
25	41			25	1.80	8.0	7.2	13	11		
30	46			30	1.50	9.6	8.6	13	11		
35	51			35	1.29	11.2	10.1	13	11		
40	55			40	1.10	12.8	11.5	13	11		
45	65			45	0.97	14.4	13.0	13	11		
50	74			50	0.86	16.0	14.4	13	11		
55	84			55	0.80	17.6	15.8	13	11		
60	91			60	0.73	19.2	17.3	13	11		
DM10X20	53	10	5	20	3.13	6.4	5.8	18	16		
25	54			25	2.50	8.0	7.2	18	16		
30	56			30	2.08	9.6	8.6	18	16		
35	59			35	1.78	11.2	10.1	18	16		
40	63			40	1.56	12.8	11.5	18	16		
45	65			45	1.38	14.4	13.0	18	16		
50	69			50	1.25	16.0	14.4	18	16		
55	71			55	1.13	17.6	15.8	18	16		
60	77			60	1.04	19.2	17.3	18	16		
65	80			65	0.96	20.8	18.7	18	16		
70	80	70	0.89	22.4	20.2	18	16				
75	90	75	0.83	24.0	21.6	18	16				
80	100	80	0.78	25.6	23.0	18	16				
DM12X20	54	12	6	20	4.53	6.4	5.8	26	23		
25	56			25	3.62	8.0	7.2	26	23		
30	58			30	3.02	9.6	8.6	26	23		
35	60			35	2.58	11.2	10.1	26	23		
40	62			40	2.20	12.8	11.5	26	23		
45	67			45	2.01	14.4	13.0	26	23		
50	71			50	1.81	16.0	14.4	26	23		
55	75			55	1.64	17.6	15.8	26	23		
60	79			60	1.51	19.2	17.3	26	23		
65	82			65	1.39	20.8	18.7	26	23		
70	82	70	1.29	22.4	20.2	26	23				
75	91	75	1.20	24.0	21.6	26	23				
80	97	80	1.13	25.6	23.0	26	23				
100	165	100	1.00	28.8	25.9	26	23				
DM14X20	150	14	7	20	6.10	6.40	5.8	35	31		
25	65			25	4.87	8.0	7.2	35	31		
30	69			30	4.06	9.6	8.6	35	31		
35	74			35	3.48	11.2	10.1	35	31		
40	78			40	3.04	12.8	11.5	35	31		
45	82			45	2.70	14.4	13.0	35	31		
50	86			50	2.43	16.0	14.4	35	31		
55	90			55	2.21	17.6	15.8	35	31		
60	95			60	2.03	19.2	17.3	35	31		
65	99			65	1.87	20.8	18.7	35	31		
70	101	70	1.74	22.4	20.2	35	31				
75	109	75	1.62	24.0	21.6	35	31				
80	109	80	1.52	25.6	23.0	35	31				
90	113	90	1.35	28.8	25.9	35	31				

稱呼 Item No.	單價 NT\$ Price	外徑 External dia. D	內徑 Internal dia. d	自由長 Free length L	定數 Fixed number Kg/mm	30萬(300,000)		50萬(500,000)		100萬(1,000,000)		
						壓縮量 mm Compressed volume	荷重 Kg(N) Loading	壓縮量 mm Compressed volume	荷重 Kg(N) Loading	壓縮量 mm Compressed volume	荷重 Kg(N) Loading	
DM14X100	175	14	7	100	1.20	32.0	39{382}	28.8	35{343}	25.6	31{304}	
DM16X25	71			25	6.37	8.0	7.2	46{451}	6.4	41{402}		
30	78			30	5.31	9.6	8.6	46{451}	7.7	41{402}		
35	84			35	4.55	11.2	10.1	46{451}	9.0	41{402}		
40	90			40	3.98	12.8	11.5	46{451}	10.2	41{402}		
45	97			45	3.54	14.4	13.0	46{451}	11.5	41{402}		
50	101			50	3.18	16.0	14.4	46{451}	12.8	41{402}		
55	107			55	2.89	17.6	15.8	46{451}	14.1	41{402}		
60	111			60	2.65	19.2	17.3	46{451}	15.4	41{402}		
65	118			65	2.45	20.8	18.7	46{451}	16.6	41{402}		
70	124			70	2.27	22.4	20.2	46{451}	17.9	41{402}		
75	130			75	2.11	24.0	21.6	46{451}	19.2	41{402}		
80	134			80	1.99	25.6	23.0	46{451}	20.5	41{402}		
90	139			90	1.77	28.8	25.9	46{451}	23.0	41{402}		
100	147			100	1.59	32.0	28.8	46{451}	25.6	41{402}		
DM18X20	78			18	9	20	10.15	6.4	65{637}	5.8	52{510}	
25	78					25	8.12	8.0	7.2	58{569}	6.4	52{510}
30	84					30	6.77	9.6	8.6	58{569}	7.7	52{510}
35	90					35	5.80	11.2	10.1	58{569}	9.0	52{510}
40	97					40	5.07	12.8	11.5	58{569}	10.2	52{510}
45	101	45	4.51			14.4	13.0	58{569}	11.5	52{510}		
50	107	50	4.06			16.0	14.4	58{569}	12.8	52{510}		
55	111	55	3.69			17.6	15.8	58{569}	14.1	52{510}		
60	118	60	3.38			19.2	17.3	58{569}	15.4	52{510}		
65	124	65	3.12			20.8	18.7	58{569}	16.6	52{510}		
70	130	70	2.90	22.4	20.2	58{569}	17.9	52{510}				
75	134	75	2.60	24.0	21.6	58{569}	19.2	52{510}				
80	141	80	2.53	25.6	23.0	58{569}	20.5	52{510}				
90	153	90	2.30	28.8	25.9	58{569}	23.0	52{510}				
100	160	100	2.02	32.0	28.8	58{569}	25.6	52{510}				
DM20X20	78	20	10	20	12.5	6.4	80{785}	5.8	64{628}			
25	78			25	10.00	8.0	7.2	72{706}	6.4	64{628}		
30	84			30	8.33	9.6	8.6	72{706}	7.7	64{628}		
35	91			35	7.14	11.2	10.1	72{706}	9.0	64{628}		
40	94			40	6.25	12.8	11.5	72{706}	10.2	64{628}		
45	101			45	5.55	14.4	13.0	72{706}	11.5	64{628}		
50	105			50	5.00	16.0	14.4	72{706}	12.8	64{628}		
55	109			55	4.54	17.6	15.8	72{706}	14.1	64{628}		
60	115			60	4.16	19.2	17.3	72{706}	15.4	64{628}		
65	124			65	3.84	20.8	18.7	72{706}	16.6	64{628}		
70	127	70	3.57	22.4	20.2	72{706}	17.9	64{628}				
75	132	75	3.30	24.0	21.6	72{706}	19.2	64{628}				
80	141	80	3.12	25.6	23.0	72{706}	20.5	64{628}				
90	153	90	2.77	28.8	25.9	72{706}	23.0	64{628}				
100	164	100	2.50	32.0	28.8	72{706}	25.6	64{628}				
125	176	125	2.00	40.8	36.0	72{706}	32.0	64{628}				
150	202	150	1.67	48.0	46.2	72{706}	38.4	64{628}				
DM22X25	89	22	11	25	12.00	8.0	97{951}	7.2	77{755}			
30	94			30	10.10	9.6	8.6	87{853}	7.7	77{755}		
35	98			35	8.70	11.2	10.1	87{853}	9.0	77{755}		
40	103			40	7.57	12.8	11.5	87{853}	10.2	77{755}		
45	107			45	6.60	14.4	13.0	87{853}	11.5	77{755}		
50	110			50	6.06	16.0	14.4	87{853}	12.8	77{755}		
55	114			55	5.50	17.6	15.8	87{853}	14.1	77{755}		
60	119			60	5.05	19.2	17.3	87{853}	15.4	77{755}		
65	121			65	4.60	20.8	18.7	87{853}	16.6	77{755}		
70	125			70	4.33	22.4	20.2	87{853}	17.9	77{755}		
75	130	75	4.00	24.0	21.6	87{853}	19.2	77{755}				
80	135	80	3.78	25.6	23.0	87{853}	20.5	77{755}				
90	144	90	3.36	28.8	25.9	87{853}	23.0	77{755}				
100	151	100	3.03	32.0	28.8	87{853}	25.6	77{755}				
125	171	125	2.42	40.0	36.0	87{853}	32.0	77{755}				
150	192	150	2.01	48.0	43.2	87{853}	38.4	77{755}				
DM25X25	84	25	12.5	25	15.50	8.0	125{1226}	7.2	100{981}			
30	91			30	13.02	9.6	8.6	112{1098}	7.7	100{981}		
35	98			35	11.20	11.2	10.1	112{1098}	9.0	100{981}		
40	103			40	9.76	12.8	11.5	112{1098}	10.2	100{981}		
45	105			45	8.60	14.4	13.0	112{1098}	11.5	100{981}		
50	110			50	7.81	16.0	14.4	112{1098}	12.8	100{981}		
55	114			55	7.00	17.6	15.8	112{1098}	14.1	100{981}		



DM中荷重彈簧 Medium Load (DM)



DM中荷重彈簧 Medium Load (DM)

稱呼 Item No.	單價 NT\$ Price	外徑	內徑	自由長 Free length	定數 Fixed number	30萬(300,000)		50萬(500,000)		100萬(1,000,000)	
		D	d			壓縮量 Compressed volume	荷重Kg(N)	壓縮量 Compressed volume	荷重Kg(N)	壓縮量 Compressed volume	荷重Kg(N)
DM25X60	120	25	12.5	60	6.51	19.2	125	17.3	112	15.4	100
65	127			20.8	18.7	16.6					
70	133			22.4	20.2	17.9					
75	137			24.0	21.6	19.2					
80	144			25.6	23.0	20.5					
90	157			28.8	25.9	23.0					
100	167			32.0	28.8	25.6					
125	198			40.0	36.0	32.0					
150	220			48.0	43.2	38.4					
175	245			56.0	50.4	44.8					
DM27X25	92	27	13.5	25	18.10	8.0	146	7.2	131	6.4	
30	99			9.6	8.6	7.7					
35	106			11.2	10.1	9.0					
40	110			12.8	11.5	10.2					
45	114			14.4	13.0	11.5					
50	121			16.0	14.4	12.8					
55	128			17.6	15.8	14.1					
60	134			19.2	17.3	15.4					
65	139			20.8	18.7	16.6					
70	145			22.4	20.2	17.9					
75	152	24.0	21.6	19.2							
80	158	25.6	23.0	20.5							
90	169	28.8	25.9	23.0							
100	183	32.0	28.8	25.6							
125	215	40.0	36.0	32.0							
150	246	48.0	43.2	38.4							
175	272	56.0	50.4	44.8							
DM30X25	100	30	15	25	22.30	8.0	180	7.2	161	6.4	
30	107			9.6	8.6	7.7					
35	116			11.2	10.1	9.0					
40	122			12.8	11.5	10.2					
45	131			14.4	13.0	11.5					
50	140			16.0	14.4	12.8					
55	147			17.6	15.8	14.1					
60	156			19.2	17.3	15.4					
65	165			20.8	18.7	16.6					
70	171			22.4	20.2	17.9					
75	180	24.0	21.6	19.2							
80	189	25.6	23.0	20.5							
90	205	28.8	25.9	23.0							
100	220	32.0	28.8	25.6							
125	267	40.0	36.0	32.0							
150	312	48.0	43.2	38.4							
175	356	56.0	50.4	44.8							
200	548	64.0	57.6	51.2							
DM35X40	151	35	17.5	40	19.14	12.8	245	11.5	220	10.2	
45	160			14.4	13.0	11.5					
50	171			16.0	14.4	12.8					
55	185			17.6	15.8	14.1					
60	196			19.2	17.3	15.4					
65	211			20.8	18.7	16.6					
70	220			22.4	20.2	17.9					
75	234			24.0	21.6	19.2					
80	245			25.6	23.0	20.5					
90	269			28.8	25.9	23.0					
100	294	32.0	28.8	25.6							
125	356	40.0	36.0	32.0							
150	418	48.0	43.2	38.4							
175	481	56.0	50.4	44.8							
200	535	64.0	57.6	51.2							
DM40X40	204	40	20	40	25.02	12.8	320	11.5	288	10.2	
50	214			16.0	14.4	12.8					
60	245			19.2	17.3	15.4					
70	278			22.4	20.2	17.9					
80	312			25.6	23.0	20.5					
90	345			28.8	25.9	23.0					
100	376			32.0	28.8	25.6					
125	458			40.0	36.0	32.0					
150	539			48.0	43.2	38.4					
175	623			56.0	50.4	44.8					
200	703	64.0	57.6	51.2							

稱呼 Item No.	單價 NT\$ Price	外徑	內徑	自由長 Free length	定數 Fixed number	30萬(300,000)		50萬(500,000)		100萬(1,000,000)		
		D	d			壓縮量 Compressed volume	荷重Kg(N)	壓縮量 Compressed volume	荷重Kg(N)	壓縮量 Compressed volume	荷重Kg(N)	
DM40X250	846	40	20	250	4.00	80.0	320	72.0	288	64.0	256	
DM50X50	356			50	25	50	31.25	16.0	500	14.4	450	12.8
60	386					19.2	17.3	15.4				
70	434					22.4	20.2	17.9				
80	481					25.6	23.0	20.5				
90	527					28.8	25.9	23.0				
100	573					32.2	28.8	25.6				
125	702					40.0	36.0	32.0				
150	827					48.0	43.2	38.4				
175	956					56.0	50.4	44.8				
200	1086	64.0	57.6			51.2						
DM60X60	565	60	30	250	6.25	80.0	720	72.0	648	64.0		
70	613			19.2	17.3	15.4						
80	686			22.4	20.2	17.9						
90	754			25.6	23.0	20.5						
100	827			28.8	25.9	23.0						
125	1007			32.0	28.8	25.6						
150	1187			40.4	36.0	32.0						
175	1368			48.0	43.2	38.4						
200	1543			56.0	50.4	44.8						
250	1879			64.0	57.6	51.2						
300	2214	96.0	86.4	76.8								



DH重荷重彈簧 Heavy Load (DH)

DH 彈簧使用回數與壓縮比的關係 DM spring use times and compression ratio

使用回數 Use times 種類 Type	100萬回 1 million	50萬回 500,000 times	30萬回 300,000 times	最大壓縮量 (max. compressed volume)
DH	自由長的19.2% 19.2% of free length	自由長的21.6% 21.6% of free length	自由長的24% 24% of free length	自由長的28% 28% of free length

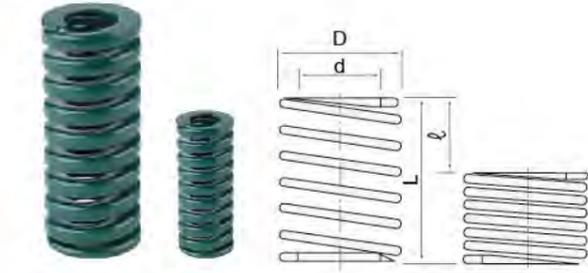
荷重計算方式
彈簧定數 Kg/mm x L (壓縮量) = Kg (荷重)
(例) 代號 DH8X15 (30萬回時)

Load calculation method
spring fixed number kgf x L (compression volume) = Kg (loading weight)
(Ex.) Code DM 8 x 15 (300,000 times)

定數 Kg/mm x 壓縮量 = 荷重
fixed number x compressed volume = loading weight

5.87X3.6=21

單位: 條/元
Unit piece/NT\$



訂購方式 **DH 8 X 15 = 100**
代號 外徑D 自由長 L 數量

稱呼 Item No.	單價 NT\$ Price	外徑 External dia. D	內徑 Internal dia. d	自由長 Free length L	定數 Fixed number Kg/mm	30萬(300,000)		50萬(500,000)		100萬(1,000,000)			
						壓縮量 zmm Compressed volume	荷重Kg(N) Loading	壓縮量 zmm Compressed volume	荷重Kg(N) Loading	壓縮量 zmm Compressed volume	荷重Kg(N) Loading		
DH8X15	36	8	4	15	5.87	3.6	2.9	3.2	19	17			
20	40			4.41	4.8	4.3	3.8	4.8	17	{166.7}			
25	48			3.51	6.0	5.4	4.8	6.0	17				
30	57			2.92	7.2	6.5	5.8	7.2	17				
35	61			2.53	8.4	7.5	6.7	8.4	17				
40	65			2.21	9.6	8.6	7.7	9.6	17				
45	69			1.96	10.8	9.7	8.6	10.8	17				
50	74			1.77	12.0	10.8	9.6	12.0	17				
55	76			1.60	13.2	11.8	10.6	13.2	17				
60	80			1.46	14.4	13.0	11.5	14.4	17				
DH10X20	54			10	5	20	6.25	4.8	3.8	4.3	27	24	
25	57					5.00	6.0	5.4	4.8	6.0	24	{235}	
30	60	4.16	7.2			6.5	5.8	7.2	24				
35	64	3.57	8.4			7.5	6.7	8.4	24				
40	65	3.15	9.6			8.6	7.7	9.6	24				
45	74	2.77	10.8			9.7	8.6	10.8	24				
50	77	2.50	12.0			10.8	9.6	12.0	24				
55	83	2.27	13.2			11.8	10.6	13.2	24				
60	87	2.08	14.4			13.0	11.5	14.4	24				
65	90	1.92	15.6			14.0	12.5	15.6	24				
70	90	1.79	16.8			15.1	13.4	16.8	24				
75	95	1.67	18.0			16.2	14.4	18.0	24				
80	100	1.56	19.2	17.3	15.4	19.2	24						
DH12X20	59	12	6	20	8.90	4.8	3.8	4.3	38	34			
25	61			7.10	6.0	5.4	4.8	6.0	34	{333}			
30	65			5.90	7.2	6.5	5.8	7.2	34				
35	69			5.11	8.4	7.5	6.7	8.4	34				
40	74			4.47	9.6	8.6	7.7	9.6	34				
45	78			3.39	10.8	9.7	8.6	10.8	34				
50	82			3.58	12.0	10.8	9.6	12.0	34				
55	86			3.25	13.2	11.8	10.6	13.2	34				
60	92			2.98	14.4	13.0	11.5	14.4	34				
65	97			2.74	15.6	14.0	12.5	15.6	34				
70	97			2.54	16.8	15.1	13.4	16.8	34				
75	99			2.37	18.0	16.2	14.4	18.0	34				
80	101	2.21	19.2	17.3	15.4	19.2	34						
DH14X20	155	14	7	20	12.3	4.8	3.8	4.3	53	47			
25	69			9.83	6.0	5.4	4.8	6.0	47	{461}			
30	74			8.19	7.2	6.5	5.8	7.2	47				
35	78			7.02	8.4	7.5	6.7	8.4	47				
40	82			6.14	9.6	8.6	7.7	9.6	47				
45	86			5.46	10.8	9.7	8.6	10.8	47				
50	90			4.91	12.0	10.8	9.6	12.0	47				
55	95			4.46	13.2	11.8	10.6	13.2	47				
60	99			4.09	14.4	13.0	11.5	14.4	47				
65	101			3.78	15.6	14.0	12.5	15.6	47				
70	105			3.51	16.8	15.1	13.4	16.8	47				
75	109			3.27	18.0	16.2	14.4	18.0	47				
80	109	3.07	19.2	17.3	15.4	19.2	47						
90	113	2.72	21.6	19.4	17.3	21.6	47						



DH重荷重彈簧 Heavy Load (DH)

稱呼 Item No.	單價 NT\$ Price	外徑 External dia. D	內徑 Internal dia. d	自由長 Free length L	定數 Fixed number Kg/mm	30萬(300,000)		50萬(500,000)		100萬(1,000,000)	
						壓縮量 zmm Compressed volume	荷重Kg(N) Loading	壓縮量 zmm Compressed volume	荷重Kg(N) Loading	壓縮量 zmm Compressed volume	荷重Kg(N) Loading
DH16X25	78	16	8	25	12.83	6.0	6.0	5.4	69	62	
30	84			10.69	7.2	6.5	5.8	7.2	62	{608}	
35	90			9.16	8.4	7.5	6.7	8.4	62		
40	97			8.02	9.6	8.6	7.7	9.6	62		
45	101			7.12	10.8	9.7	8.6	10.8	62		
50	107			6.41	12.0	10.8	9.6	12.0	62		
55	111			5.83	13.2	11.8	10.6	13.2	62		
60	118			5.34	14.4	13.0	11.5	14.4	62		
65	124			4.93	15.6	14.0	12.5	15.6	62		
70	130			4.58	16.8	15.1	13.4	16.8	62		
75	134			4.20	18.0	16.2	14.4	18.0	62		
80	141			4.01	19.2	17.3	15.4	19.2	62		
90	147	3.57	21.6	19.4	17.3	21.6	62				
100	164	3.21	24.0	21.6	19.2	24.0	62				
DH18X20	88	18	9	20	16.16	6.0	4.8	4.3	87	78	
25	88			13.47	7.2	5.4	4.8	7.2	78	{765}	
30	95			11.54	8.4	6.5	5.8	8.4	78		
35	101			10.10	9.6	7.5	6.7	9.6	78		
40	105			8.98	10.8	8.6	7.7	10.8	78		
45	109			8.08	12.0	9.7	8.6	12.0	78		
50	116			7.34	13.2	10.8	9.6	13.2	78		
55	122			6.73	14.4	11.8	10.6	14.4	78		
60	128			6.21	15.6	13.0	11.5	15.6	78		
65	132			5.77	16.8	14.0	12.5	16.8	78		
70	139			5.30	18.0	15.1	13.4	18.0	78		
75	145			5.05	19.2	16.2	14.4	19.2	78		
80	151	4.50	21.6	17.3	15.4	21.6	78				
90	162	4.04	24.0	19.4	17.3	24.0	78				
100	168	3.66	27.0	21.6	19.2	27.0	78				
DH20X25	80	20	10	25	20.00	6.0	5.4	5.4	108	96	
30	87			16.66	7.2	6.5	5.8	7.2	96	{941}	
35	93			14.28	8.4	7.5	6.7	8.4	96		
40	100			12.50	9.6	8.6	7.7	9.6	96		
45	104			11.11	10.8	9.7	8.6	10.8	96		
50	111			10.00	12.0	10.8	9.6	12.0	96		
55	115			9.09	13.2	11.8	10.6	13.2	96		
60	122			8.33	14.4	13.0	11.5	14.4	96		
65	128			7.69	15.6	14.0	12.5	15.6	96		
70	135			7.14	16.8	15.1	13.4	16.8	96		
75	139			6.60	18.0	16.2	14.4	18.0	96		
80	146			6.25	19.2	17.3	15.4	19.2	96		
90	159	5.55	21.6	19.4	17.3	21.6	96				
100	169	5.00	24.0	21.6	19.2	24.0	96				
125	187	4.00	30.0	27.0	24.0	30.0	96				
150	218	3.33	36.0	32.4	28.8	36.0	96				
DH22X25	94	22	11	25	24.00	6.0	5.4	5.4	130	116	
30	98			20.13	7.2	6.5	5.8	7.2	116	{1138}	
35	103			17.30	8.4	7.5	6.7	8.4	116		
40	107			15.10	9.6	8.6	7.7	9.6	116		
45	110			13.40	10.8	9.7	8.6	10.8	116		
50	114			12.08	12.0	10.8	9.6	12.0	116		
55	119			10.90	13.2	11.8	10.6	13.2	116		
60	121			10.06	14.4	13.0	11.5	14.4	116		
65	125			9.20	15.6	14.0	12.5	15.6	116		
70	130			8.63	16.8	15.1	13.4	16.8	116		
75	135			8.00	18.0	16.2	14.4	18.0	116		
80	139			7.55	19.2	17.3	15.4	19.2	116		
90	151	6.71	21.6	19.4	17.3	21.6	116				
100	164	6.04	24.0	21.6	19.2	24.0	116				
125	198	4.83	30.0	27.0	24.0	30.0	116				
150	224	4.02	36.0	32.4	28.8	36.0	116				
DH25X25	92	25	12.5	25	31.20	6.0	5.4	5.4	169	150	
30	96			25.97	7.2	6.5	5.8	7.2	150	{1471}	
35	101			22.50	8.4	7.5	6.7	8.4	150		
40	107			19.47	9.6	8.6	7.7	9.6	150		
45	111			17.40	10.8	9.7	8.6	10.8	150		
50	117			15.58	12.0	10.8	9.6	12.0	150		
55	124			14.20	13.2	11.8	10.6	13.2	150		
60	130			12.98	14.4	13.0	11.5	14.4	150		
65	134			12.00	15.6	14.0	12.5	15.6	150		
70	141			11.13	16.8	15.1	13.4	16.8	150		



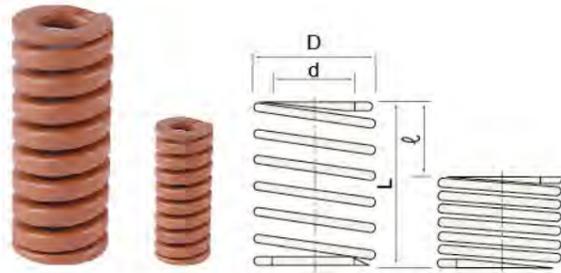
DH重荷重彈簧 Heavy Load (DH)

稱呼 Item No.	單價 NT\$ Price	外徑	內徑	自由長 Free length	定數 Fixed number	30萬(300,000)		50萬(500,000)		100萬(1,000,000)		
		D	d			壓縮量 mm Compressed volume	荷重 Kg(N) Loading	壓縮量 mm Compressed volume	荷重 Kg(N) Loading	壓縮量 mm Compressed volume	荷重 Kg(N) Loading	
DH25X75	147	25	12.5	75	10.40	18.0	16.2	14.4	150 {1471}			
80	153			80	9.73	19.2	17.3	15.4				
90	164			90	8.65	21.6	19.4	17.3				
100	176			100	7.79	24.0	21.6	19.2				
125	208			125	6.23	30.0	27.0	24.0				
150	235			150	4.02	36.0	32.4	28.8				
175	265			175	4.46	42.0	37.8	33.6				
DH27X25	110			27	13.5	25	36.40	6.0		5.4	4.8	175 {1716}
30	114	30	30.41			7.2	6.5	5.8				
35	119	35	26.20			8.4	7.5	6.7				
40	125	40	22.81			9.6	8.6	7.7				
45	132	45	20.30			10.8	9.7	8.6				
50	139	50	18.25			12.0	10.8	9.6				
55	144	55	16.50			13.2	11.8	10.6				
60	151	60	15.20			14.4	13.0	11.5				
65	157	65	14.00			15.6	14.0	12.5				
70	164	70	13.03			16.8	15.1	13.4				
75	171	75	12.10			18.0	16.2	14.4				
80	176	80	11.40			19.2	17.3	15.4				
90	196	90	10.13			21.6	19.4	17.3				
100	219	100	9.12			24.0	21.6	19.2				
125	269	125	7.30			30.0	27.0	24.0				
150	319	150	6.08			36.0	32.4	28.8				
175	351	175	5.21			42.0	37.8	33.6				
DH30X25	114	30	15	25	45.00	6.0	5.4	4.8	216 {2118}			
30	121			30	37.50	7.2	6.5	5.8				
35	130			35	32.40	8.4	7.5	6.7				
40	139			40	28.12	9.6	8.6	7.7				
45	145			45	25.00	10.8	9.7	8.6				
50	154			50	22.50	12.0	10.8	9.6				
55	163			55	20.40	13.2	11.8	10.6				
60	169			60	18.75	14.4	13.0	11.5				
65	178			65	17.30	15.6	14.0	12.5				
70	187			70	16.07	16.8	15.1	13.4				
75	193			75	15.00	18.0	16.2	14.4				
80	202			80	14.06	19.2	17.3	15.4				
90	226			90	12.50	21.6	19.4	17.3				
100	251			100	11.25	24.0	21.6	19.2				
125	308			125	9.00	30.0	27.0	24.0				
150	365			150	7.50	36.0	32.4	28.8				
175	420			175	6.24	42.0	37.8	33.6				
200	462	200	9.00	48.0	43.2	38.4						
DH35X40	163	35	17.5	40	38.22	9.6	8.6	7.7	293 {2873}			
45	177			45	33.98	10.8	9.7	8.6				
50	191			50	30.58	12.0	10.8	9.6				
55	207			55	27.80	13.2	11.8	10.6				
60	222			60	25.48	14.4	13.0	11.5				
65	238			65	23.53	15.6	14.0	12.5				
70	254			70	21.84	16.8	15.1	13.4				
75	271			75	20.39	18.0	16.2	14.4				
80	288			80	19.11	19.2	17.3	15.4				
90	324			90	16.99	21.6	19.4	17.3				
100	344			100	15.29	24.0	21.6	19.2				
125	410			125	12.23	30.0	27.0	24.0				
150	479			150	10.19	36.0	32.4	28.8				
175	547			175	8.73	42.0	37.8	33.6				
200	619			200	7.63	48.0	43.2	38.4				
DH40X40	211			40	20	40	50.00	9.6		8.6	7.7	384 {3766}
50	244					50	40.00	12.0		10.8	9.6	
60	280	60	33.33			14.4	13.0	11.5				
70	322	70	28.57			16.8	15.1	13.4				
80	359	80	25.00			19.2	17.3	15.4				
90	395	90	22.22			21.6	19.4	17.3				
100	432	100	20.00			24.0	21.6	19.2				
125	520	125	16.00			30.0	27.0	24.0				
150	615	150	13.33			36.0	32.4	28.8				
175	693	175	11.42			42.0	37.8	33.6				
200	782	200	10.00			48.0	43.2	38.4				
250	953	250	8.00			60.0	54.0	48.0				
DH50X50	394	50	25			50	62.50	12.0	10.8	9.6	600{5884}	



DH重荷重彈簧 Heavy Load (DH)

稱呼 Item No.	單價 NT\$ Price	外徑	內徑	自由長 Free length	定數 Fixed number	30萬(300,000)		50萬(500,000)		100萬(1,000,000)		
		D	d			壓縮量 mm Compressed volume	荷重 Kg(N) Loading	壓縮量 mm Compressed volume	荷重 Kg(N) Loading	壓縮量 mm Compressed volume	荷重 Kg(N) Loading	
DH50X60	433	50	25	60	52.08	14.4	13.0	11.5	600 {5884}			
70	488			70	44.64	16.8	15.1	13.4				
80	543			80	39.06	19.2	17.3	15.4				
90	598			90	34.72	21.6	19.4	17.3				
100	652			100	31.25	24.0	21.6	19.2				
125	789			125	25.00	30.0	27.0	24.0				
150	926			150	20.83	36.0	32.4	28.8				
175	1068			175	17.85	42.0	37.8	33.6				
200	1205			200	15.62	48.0	43.2	38.4				
250	1469			250	12.50	60.0	54.0	48.0				
300	1761			300	10.41	72.0	64.8	57.6				
DH60X60	654			60	30	60	75.00	14.4		13.0	11.5	864 {8473}
70	679					70	64.28	16.8		15.1	13.4	
80	758					80	56.25	19.2		17.3	15.4	
90	833					90	50.00	21.6		19.4	17.3	
100	913					100	45.00	24.0		21.6	19.2	
125	1104					125	36.00	30.0		27.0	24.0	
150	1301	150	30.00			36.0	32.4	28.8				
175	1493	175	25.71			42.0	37.8	33.6				
200	1689	200	22.50			48.0	43.2	38.4				
250	1979	250	18.00			60.0	54.0	48.0				
300	2284	300	15.00			72.0	64.8	57.6				



DB 彈簧使用回數與壓縮比的關係 DB spring use times and compression ratio

彈簧種類 Spring Type	100萬回 1 million times	50萬回 500,000 times	30萬回 300,000 times	最大壓縮量 Max. compressed volume
DB	自由長的16% 16% of free length	自由長的18% 18% of free length	自由長的20% 20% of free length	自由長的24% 24% of free length

荷重計算方式 彈簧定數 Kgf/mm X l (壓縮量) = Kgf (荷重) (例) 代號 DB8X15 (30萬回時)

Load calculation method
spring fixed number kgf x l (compression volume) = Kgf (loading weight)
(Ex.) Code DB 8 x 15 (300,000 times)

定數 Kgf/mm X 壓縮量 = 荷重
fixed number x compressed volume = loading weight

10.8 X 3.0 = 33

訂購方式 Purchase method
代號 Code number
外徑 D External dia.
自由長 L Free length
數量 Volume

DB 8 X 15 = 100

單位: 條/元
Unit piece/NTS

稱呼 Item No.	單價 NTS Price	外徑 External dia. D	內徑 Internal dia. d	自由長 Free length L	定數 Fixed number Kgf/mm	30萬(300,000)		50萬(500,000)		100萬(1,000,000)	
						壓縮量 mm Compressed volume	荷重 Kg(N) Loading	壓縮量 mm Compressed volume	荷重 Kg(N) Loading	壓縮量 mm Compressed volume	荷重 Kg(N) Loading
DB8X15	54	8	4	15	10.80	3.0	2.4	33 {343.2}	30 {304}	26 {255}	
20	58			20	8.13	4.0	3.2				
25	62			25	6.50	5.0	4.0				
30	67			30	5.42	6.0	4.8				
35	71			35	4.64	7.0	5.6				
40	75			40	4.10	8.0	6.4				
45	77			45	3.61	9.0	7.2				
50	82			50	3.33	10.0	8.0				
55	86			55	3.00	11.0	8.8				
60	90			60	2.75	12.0	9.6				
DB10X20	58	10	5	20	11.25	4.0	3.2	45 {441}	41 {402}	36 {353}	
25	64			25	9.00	5.0	4.0				
30	69			30	7.50	6.0	4.8				
35	71			35	6.43	7.0	5.6				
40	75			40	5.63	8.0	6.4				
45	79			45	5.00	9.0	7.2				
50	79			50	4.50	10.0	8.0				
55	86			55	4.09	11.0	8.8				
60	90			60	3.75	12.0	9.6				
65	94			65	3.47	13.0	10.4				
70	94	70	3.21	14.0	11.2						
75	99	75	3.00	15.0	12.0						
80	103	80	2.82	16.0	12.8						
DB12X20	78	12	6	20	14.50	4.0	3.2	58 {569}	52 {510}	46 {451}	
25	78			25	11.60	5.0	4.0				
30	78			30	9.67	6.0	4.8				
35	84			35	8.29	7.0	5.6				
40	88			40	7.25	8.0	6.4				
45	97			45	6.44	9.0	7.2				
50	103			50	5.80	10.0	8.0				
55	107			55	5.27	11.0	8.8				
60	111			60	4.83	12.0	9.6				
65	111			65	4.44	13.0	10.4				
70	111	70	4.13	14.0	11.2						
75	113	75	3.85	15.0	12.0						
80	130	80	3.61	16.0	12.8						
DB14X20	88	14	7	20	18.80	4.0	3.2	75 {736}	68 {667}	60 {588}	
25	88			25	15.00	5.0	4.0				
30	88			30	12.50	6.0	4.8				
35	92			35	10.72	7.0	5.6				
40	97			40	9.38	8.0	6.4				
45	103			45	8.34	9.0	7.2				
50	107			50	7.50	10.0	8.0				
55	113			55	6.82	11.0	8.8				
60	120			60	6.25	12.0	9.6				
65	126			65	5.77	13.0	10.4				
70	130	70	5.36	14.0	11.2						
75	137	75	5.00	15.0	12.0						
80	137	80	4.69	16.0	12.8						
90	143	90	4.17	18.0	14.4						
DB16X25	88	16	8	25	20.00	5.0	4.0	100{981}	90{883}	80{785}	

稱呼 Item No.	單價 NTS Price	外徑 External dia. D	內徑 Internal dia. d	自由長 Free length L	定數 Fixed number Kgf/mm	30萬(300,000)		50萬(500,000)		100萬(1,000,000)							
						壓縮量 mm Compressed volume	荷重 Kg(N) Loading	壓縮量 mm Compressed volume	荷重 Kg(N) Loading	壓縮量 mm Compressed volume	荷重 Kg(N) Loading						
DB16X30	97	16	8	30	16.67	6.0	5.4	100 {981}	90 {883}	80 {785}							
35	103			35	14.29	7.0	6.3										
40	107			40	12.50	8.0	7.2										
45	113			45	11.11	9.0	8.1										
50	120			50	10.00	10.0	9.0										
55	126			55	9.09	11.0	9.9										
60	130			60	8.34	12.0	10.8										
65	141			65	7.69	13.0	11.7										
70	145			70	7.14	14.0	12.6										
75	151			75	6.67	15.0	13.5										
80	162			80	6.25	16.0	14.4										
90	168			90	5.56	18.0	16.2										
100	185			100	5.00	20.0	18.0										
DB18X20	91			18	9	20	31.25					4.0	3.6	125 {1266}	113 {1108}	100 {981}	
25	91					25	25.00					5.0	4.5				
30	100					30	20.84					6.0	5.4				
35	109	35	17.86			7.0	6.3										
40	115	40	15.63			8.0	7.2										
45	124	45	13.89			9.0	8.1										
50	128	50	12.50			10.0	9.0										
55	135	55	11.37			11.0	9.9										
60	139	60	10.84			12.0	10.8										
65	150	65	9.62			13.0	11.7										
70	154	70	8.93			14.0	12.6										
75	163	75	8.34			15.0	13.5										
80	172	80	7.82			16.0	14.4										
90	189	90	6.95			18.0	16.2										
100	193	100	6.26			20.0	18.0										
DB20X20	93	20	11			20	40.00	4.0	3.6	160 {1569}	144 {1412}	128 {1255}					
25	93			25	32.00	5.0	4.5										
30	102			30	26.67	6.0	5.4										
35	111			35	22.86	7.0	6.3										
40	118			40	20.00	8.0	7.2										
45	127			45	17.78	9.0	8.1										
50	134			50	16.00	10.0	9.0										
55	140			55	14.55	11.0	9.9										
60	151			60	13.33	12.0	10.8										
65	158			65	12.31	13.0	11.7										
70	167			70	11.43	14.0	12.6										
75	176			75	10.67	15.0	13.5										
80	183			80	10.00	16.0	14.4										
90	200			90	8.89	18.0	16.2										
100	216			100	8.00	20.0	18.0										
125	245			125	6.40	25.0	22.5										
150	280	150	5.33	30.0	27.0												
DB22X25	98	22	11	25	39.00	5.0	4.5	195 {1912}	176 {1762}	156 {1530}							
30	107			30	32.50	6.0	5.4										
35	114			35	27.86	7.0	6.3										
40	121			40	24.38	8.0	7.2										
45	130			45	21.67	9.0	8.1										
50	139			50	19.50	10.0	9.0										
55	146			55	17.73	11.0	9.9										
60	155			60	16.25	12.0	10.8										
65	164			65	15.00	13.0	11.7										
70	171			70	13.93	14.0	12.6										
75	180			75	13.00	15.0	13.5										
80	189			80	12.19	16.0	14.4										
90	205			90	10.83	18.0	16.2										
100	224			100	9.75	20.0	18.0										
125	265			125	7.80	25.0	22.5										
150	297			150	6.50	30.0	27.0										
DB25X25	103	25	12.5	25	49.00	5.0	4.5	245 {2403}	221 {2167}	196 {1922}							
30	110			30	40.80	6.0	5.4										
35	119			35	35.00	7.0	6.3										
40	125			40	30.60	8.0	7.2										
45	135			45	27.20	9.0	8.1										
50	144			50	24.50	10.0	9.0										
55	151			55	22.30	11.0	9.9										
60	160			60	20.40	12.0	10.8										
65	169			65	18.80	13.0	11.7										



DB極重荷重彈簧 Super Heavy Load (DB)

稱呼 Item No.	單價 NT\$ Price	外徑	內徑	自由長 Free length	定數 Fixed number	30萬(300,000)		50萬(500,000)		100萬(1,000,000)			
		D	d			壓縮量 zmm Compressed volume	荷重Kg(N) Loading	壓縮量 zmm Compressed volume	荷重Kg(N) Loading	壓縮量 zmm Compressed volume	荷重Kg(N) Loading		
DB25X70	176	25	12.5	70	17.50	14.0	245	12.6	221	11.2	196		
75	185			75	16.30	15.0	13.5	12.0					
80	194			80	15.30	16.0	14.4	12.8					
90	210			90	13.60	18.0	16.2	14.4					
100	226			100	12.30	20.0	18.0	16.0					
125	269			125	9.80	25.0	22.5	20.0					
150	310			150	6.50	30.0	27.0	24.0					
175	356			175	8.17	35.0	31.5	28.0					
DB27X25	119			27	13.5	25	58.00	5.0	190	4.5	261	4.0	232
30	126					30	48.33	6.0	5.4	4.8			
35	135					35	41.43	7.0	6.3	5.6			
40	145	40	36.25			8.0	7.2	6.4					
45	152	45	32.22			9.0	8.1	7.2					
50	161	50	29.00			10.0	9.0	8.0					
55	171	55	26.36			11.0	9.9	8.8					
60	178	60	24.17			12.0	10.8	9.6					
65	187	65	22.31			13.0	11.7	10.4					
70	197	70	20.71			14.0	12.6	11.2					
75	204	75	19.33			15.0	13.5	12.0					
80	220	80	18.13			16.0	14.4	12.8					
90	239	90	16.11			18.0	16.2	14.4					
100	265	100	14.50			20.0	18.0	16.0					
125	327	125	11.60			25.0	22.5	20.0					
150	389	150	9.67			30.0	27.0	24.0					
175	436	175	8.28			35.0	31.5	28.0					
DB30X25	117	30	15	25	72.00	5.0	360	4.5	324	4.0	288		
30	125			30	60.00	6.0	5.4	4.8					
35	139			35	51.43	7.0	6.3	5.6					
40	145			40	45.00	8.0	7.2	6.4					
45	158			45	40.00	9.0	8.1	7.2					
50	169			50	36.00	10.0	9.0	8.0					
55	178			55	32.72	11.0	9.9	8.8					
60	187			60	30.00	12.0	10.8	9.6					
65	198			65	27.69	13.0	11.7	10.4					
70	207			70	25.71	14.0	12.6	11.2					
75	218			75	24.00	15.0	13.5	12.0					
80	226			80	22.50	16.0	14.4	12.8					
90	246			90	20.00	18.0	16.2	14.4					
100	266			100	18.00	20.0	18.0	16.0					
125	321			125	14.40	25.0	22.5	20.0					
150	372			150	12.00	30.0	27.0	24.0					
175	427			175	10.28	35.0	31.5	28.0					
200	467	200	9.00	40.0	36.0	32.0							
DB35X40	187	35	17.5	40	61.25	8.0	490	7.2	441	6.4	392		
45	207			45	54.44	9.0	8.1	7.2					
50	224			50	49.00	10.0	9.0	8.0					
55	241			55	44.54	11.0	9.9	8.8					
60	260			60	40.83	12.0	10.8	9.6					
65	277			65	37.69	13.0	11.7	10.4					
70	294			70	35.00	14.0	12.6	11.2					
75	314			75	32.67	15.0	13.5	12.0					
80	331			80	30.62	16.0	14.4	12.8					
90	367			90	27.22	18.0	16.2	14.4					
100	404			100	24.50	20.0	18.0	16.0					
125	482			125	19.60	25.0	22.5	20.0					
150	565			150	16.33	30.0	27.0	24.0					
175	642			175	14.00	35.0	31.5	28.0					
200	725			200	12.50	40.0	36.0	32.0					
DB40X40	266			40	20	40	80.00	8.0	640	7.2	576	6.4	512
50	294					50	64.00	10.0	9.0	8.0			
60	336	60	53.33			12.0	10.8	9.6					
70	377	70	45.71			14.0	12.6	11.2					
80	416	80	40.00			16.0	14.4	12.8					
90	457	90	35.55			18.0	16.2	14.4					
100	496	100	32.00			20.0	18.0	16.0					
125	594	125	25.60			25.0	22.5	20.0					
150	701	150	21.33			30.0	27.0	24.0					
175	803	175	18.28			35.0	31.5	28.0					
200	905	200	16.00			40.0	36.0	32.0					



DB極重荷重彈簧 Super Heavy Load (DB)

稱呼 Item No.	單價 NT\$ Price	外徑	內徑	自由長 Free length	定數 Fixed number	30萬(300,000)		50萬(500,000)		100萬(1,000,000)			
		D	d			壓縮量 zmm Compressed volume	荷重Kg(N) Loading	壓縮量 zmm Compressed volume	荷重Kg(N) Loading	壓縮量 zmm Compressed volume	荷重Kg(N) Loading		
DB40X250	1105	40	20	250	12.80	50.0	640	45.0	576	40.0	512		
DB50X50	458			50	100.00	10.0	9.0	8.0					
60	492			60	83.33	12.0	10.8	9.6					
70	560			70	71.42	14.0	12.6	11.2					
80	628			80	62.50	16.0	14.4	12.8					
90	696			90	55.55	18.0	16.2	14.4					
100	759			100	50.00	20.0	18.0	16.0					
125	925			125	40.00	25.0	22.5	20.0					
150	1085			150	33.33	30.0	27.0	24.0					
175	1246			175	28.57	35.0	31.5	28.0					
200	1406			200	25.00	40.0	36.0	32.0					
250	1718			250	20.00	50.0	45.0	40.0					
300	2034			300	16.66	60.0	54.0	48.0					
DB60X60	783			60	30	60	120.00	12.0	1440	10.8	1296	9.6	1152
70	855					70	102.86	14.0	12.6	11.2			
80	898					80	90.00	16.0	14.4	12.8			
90	951					90	80.00	18.0	16.2	14.4			
100	1028	100	72.00			20.0	18.0	16.0					
125	1229	125	57.60			25.0	22.5	20.0					
150	1426	150	48.00			30.0	27.0	24.0					
175	1628	175	41.14			35.0	31.5	28.0					
200	1825	200	36.00			40.0	36.0	32.0					
250	2180	250	28.80			50.0	45.0	40.0					
300	2531	300	24.00			60.0	54.0	48.0					

DR塑膠模用耐熱彈簧 Heat-proof Springs for Plastic Molds (DR)

DR 彈簧使用回數與壓縮比的關係

DR spring use times and compression ratio

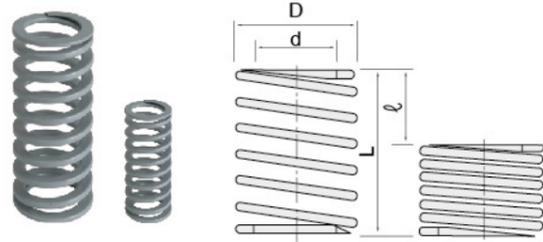
使用回數 Use times 種類 Type	100萬回 1 million	50萬回 500,000 times	30萬回 300,000 times	最大壓縮量 maxi. compressed volume
DR	自由長的40% 40% of free length	自由長的45% 45% of free length	自由長的50% 50% of free length	自由長的60% 60% of free length

■ 荷重計算方式
彈簧定數 Kg/mm X ℓ (壓縮量) = Kg (荷重)
(例) 代號DR14.5X20 (30萬回時)

■ Load calculation method
spring fixed number kgf x ℓ (compression volume) = Kg (loading weight)
(Ex.) Code DF 10 x 20 (300,000 times)

定數 Kg/mm X 壓縮量 = 荷重
fixed number x compressed volume = loading weight
1.10X10.0=11

單位: 條/元
Unit piece/NT\$

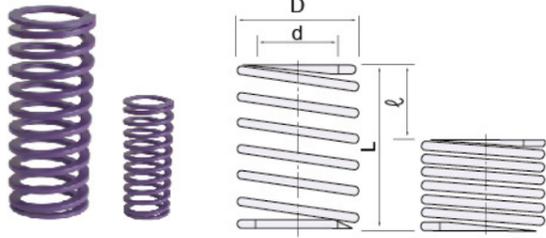


訂購方式 Purchase method
DR 14.5 X 15 = 100
代號 Code number 外徑 D External dia. 自由長 L Free length 數量 Volume

稱呼 Item No.	單價 NT\$ Price	外徑 External dia. D	內徑 Internal dia. d	自由長 Free length L	定數 Fixed number Kg/mm	Free lengthX40%		Free lengthX45%		Free lengthX50%	
						壓縮量 ℓmm Compressed volume	荷重Kg(N) Loading	壓縮量 ℓmm Compressed volume	荷重Kg(N) Loading	壓縮量 ℓmm Compressed volume	荷重Kg(N) Loading
DR14.5X20	95	14.5	9	20	1.10	8.0	9 {88.3}	9.0	10 {98.1}	10.0	11 {107.9}
25	105			25	0.88	10.0		11.3		12.5	
30	110			30	0.73	12.0		13.5		15.0	
35	115			35	0.63	14.0		15.8		17.5	
40	120			40	0.55	16.0		18.0		20.0	
45	125			45	0.49	18.0		20.3		22.5	
50	135			50	0.44	20.0		22.5		25.0	
55	140			55	0.40	22.0		24.8		27.5	
60	145			60	0.37	24.0		27.0		30.0	
65	150			65	0.34	26.0		29.3		32.5	
70	155			70	0.31	28.0		31.5		35.0	
75	165			75	0.29	30.0		33.8		37.5	
80	175			80	0.28	32.0		36.0		40.0	
90	185			90	0.24	36.0		40.5		45.0	
100	200			100	0.22	40.0		45.0		50.0	
125	215	125	0.18	50.0	56.3	62.5					
DR17X25	110	17	11	25	1.52	10.0	15 {147.1}	11.3	17 {166.7}	12.5	19 {186.3}
30	115			30	1.27	12.0		13.5		15.0	
35	120			35	1.09	14.0		15.8		17.5	
40	125			40	0.95	16.0		18.0		20.0	
45	135			45	0.84	18.0		20.3		22.5	
50	140			50	0.76	20.0		22.5		25.0	
55	145			55	0.69	22.0		24.8		27.5	
60	150			60	0.63	24.0		27.0		30.0	
65	155			65	0.58	26.0		29.3		32.5	
70	165			70	0.54	28.0		31.5		35.0	
75	170			75	0.51	30.0		33.8		37.5	
80	180			80	0.48	32.0		36.0		40.0	
90	195			90	0.42	36.0		40.5		45.0	
100	205			100	0.38	40.0		45.0		50.0	
125	215			125	0.30	50.0		56.3		62.5	
150	235	150	0.25	60.0	67.5	75.0					
DR21X30	135	21	13	30	1.40	12.0	17 {166.7}	13.5	19 {186.3}	15.0	21 {205.9}
35	140			35	1.20	14.0		15.8		17.5	
40	145			40	1.05	16.0		18.0		20.0	
45	150			45	0.93	18.0		20.3		22.5	
50	155			50	0.84	20.0		22.5		25.0	
55	165			55	0.76	22.0		24.8		27.5	
60	170			60	0.70	24.0		27.0		30.0	
65	175			65	0.65	26.0		29.3		32.5	
70	180			70	0.60	28.0		31.5		35.0	
75	185			75	0.56	30.0		33.8		37.5	
80	195			80	0.53	32.0		36.0		40.0	
90	205			90	0.47	36.0		40.5		45.0	
100	215			100	0.42	40.0		45.0		50.0	
125	230			125	0.34	50.0		56.3		62.5	
150	250			150	0.28	60.0		67.5		75.0	
DR26X30	145	26	16.5	30	2.73	12.0	33 {323.6}	13.5	37 {362.8}	15.0	41 {402.1}
35	150			35	2.34	14.0		15.8		17.5	
40	155			40	2.05	16.0		18.0		20.0	
45	165			45	1.82	18.0		20.3		22.5	

DR塑膠模用耐熱彈簧 Heat-proof Springs for Plastic Molds (DR)

稱呼 Item No.	單價 NT\$ Price	外徑 External dia. D	內徑 Internal dia. d	自由長 Free length L	定數 Fixed number Kg/mm	Free lengthX40%		Free lengthX45%		Free lengthX50%	
						壓縮量 ℓmm Compressed volume	荷重Kg(N) Loading	壓縮量 ℓmm Compressed volume	荷重Kg(N) Loading	壓縮量 ℓmm Compressed volume	荷重Kg(N) Loading
DR26X50	170	26	16.5	50	1.64	20.0	33 {323.6}	22.5	37 {362.8}	25.0	41 {402.1}
55	175			55	1.49	22.0		24.8		27.5	
60	180			60	1.37	24.0		27.0		30.0	
65	185			65	1.26	26.0		29.3		32.5	
70	195			70	1.17	28.0		31.5		35.0	
75	200			75	1.09	30.0		33.8		37.5	
80	205			80	1.03	32.0		36.0		40.0	
90	215			90	0.91	36.0		40.5		45.0	
100	230			100	0.82	40.0		45.0		50.0	
110	240			110	0.75	44.0		49.5		55.0	
125	260			125	0.66	50.0		56.3		62.5	
150	275			150	0.55	60.0		67.5		75.0	
175	300			175	0.47	70.0		78.8		87.5	
200	330			200	0.41	80.0		90.0		100.0	
DR32X40	175			32	21	40		2.55		16.0	
45	185	45	2.27			18.0	20.3	22.5			
50	200	50	2.04			20.0	22.5	25.5			
60	210	60	1.70			24.0	27.0	30.0			
70	225	70	1.46			28.0	31.5	35.0			
80	240	80	1.28			32.0	36.0	40.0			
90	260	90	1.13			36.0	40.5	45.0			
100	275	100	1.02			40.0	45.0	50.0			
110	300	110	0.93			44.0	49.5	55.0			
125	320	125	0.82			50.0	56.3	62.5			
150	335	150	0.68			60.0	67.5	75.0			
175	360	175	0.58			70.0	78.8	87.5			
200	390	200	0.51			80.0	90.0	100.0			
250	420	250	0.41			100.0	112.5	125.0			
300	480	300	0.34			120.0	135.0	150.0			
DR39X40	225	39	26	40	2.75	16.0	44 {431.5}	18.0	50 {409.3}	20.0	55 {539.4}
45	235			45	2.44	18.0		20.3		22.5	
50	245			50	2.20	20.0		22.5		25.0	
60	260			60	1.83	24.0		27.0		30.0	
70	270			70	1.57	28.0		31.5		35.0	
80	285			80	1.38	32.0		36.0		40.0	
90	300			90	1.22	36.0		40.5		45.0	
100	320			100	1.10	40.0		45.0		50.0	
110	335			110	1.00	44.0		49.5		55.0	
125	355			125	0.88	50.0		56.3		62.5	
150	375			150	0.73	60.0		67.5		75.0	
175	390			175	0.63	70.0		78.8		87.5	
200	415			200	0.55	80.0		90.0		100.0	
250	450			250	0.44	100.0		112.5		125.0	
300	530			300	0.37	120.0		135.0		150.0	
DR46X50	275	46	32	50	2.48	20.0	50 {490.3}	22.5	56 {549.2}	25.0	62 {608}
60	290			60	2.07	24.0		27.0		30.0	
70	300			70	1.77	28.0		31.5		35.0	
80	315			80	1.55	32.0		36.0		40.0	
90	330			90	1.38	36.0		40.5		45.0	
100	350			100	1.24	40.0		45.0		50.0	
110	375			110	1.13	44.0		49.5		55.0	
125	395			125	0.99	50.0		56.3		62.5	
150	420			150	0.83	60.0		67.5		75.0	
175	450			175	0.71	70.0		78.8		87.5	
200	480			200	0.62	80.0		90.0		100.0	
250	540			250	0.50	100.0		112.5		125.0	
300	600			300	0.41	120.0		135.0		150.0	



訂購方式 **DY 14.5 X 15 = 100**
 Purchase method [代號] [外徑D] [自由長L] [數量]
 Code External dia. Free length Volume
 number

DY 彈簧使用回數與壓縮比的關係

DY spring use times and compression ratio

種類 Type	使用回數 Use times	100萬回 1 million	50萬回 500,000 times	30萬回 300,000 times	最大壓縮量 max. compressed volume
DY		自由長的40% 16% of free length	自由長的45% 18% of free length	自由長的50% 20% of free length	自由長的60% 24% of free length

荷重計算方式
 彈簧定數 Kgf/mm X L (壓縮量) = Kgf (荷重)
 (例) 代號 DY14.6X20 (30萬回時)

Load calculation method
 spring fixed number kgf x L (compression volume) = Kgf (loading weight)
 (Ex.) Code DY 14.6 x 20 (300,000 times)

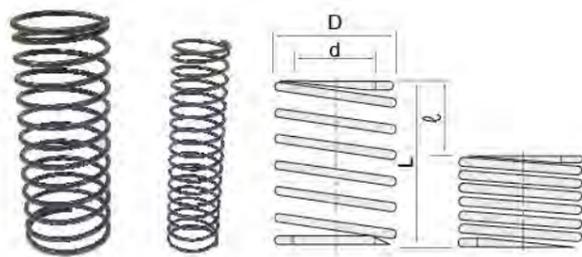
定數 Kgf/mm X 壓縮量 = 荷重
 fixed number x compressed volume = loading weight

1.9 X 10.0 = 19

單位: 條/元
 Unit: piece/NT\$

稱呼 Item No.	單價 NT\$ Price	外徑 Internal dia.		自由長 Free length	定數 Fixed number	Free length X40%		Free length X45%		Free length X50%		
		D	d			量縮量 Lmm Compressed volume	荷重 Kg(N) Loading	量縮量 Lmm Compressed volume	荷重 Kg(N) Loading	量縮量 Lmm Compressed volume	荷重 Kg(N) Loading	
DY14.5X20	110	14.5	9	20	1.90	8.0	9.0	10.0				
25	115			25	1.52	10.0	11.3	12.5				
30	120			30	1.27	12.0	13.5	15.0				
35	125			35	1.09	14.0	15.8	17.5				
40	135			40	0.95	16.0	18.0	20.0				
45	140			45	0.84	18.0	20.3	22.5				
50	145			50	0.76	20.0	22.5	25.0				
55	150			55	0.69	22.0	24.8	27.5				
60	155			60	0.63	24.0	27.0	30.0	15	17		19
65	165			65	0.58	26.0	29.3	32.5	{147.1}	{166.7}		{186.3}
70	170			70	0.54	28.0	31.5	35.0				
75	175			75	0.51	30.0	33.8	37.5				
80	190			80	0.48	32.0	36.0	40.0				
90	200	90	0.42	36.0	40.5	45.0						
100	215	100	0.38	40.0	45.0	50.0						
125	235	125	0.30	50.0	56.3	62.5						
DY17X25	120	17	11	25	2.24	10.0	11.3	12.5				
30	125			30	1.87	12.0	13.5	15.0				
35	135			35	1.60	14.0	15.8	17.5				
40	140			40	1.40	16.0	18.0	20.0				
45	145			45	1.24	18.0	20.3	22.5				
50	150			50	1.12	20.0	22.5	25.0				
55	155			55	1.02	22.0	24.8	27.5				
60	165			60	0.93	24.0	27.0	30.0	22	25		28
65	170			65	0.86	26.0	29.3	32.5	{215.7}	{245.2}		{274.6}
70	175			70	0.80	28.0	31.5	35.0				
75	180			75	0.75	30.0	33.8	37.5				
80	195			80	0.70	32.0	36.0	40.0				
90	205			90	0.62	36.0	40.5	45.0				
100	225	100	0.56	40.0	45.0	50.0						
125	240	125	0.45	50.0	56.3	62.5						
150	260	150	0.37	60.0	67.5	75.0						
DY21X30	145	21	13	30	2.40	12.0	13.5	15.0				
35	150			35	2.06	14.0	15.8	17.5				
40	155			40	1.80	16.0	18.0	20.0				
45	165			45	1.60	18.0	20.3	22.5				
50	170			50	1.44	20.0	22.5	25.0				
55	175			55	1.31	22.0	24.8	27.5				
60	180			60	1.20	24.0	27.0	30.0				
65	185			65	1.11	26.0	29.3	32.5	29.0	32		36
70	195			70	1.03	28.0	31.5	35.0	{284.4}	{313.8}		{353}
75	200			75	0.96	30.0	33.8	37.5				
80	205			80	0.90	32.0	36.0	40.0				
90	215			90	0.80	36.0	40.5	45.0				
100	230			100	0.72	40.0	45.0	50.0				
125	255	125	0.58	50.0	56.3	62.5						
150	270	150	0.48	60.0	67.5	75.0						
DY26X30	165	26	16.5	30	3.53	12.0	13.5	15.0				
35	170			35	3.03	14.0	15.8	17.5	42	48		53
40	175			40	2.65	16.0	18.0	20.0	{411.9}	{470.7}		{519.8}
45	180			45	2.36	18.0	20.3	22.5				

稱呼 Item No.	單價 NT\$ Price	外徑 Internal dia.		自由長 Free length	定數 Fixed number	Free length X40%		Free length X45%		Free length X50%		
		D	d			量縮量 Lmm Compressed volume	荷重 Kg(N) Loading	量縮量 Lmm Compressed volume	荷重 Kg(N) Loading	量縮量 Lmm Compressed volume	荷重 Kg(N) Loading	
DY26X50	185	26	16.5	50	2.12	20.0						
55	195			55	1.93	22.0						
60	200			60	1.77	24.0						
65	205			65	1.63	26.0						
70	210			70	1.51	28.0						
75	215			75	1.41	30.0						
80	230			80	1.33	32.0						
90	235			90	1.18	36.0						
100	255			100	1.06	40.0						
110	270			110	0.96	44.0						
125	290			125	0.85	50.0						
150	320			150	0.71	60.0						
175	350			175	0.61	70.0						
200	380			200	0.53	80.0						
DY32X40	200			32	21	40	3.55	16.0				
45	215	45	3.16			18.0						
50	235	50	2.84			20.0						
60	255	60	2.37			24.0						
70	270	70	2.03			28.0						
80	290	80	1.78			32.0						
90	305	90	1.58			36.0						
100	330	100	1.42			40.0						
110	350	110	1.29			44.0						
125	375	125	1.14			50.0						
150	390	150	0.95			60.0						
175	420	175	0.81			70.0						
200	450	200	0.71			80.0						
250	480	250	0.57			100.0						
300	530	300	0.47			120.0						
DY39X40	240	39	26	40	4.65	16.0						
45	255			45	4.13	18.0						
50	265			50	3.72	20.0						
60	285			60	3.10	24.0						
70	300			70	2.66	28.0						
80	320			80	2.33	32.0						
90	335			90	2.07	36.0						
100	360			100	1.86	40.0						
110	385			110	1.69	44.0						
125	410			125	1.49	50.0						
150	435			150	1.24	60.0						
175	470			175	1.06	70.0						
200	505			200	0.93	80.0						
250	540			250	0.74	100.0						
300	600			300	0.62	120.0						
DY46X50	300	46	32	50	4.96	20.0						
60	315			60	4.13	24.0						
70	325			70	3.54	28.0						
80	335			80	3.10	32.0						
90	360			90	2.76	36.0						
100	385			100	2.48	40.0						
110	420			110	2.25	44.0						
125	450			125	1.98	50.0						
150	480			150	1.65	60.0						
175	510			175	1.42	70.0						
200	540			200	1.24	80.0						
250	600			250	0.99	100.0						
300	660			300	0.83	120.0						



訂購方式 **DLR** 3 X 15 = 100
 Purchase method Code number External dia. Free length Volume

稱呼 Item No.	售價 NT\$ Price	外徑 External dia. D	內徑 Internal dia. d	自由長 Free length L	定數 Fixed resistance Kg/mm	Free lengthX40%		Free lengthX45%		Free lengthX50%	
						壓縮量 mm Compressed volume	荷重 Kg(N) Loading	壓縮量 mm Compressed volume	荷重 Kg(N) Loading	壓縮量 mm Compressed volume	荷重 Kg(N) Loading
DLR3X10		3	2	10	0.3	1.6	2.4	0.68	3.2	0.9	
15	0.2			2.4	3.6	0.8					
20	0.1			3.2	4.8	1.2					
25	0.2			4.0	6.0	1.6					
DLR4X10				4	2.6	10	0.5	1.6	2.4	1.2	3.2
15	0.3	2.4	3.6			1.8					
20	0.3	3.2	4.8			2.4					
25	0.2	4.0	6.0			3.2					
30	0.2	4.8	7.2			4.0					
DLR6X15		6	4	15	0.8	2.4	3.6	2.7	4.8	3.6	
20	0.6			3.2	4.8	3.6					
25	0.5			4.0	6.0	4.8					
30	0.4			4.8	7.2	6.0					
35	0.3			5.6	8.4	7.2					
DLR8X15		8	5.4	15	1.3	2.4	3.6	4.8	6.4	6.4	
20	1.0			3.2	4.8	6.4					
25	0.8			4.0	6.0	8.0					
30	0.7			4.8	7.2	9.6					
35	0.6			5.6	8.4	11.2					
DLR10X25		10	6.5	25	1.3	4.0	6.0	7.5	10	10	
30	1.0			4.8	7.2	9.6					
35	0.9			5.6	8.4	11.2					
40	0.8			6.4	9.6	12.8					
45	0.7			7.2	10.8	14.4					
DLR12X25		12	8	25	1.8	4.0	6.0	10.8	14.4	14.4	
30	1.5			4.8	7.2	12.8					
35	1.3			5.6	8.4	14.4					
40	1.1			6.4	9.6	16.0					
45	1.0			7.2	10.8	17.6					
DLR14X25		14	9.3	25	2.5	4.0	6.0	14.7	19.6	19.6	
30	2.0			4.8	7.2	16.0					
35	1.8			5.6	8.4	17.6					
40	1.5			6.4	9.6	19.2					
45	1.4			7.2	10.8	20.8					
DLR12X30		16	10.7	25	3.2	4.0	6.0	19.2	25.8	25.8	
30	2.7			4.8	7.2	20.8					
35	2.3			5.6	8.4	22.4					
40	2.0			6.4	9.6	24.0					
45	1.8			7.2	10.8	25.6					
DLR16X30		16	10.7	25	1.6	8.0	12.0	19.2	25.8	25.8	
30	1.5			8.8	13.2	20.8					
35	1.3			9.6	14.4	22.4					
40	1.2			10.4	15.6	24.0					
45	1.1			11.2	16.8	25.6					
DLR18X25		18	12	25	4.1	4.0	6.0	16.2	24.3	32.4	
30	3.4			4.8	7.2	17.6					
35	2.9			5.6	8.4	19.2					
40	2.5			6.4	9.6	20.8					
45	2.3			7.2	10.8	22.4					
DLR20X25		20	13.5	25	5.0	4.0	6.0	20	30	40	
30	4.2			4.8	7.2	21.6					
35	3.6			5.6	8.4	23.2					
40	3.1			6.4	9.6	24.8					
45	2.8			7.2	10.8	26.4					
DLR22X25		22	14.7	25	6.1	4.0	6.0	24.2	36.3	48.4	
30	5.0			4.8	7.2	25.8					
35	4.3			5.6	8.4	27.4					
40	3.3			6.4	9.6	29.0					
45	3.4			7.2	10.8	30.6					
DLR25X25		25	17	25	7.8	4.0	6.0	31.3	47	62.6	
30	6.5			4.8	7.2	32.9					
35	5.6			5.6	8.4	34.5					
40	4.9			6.4	9.6	36.1					
45	4.3			7.2	10.8	37.7					

稱呼 Item No.	售價 NT\$ Price	外徑 External dia. D	內徑 Internal dia. d	自由長 Free length L	定數 Fixed resistance Kg/mm	Free lengthX40%		Free lengthX45%		Free lengthX50%	
						壓縮量 mm Compressed volume	荷重 Kg(N) Loading	壓縮量 mm Compressed volume	荷重 Kg(N) Loading	壓縮量 mm Compressed volume	荷重 Kg(N) Loading
DLR18X25		18	12	25	4.1	4.0	6.0	16.2	24.3	32.4	
30	3.4			4.8	7.2	17.6					
35	2.9			5.6	8.4	19.2					
40	2.5			6.4	9.6	20.8					
45	2.3			7.2	10.8	22.4					
50	2.0			8.0	12.0	24.0					
55	1.8			8.8	13.2	25.6					
60	1.7			9.6	14.4	27.2					
65	1.6			10.4	15.6	28.8					
70	1.4			11.2	16.8	30.4					
75	1.4			12.0	18.0	32.0					
80	1.3			12.8	19.2	33.6					
90	1.1			14.4	21.6	35.2					
DLR20X25		20	13.5	25	5.0	4.0	6.0	20	30	40	
30	4.2			4.8	7.2	21.6					
35	3.6			5.6	8.4	23.2					
40	3.1			6.4	9.6	24.8					
45	2.8			7.2	10.8	26.4					
50	2.5			8.0	12.0	28.0					
55	2.3			8.8	13.2	29.6					
60	2.1			9.6	14.4	31.2					
65	1.9			10.4	15.6	32.8					
70	1.8			11.2	16.8	34.4					
75	1.7			12.0	18.0	36.0					
80	1.6			12.8	19.2	37.6					
90	1.4			14.4	21.6	39.2					
100	1.3	16.0	24.0	40.8							
DLR22X25		22	14.7	25	6.1	4.0	6.0	24.2	36.3	48.4	
30	5.0			4.8	7.2	25.8					
35	4.3			5.6	8.4	27.4					
40	3.3			6.4	9.6	29.0					
45	3.4			7.2	10.8	30.6					
50	3.0			8.0	12.0	32.2					
55	2.8			8.8	13.2	33.8					
60	2.5			9.6	14.4	35.4					
65	2.3			10.4	15.6	37.0					
70	2.2			11.2	16.8	38.6					
75	2.0			12.0	18.0	40.2					
80	1.9			12.8	19.2	41.8					
90	1.7			14.4	21.6	43.4					
100	1.5	16.0	24.0	45.0							
DLR25X25		25	17	25	7.8	4.0	6.0	31.3	47	62.6	
30	6.5			4.8	7.2	32.9					
35	5.6			5.6	8.4	34.5					
40	4.9			6.4	9.6	36.1					
45	4.3			7.2	10.8	37.7					
50	3.9			8.0	12.0	39.3					
55	3.6			8.8	13.2	40.9					
60	3.3			9.6	14.4	42.5					
65	3.0			10.4	15.6	44.1					
70	2.8			11.2	16.8	45.7					
75	2.6			12.0	18.0	47.3					
80	2.4			12.8	19.2	48.9					
90	2.2			14.4	21.6	50.5					
100	2.0	16.0	24.0	52.1							

稱呼 No	售價 NT\$	外徑 mm	內徑 mm	自由長 mm	傾斜度
DLR3X300		3		300	
4X300		4		300	
6X300		6		300	
8X300		8		300	
10X300		10		300	
12X300		12		300	
14X300		14		300	
16X300		16		300	
18X300		18		300	
20X300		20		300	
22X300		22		300	
25X300		25		300	