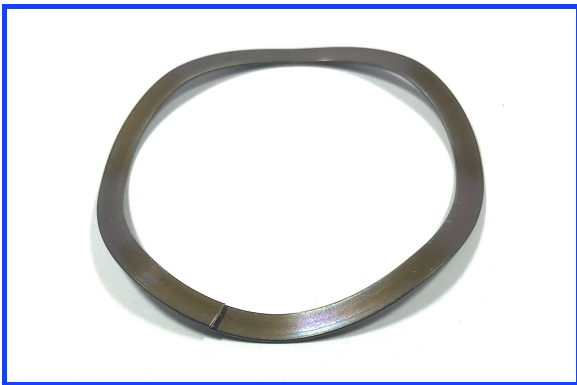
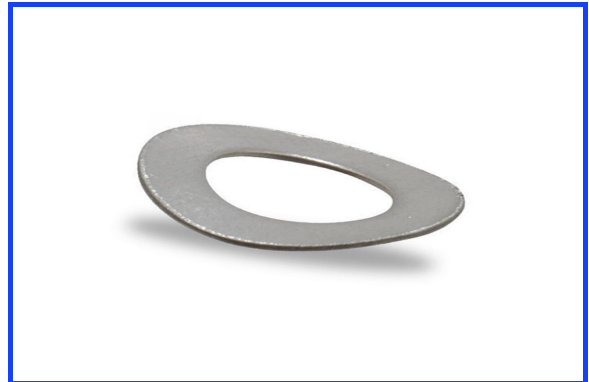


MBA

2023.1

Wave Washers

Curved, 2 wave, 3 Wave and 4 wave (includes EPL series)



Wave washers are available in curved style, 2 wave, 3 wave and 4 wave, continuous and split. This catalogue includes equivalents to the EPL electric motor bearing pre-load washer series.

The most common materials available are stainless steel and carbon spring steel.

Type the part number from this catalogue into the search box on any web page for delivery, stock levels and pricing.

Prefixes and Suffixes

W	0048	-	T	-	006	-	002	-	W3	-	S2
1	2		3		4		5		6		7

1. Product Identifier:

W: Washer

2. Nominal ID Code:

Inside diameter in mm using 4 digits and 1 decimal place with decimal point removed.
ie, 0048 = 4.76mm, 0095 = 9.525mm, 1000 = 10mm

3. Type of Washer Identifier:

T: Wave Washer (Thrust Washer)

4. OD Identifier Code::

Washer OD (Housing Bore) identifier in mm using 3 digits and 0 decimal places.
ie, 006 could be from 5.01 to 5.99
009 could be from 8.01 to 8.99

Essentially, 005 would fit into a 5mm bore, so the OD of this washer is less than 5. The next identifier would be 006 which will fit into a 6mm bore.

5. Height Identifier Code::

Washer height identifier in mm using 3 digits and 1 decimal place.
ie, 009 could be from 0.85 to 0.95mm height
008 could be from 0.75 to 0.85mm height

6. Type:

W2: 2 Wave Washer
W4: 4 Wave Washer

W3: 3 Wave Washer
WC: Curved Washer DIN 137

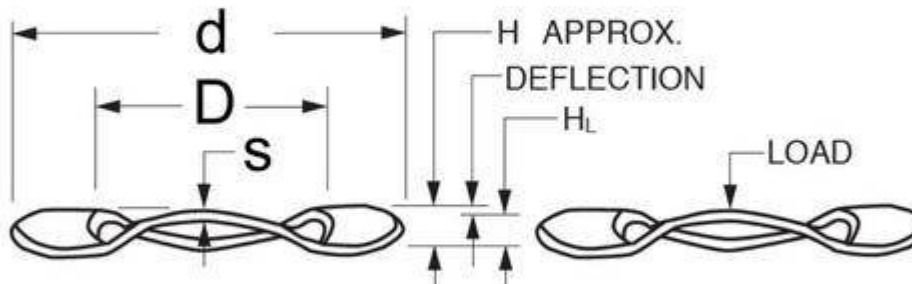
7. Material:

BC: Beryllium Copper
CZ: Zinc Plated Carbon Steel
S2: Stainless Steel 302
S4: Stainless Steel 304
S400: Stainless Steel 400 Grade

C: Carbon Steel
S17: Stainless Steel 17-4 PH
S3: Stainless Steel 303
S6: Stainless Steel 316

These are just some of the most commonly used suffixes. Please refer to MBA for information on suffixes not listed.

Example Diagram



Only the most common diagrams are shown. Other types are also listed in this catalogue.

Nominal ID (mm)	Nominal OD (mm)	Approx. Height (mm)	Material Thickness (mm)	
1.50 mm (0.059 inch.)				
1.50	3.00	0.30	0.08	Part Number: W0015-T-003-003-W3-S400 3 Wave Series - Heat Treated 400 Grade Stainless, Edges Radiused -- Suits Screw: M1
1.52 mm (0.060 inch.)				
1.52	3.80	0.43	0.15	Part Number: W0015-T-004-004-W3-BC 3 Wave Series - Beryllium Copper -- Suits Screw: 00-90, M1.4
1.52	3.80	0.43	0.15	Part Number: W0015-T-004-004-W3-S2 3 Wave Series - 302 Stainless -- Suits Screw: 00-90, M1.4
2.00 mm (0.079 inch.)				
2.00	3.10	0.45	0.08	Part Number: W0020-T-004-005-W3-S400 3 Wave Series - Heat Treated 400 Grade Stainless, Edges Radiused -- Suits Screw: M2
2.00	4.50	0.50	0.30	Part Number: ** W0020-T-005-005-WC-CZ Curved DIN 137 Type A - Zinc Plated Spring Steel -- Suits Screw: M2
2.00	4.60	0.38	0.16	Part Number: ** W0020-T-005-004-W3-BC 3 Wave Series - Beryllium Copper -- Suits Screw: M2
2.18 mm (0.086 inch.)				
2.18	5.23	0.46	0.15	Part Number: W0022-T-006-005-W3-BC 3 Wave Series - Beryllium Copper -- Suits Screw: 2-56, 2-64
2.18	5.23	0.46	0.15	Part Number: W0022-T-006-005-W3-S2 3 Wave Series - 302 Stainless -- Suits Screw: 2-56, 2-64
2.18	5.46	0.64	0.14	Part Number: ** W0022-T-006-006-WC-S2 Curved - 302 Stainless -- Suits Screw: 2-56, 2-64
2.18	5.46	0.71	0.11	Part Number: W0022-T-006-007-WC-S2 Curved - 302 Stainless -- Suits Screw: 2-56, 2-64
2.50 mm (0.098 inch.)				
2.50	3.80	0.50	0.08	Part Number: W0025-T-004-005-W3-S400 3 Wave Series - Heat Treated 400 Grade Stainless, Edges Radiused -- Suits Screw: M2.5
2.50	5.50	0.55	0.30	Part Number: ** W0025-T-006-006-WC-CZ Curved DIN 137 Type A - Zinc Plated Spring Steel -- Suits Screw: M2.5
2.85 mm (0.112 inch.)				
2.85	6.35	0.53	0.15	Part Number: W0028-T-007-005-W3-BC 3 Wave Series - Beryllium Copper -- Suits Screw: 4-40, 4-48
3.00 mm (0.118 inch.)				
3.00	4.30	0.50	0.10	Part Number: W0030-T-005-005-W3-S400 3 Wave Series - Heat Treated 400 Grade Stainless, Edges Radiused -- Suits Screw: M3
3.00	6.00	0.65	0.40	Part Number: ** W0030-T-006-007-WC-CZ Curved DIN 137 Type A - Zinc Plated Spring Steel -- Suits Screw: M3
3.00	6.35	0.53	0.15	Part Number: ** W0030-T-007-005-W3-S2 3 Wave Series - 302 Stainless -- Suits Screw: M3
3.00	8.00	0.80	0.50	Part Number: W0030-T-008-008-W2-CZ 2 Wave Din 137 Type B - Zinc Plated Spring Steel -- Suits Screw: M3
3.18 mm (0.125 inch.)				
3.18	6.22	0.86	0.15	Part Number: W0032-T-007-009-WC-S2 Curved DIN 137 Type A - 301 Stainless -- Suits Screw: 5-40, 5-44, 1/8
3.18	6.22	1.24	0.10	Part Number: W0032-T-007-012-WC-S2 Curved - 302 Stainless -- Suits Screw: 5-40, 5-44, 1/8
3.18	6.40	0.71	0.10	Part Number: W0032-T-007-007-WC-S2 Curved DIN 137 Type A - 301 Stainless -- Suits Screw: 5-40, 5-44, 1/8
3.18	6.73	0.53	0.15	Part Number: W0032-T-007-005-W3-S2 3 Wave Series - 302 Stainless -- Suits Screw: 5-40, 5-44, 1/8
3.18	6.73	0.53	0.15	Part Number: W0032-T-007-005-W3-BC 3 Wave Series - Beryllium Copper -- Suits Screw: 5-40, 5-44, 1/8
3.18	6.86	0.97	0.13	Part Number: W0032-T-007-010-WC-S2 Curved - 302 Stainless -- Suits Screw: 5-40, 5-44, 1/8
3.18	7.80	0.86	0.22	Part Number: W0032-T-008-008-WC-S2 Curved - 302 Stainless -- Suits Screw: 5-40, 5-44, 1/8
3.18	7.80	0.94	0.18	Part Number: W0032-T-008-009-WC-S2 Curved - 302 Stainless -- Suits Screw: 5-40, 5-44, 1/8
3.50 mm (0.138 inch.)				
3.50	4.80	0.55	0.10	Part Number: W0035-T-005-006-W3-S400 3 Wave Series - Heat Treated 400 Grade Stainless, Edges Radiused -- Suits Screw: M3.5, 6-32, 6-40

Usually stocked or Short Delivery

** Available while stocks last **

Long Delivery or Large Minimum Quantities



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

Nominal ID (mm)	Nominal OD (mm)	Approx. Height (mm)	Material Thickness (mm)	
3.50 mm (0.138 inch.)				
3.50	6.86	0.89	0.18	Part Number: W0035-T-007-009-WC-S2 Curved DIN 137 Type A - 301 Stainless -- Suits Screw: M3.5, 6-32, 6-40
3.50	6.86	1.32	0.11	Part Number: W0035-T-007-013-WC-S2 Curved DIN 137 Type A - 301 Stainless -- Suits Screw: M3.5, 6-32, 6-40
3.50	7.62	0.71	0.20	Part Number: ** W0035-T-008-007-W3-BC 3 Wave Series - Beryllium Copper -- Suits Screw: M3.5, 6-32, 6-40
3.50	7.62	0.71	0.20	Part Number: ** W0035-T-008-007-W3-S2 3 Wave Series - 302 Stainless -- Suits Screw: M3.5, 6-32, 6-40
3.50	8.18	0.86	0.25	Part Number: W0035-T-009-008-WC-S2 Curved - 302 Stainless -- Suits Screw: M3.5, 6-32, 6-40
3.50	8.18	0.94	0.21	Part Number: W0035-T-009-009-WC-S2 Curved - 302 Stainless -- Suits Screw: M3.5, 6-32, 6-40
4.00 mm (0.157 inch.)				
4.00	6.00	0.65	0.12	Part Number: W0040-T-006-007-W3-S400 3 Wave Series - Heat Treated 400 Grade Stainless, Edges Radiused -- Suits Screw: M4
4.00	8.00	0.80	0.50	Part Number: W0040-T-008-008-WC-CZ Curved DIN 137 Type A - Spring Steel HRC 43-50 -- Suits Screw: M4
4.00	8.10	0.76	0.28	Part Number: ** W0040-T-009-008-W3-S3 3 Wave Series - 303 Stainless -- Suits Screw: M4
4.00	10.00	1.10	0.20	Part Number: W0040-T-010-011-W2-C 2 Wave Series - Carbon Spring Steel - Suits OD of 623 Bearings (Equiv EPL001) -- Suits Screw: M4
4.17 mm (0.164 inch.)				
4.17	8.18	1.07	0.19	Part Number: W0042-T-009-011-WC-S2 Curved DIN 137 Type A - 301 Stainless -- Suits Screw: 8-32, 8-36
4.17	8.18	1.63	0.13	Part Number: W0042-T-009-016-WC-S2 Curved DIN 137 Type A - 301 Stainless -- Suits Screw: 8-32, 8-36
4.17	8.18	1.63	0.13	Part Number: ** W0042-T-009-016-WC-CZ Curved DIN 137 Type A - AISI C1075 Spring Steel - Blued -- Suits Screw: 8-32, 8-36
4.17	8.64	0.76	0.25	Part Number: ** W0042-T-009-008-W3-S2 3 Wave Series - 302 Stainless -- Suits Screw: 8-32, 8-36
4.17	8.64	0.76	0.25	Part Number: ** W0042-T-009-008-W3-BC 3 Wave Series - Beryllium Copper -- Suits Screw: 8-32, 8-36
4.17	9.40	0.99	0.29	Part Number: W0042-T-010-010-WC-CZ Curved - High Carbon Steel -- Suits Screw: 8-32, 8-36
4.17	9.40	0.99	0.29	Part Number: W0042-T-010-010-WC-S2 Curved - 302 Stainless -- Suits Screw: 8-32, 8-36
4.17	9.40	1.12	0.23	Part Number: W0042-T-010-011-WC-S2 Curved - 302 Stainless -- Suits Screw: 8-32, 8-36
4.50 mm (0.177 inch.)				
4.50	6.10	0.60	0.12	Part Number: W0045-T-007-006-W3-S400 3 Wave Series - Heat Treated 400 Grade Stainless, Edges Radiused -- Suits Screw: M4.5
4.76 mm (0.187 inch.)				
4.76	6.35	0.76	0.15	Part Number: W0048-T-007-008-W3-S2 3 Wave Series - 302 Stainless -- Suits Screw: 10-24, 10-32, 3/16
4.76	8.18	1.09	0.17	Part Number: W0048-T-009-011-WC-S2 Curved - 302 Stainless -- Suits Screw: 10-24, 10-32, 3/16
4.76	8.18	1.35	0.13	Part Number: W0048-T-009-014-WC-S2 Curved - 302 Stainless -- Suits Screw: 10-24, 10-32, 3/16
4.76	9.40	1.19	0.23	Part Number: ** W0048-T-010-012-WC-CZ Curved DIN 137 Type A - AISI C1075 Spring Steel - Blued -- Suits Screw: 10-24, 10-32, 3/16
4.76	9.40	1.75	0.15	Part Number: ** W0048-T-010-018-WC-S2 Curved DIN 137 Type A - 301 Stainless -- Suits Screw: 10-24, 10-32, 3/16
4.76	9.53	0.81	0.31	Part Number: W0048-T-010-008-W3-BC 3 Wave Series - Beryllium Copper -- Suits Screw: 10-24, 10-32, 3/16
4.76	9.53	1.19	0.23	Part Number: W0048-T-010-012-WC-S2 Curved DIN 137 Type A - 301 Stainless -- Suits Screw: 10-24, 10-32, 3/16
4.76	10.74	1.09	0.36	Part Number: W0048-T-011-011-WC-CZ Curved - High Carbon Steel -- Suits Screw: 10-24, 10-32, 3/16
4.76	10.74	1.19	0.29	Part Number: W0048-T-011-012-WC-CZ Curved - High Carbon Steel -- Suits Screw: 10-24, 10-32, 3/16
4.76	11.10	1.19	0.30	Part Number: W0048-T-012-012-WC-S2 Curved DIN 137 Type A - 301 Stainless -- Suits Screw: 10-24, 10-32, 3/16

Usually stocked or Short Delivery
** Available while stocks last **



Long Delivery or Large Minimum Quantities
Not in current production



Nominal ID (mm)	Nominal OD (mm)	Approx. Height (mm)	Material Thickness (mm)	
5.00 mm (0.197 inch.)				
5.00	6.75	0.65	0.12	Part Number: W0050-T-007-007-W3-S400
	3 Wave Series - Heat Treated 400 Grade Stainless, Edges Radiused -- Suits Screw: M5			
5.00	9.53	0.81	0.31	Part Number: W0050-T-010-008-W3-S2
	3 Wave Series - 302 Stainless -- Suits Screw: M5			
5.00	10.00	0.90	0.50	Part Number: ** W0050-T-010-009-WC-CZ
	Curved DIN 137 Type A - Zinc Plated Spring Steel -- Suits Screw: M5			
5.00	10.74	1.35	0.25	Part Number: W0050-T-011-014-WC-S2
	Curved DIN 137 Type A - 301 Stainless -- Suits Screw: M5			
5.00	10.74	2.06	0.17	Part Number: W0050-T-011-021-WC-S2
	Curved - 302 Stainless -- Suits Screw: M5			
5.00	11.00	1.10	0.50	Part Number: W0050-T-012-011-W2-CZ
	2 Wave Din 137 Type B - Zinc Plated Spring Steel -- Suits Screw: M5			
5.00	11.38	2.03	0.25	Part Number: W0050-T-012-020-WC-CZ
	Curved - Carbon Steel -- Suits Screw: M5			
5.00	12.95	2.03	0.38	Part Number: W0050-T-013-020-WC-CZ
	Curved - Carbon Steel -- Suits Screw: M5			
5.00	12.95	2.29	0.38	Part Number: W0050-T-013-023-WC-CZ
	Curved - Carbon Steel -- Suits Screw: M5			
5.49 mm (0.216 inch.)				
5.50	12.45	1.27	0.38	Part Number: W0055-T-013-013-WC-CZ
	Curved - High Carbon Steel -- Suits Screw: M5.5, 12-24			
5.50	12.45	1.45	0.30	Part Number: W0055-T-013-015-WC-CZ
	Curved - High Carbon Steel -- Suits Screw: M5.5, 12-24			
5.60 mm (0.220 inch.)				
5.60	11.10	1.35	0.25	Part Number: W0056-T-012-013-WC-S2
	Curved DIN 137 Type A - 301 Stainless -- Suits Screw: M5.5, 12-24			
5.60	12.70	1.27	0.38	Part Number: W0056-T-013-013-WC-CZ
	Curved DIN 137 Type A - Spring Steel -- Suits Screw: M5.5, 12-24			
6.00 mm (0.236 inch.)				
6.00	7.75	0.70	0.15	Part Number: W0060-T-008-007-W3-S400
	3 Wave Series - Heat Treated 400 Grade Stainless, Edges Radiused -- Suits Screw: M6			
6.00	11.00	1.10	0.50	Part Number: ** W0060-T-012-011-WC-CZ
	Curved DIN 137 Type A - Zinc Plated Spring Steel -- Suits Screw: M6			
6.00	12.00	1.30	0.50	Part Number: W0060-T-012-013-W2-CZ
	2 Wave Din 137 Type B - Zinc Plated Spring Steel -- Suits Screw: M6			
6.00	12.95	2.54	0.25	Part Number: W0060-T-013-025-WC-CZ
	Curved - Carbon Steel -- Suits Screw: M6			
6.35 mm (0.250 inch.)				
6.35	9.32	0.76	0.15	Part Number: W0064-T-010-008-W3-S2
	3 Wave Series - 302 Stainless -- Suits Screw: 1/4			
6.35	10.74	1.40	0.21	Part Number: W0064-T-011-014-WC-S2
	Curved - 302 Stainless -- Suits Screw: 1/4			
6.35	10.74	1.78	0.17	Part Number: W0064-T-011-018-WC-S2
	Curved - 302 Stainless -- Suits Screw: 1/4			
6.35	12.45	1.60	0.28	Part Number: W0064-T-013-016-WC-CZ
	Curved DIN 137 Type A - AISI C1075 Spring Steel - Blued -- Suits Screw: 1/4			
6.35	12.57	2.29	0.38	Part Number: W0064-T-013-023-WC-CZ
	Curved - Carbon Steel -- Suits Screw: 1/4			
6.35	12.70	1.07	0.36	Part Number: W0064-T-013-011-W3-S2
	3 Wave Series - 302 Stainless -- Suits Screw: 1/4			
6.35	12.70	1.60	0.30	Part Number: W0064-T-013-016-WC-S2
	Curved DIN 137 Type A - 301 Stainless -- Suits Screw: 1/4			
6.35	12.70	2.31	0.18	Part Number: W0064-T-013-023-WC-S2
	Curved DIN 137 Type A - 301 Stainless -- Suits Screw: 1/4			
6.35	14.00	1.52	0.37	Part Number: W0064-T-014-015-WC-CZ
	Curved - High Carbon Steel -- Suits Screw: 1/4			
6.35	14.00	2.57	0.22	Part Number: W0064-T-014-026-WC-S2
	Curved - 302 Stainless -- Suits Screw: 1/4			
6.35	14.30	1.32	0.46	Part Number: W0064-T-015-013-WC-CZ
	Curved DIN 137 Type A - Spring Steel -- Suits Screw: 1/4			
6.35	14.30	1.32	0.46	Part Number: W0064-T-015-013-WC-S2
	Curved DIN 137 Type A - 301 Stainless -- Suits Screw: 1/4			

 Usually stocked or Short Delivery
 ** Available while stocks last **



 Long Delivery or Large Minimum Quantities
 Not in current production



Nominal ID (mm)	Nominal OD (mm)	Approx. Height (mm)	Material Thickness (mm)	
7.00 mm (0.276 inch.)				
7.00	8.70	0.90	0.15	Part Number: W0070-T-009-009-W3-S400
	3 Wave Series - Heat Treated 400 Grade Stainless, Edges Radiused -- Suits Screw: M7, 9/32			
7.00	13.00	1.40	0.20	Part Number: W0070-T-013-014-W2-C
	2 Wave Series - Carbon Spring Steel - Suits OD of 624 Bearings (Equip EPL002) -- Suits Screw: M7, 9/32			
7.00	14.00	1.78	0.31	Part Number: W0070-T-014-018-WC-CZ
	Curved DIN 137 Type A - AISI C1075 Spring Steel - Blued -- Suits Screw: M7, 9/32			
7.94 mm (0.313 inch.)				
7.94	12.70	1.57	0.30	Part Number: W0079-T-013-016-WC-S2
	Curved DIN 137 Type A - 301 Stainless -- Suits Screw: 5/16			
7.94	12.70	1.96	0.18	Part Number: W0079-T-013-020-WC-S2
	Curved DIN 137 Type A - 301 Stainless -- Suits Screw: 5/16			
7.94	12.95	3.56	0.38	Part Number: ** W0079-T-013-036-W3-C
	3 Wave Series - Carbon Steel -- Suits Screw: 5/16			
7.94	15.24	1.32	0.36	Part Number: W0079-T-016-013-W3-C
	3 Wave Series - Carbon Spring Steel -- Suits Screw: 5/16			
7.94	15.24	1.32	0.36	Part Number: W0079-T-016-013-W3-S2
	3 Wave Series - 302 Stainless -- Suits Screw: 5/16			
7.94	15.24	1.32	0.36	Part Number: W0079-T-016-013-W3-BC
	3 Wave Series - Beryllium Copper -- Suits Screw: 5/16			
7.94	15.55	1.96	0.33	Part Number: W0079-T-016-020-WC-S1
	Curved DIN 137 Type A - 301 Stainless -- Suits Screw: 5/16			
7.94	15.55	1.96	0.33	Part Number: W0079-T-016-020-WC-CZ
	Curved DIN 137 Type A - AISI C1075 Spring Steel - Blued -- Suits Screw: 5/16			
7.94	15.55	2.87	0.23	Part Number: W0079-T-016-029-WC-S1
	Curved DIN 137 Type A - 301 Stainless -- Suits Screw: 5/16			
7.94	15.90	1.96	0.33	Part Number: W0079-T-016-020-WC-S2
	Curved DIN 137 Type A - 301 Stainless -- Suits Screw: 5/16			
7.94	16.13	2.72	0.51	Part Number: W0079-T-017-027-WC-CZ
	Curved - Carbon Steel -- Suits Screw: 5/16			
7.94	18.67	1.78	0.53	Part Number: W0079-T-019-018-WC-CZ
	Curved - High Carbon Steel -- Suits Screw: 5/16			
7.94	18.67	1.93	0.43	Part Number: W0079-T-019-019-WC-CZ
	Curved - High Carbon Steel -- Suits Screw: 5/16			
8.00 mm (0.315 inch.)				
8.00	9.70	0.85	0.18	Part Number: W0080-T-010-009-W3-S400
	3 Wave Series - Heat Treated 400 Grade Stainless, Edges Radiused -- Suits Screw: M8, 5/16			
8.00	12.45	1.57	0.28	Part Number: W0080-T-013-016-WC-CZ
	Curved - High Carbon Steel -- Suits Screw: M8, 5/16			
8.00	13.00	0.89	0.18	Part Number: W0080-T-014-009-W3-S2
	3 Wave Series - 302 Stainless -- Suits Screw: M8, 5/16			
8.00	15.00	1.50	0.80	Part Number: ** W0080-T-016-015-W2-CZ
	2 Wave Din 137 Type B - Zinc Plated Spring Steel -- Suits Screw: M8, 5/16			
8.00	15.00	1.70	0.50	Part Number: ** W0080-T-016-017-WC-CZ
	Curved DIN 137 Type A - Zinc Plated Spring Steel -- Suits Screw: M8, 5/16			
8.00	17.07	3.05	0.25	Part Number: W0080-T-018-031-WC-S2
	Curved - 302 Stainless -- Suits Screw: M8, 5/16			
8.73 mm (0.344 inch.)				
8.73	12.70	0.89	0.18	Part Number: W0087-T-013-009-W3-C
	3 Wave Series - Carbon Spring Steel -- Suits Screw: 11/32			
8.73	12.70	0.89	0.18	Part Number: W0087-T-013-009-W3-S2
	3 Wave Series - 302 Stainless -- Suits Screw: 11/32			
9.00 mm (0.354 inch.)				
9.00	10.74	1.15	0.18	Part Number: W0090-T-011-012-W3-S400
	3 Wave Series - Heat Treated 400 Grade Stainless, Edges Radiused -- Suits Screw: 11/32			
9.00	17.07	2.06	0.38	Part Number: W0090-T-018-021-WC-CZ
	Curved DIN 137 Type A - AISI C1075 Spring Steel - Blued -- Suits Screw: 11/32			
9.53 mm (0.375 inch.)				
9.53	15.45	1.88	0.33	Part Number: W0095-T-016-019-WC-CZ
	Curved - High Carbon Steel -- Suits Screw: 3/8			
9.53	15.45	2.49	0.23	Part Number: W0095-T-016-025-WC-S2
	Curved - 302 Stainless -- Suits Screw: 3/8			

 Usually stocked or Short Delivery
 ** Available while stocks last **



 Long Delivery or Large Minimum Quantities
 Not in current production



Nominal ID (mm)	Nominal OD (mm)	Approx. Height (mm)	Material Thickness (mm)	
9.53 mm (0.375 inch.)				
9.53	16.89	2.34	0.56	Part Number: W0095-T-017-023-W3-C 3 Wave Series - Carbon Steel -- Suits Screw: 3/8
9.53	17.07	2.01	0.38	Part Number: W0095-T-018-020-WC-CZ Curved - High Carbon Steel -- Suits Screw: 3/8
9.53	17.07	2.92	0.25	Part Number: W0095-T-018-029-WC-S2 Curved - 302 Stainless -- Suits Screw: 3/8
9.53	17.78	1.63	0.56	Part Number: W0095-T-018-016-W3-BC 3 Wave Series - Beryllium Copper -- Suits Screw: 3/8
9.53	17.78	1.63	0.56	Part Number: W0095-T-018-016-W3-S2 3 Wave Series - 302 Stainless -- Suits Screw: 3/8
9.53	18.67	2.18	0.41	Part Number: W0095-T-019-022-WC-S2 Curved DIN 137 Type A - 301 Stainless -- Suits Screw: 3/8
9.53	18.67	3.28	0.28	Part Number: ** W0095-T-019-033-WC-CZ Curved DIN 137 Type A - AISI C1075 Spring Steel - Blued -- Suits Screw: 3/8
9.53	18.67	3.28	0.28	Part Number: ** W0095-T-019-033-WC-S2 Curved DIN 137 Type A - 301 Stainless -- Suits Screw: 3/8
9.53	19.10	2.18	0.38	Part Number: W0095-T-020-022-WC-CZ Curved DIN 137 Type A - Spring Steel -- Suits Screw: 3/8
9.53	19.30	2.74	0.25	Part Number: W0095-T-020-027-WC-CZ Curved - Carbon Steel -- Suits Screw: 3/8
9.53	19.30	3.81	0.25	Part Number: W0095-T-020-038-WC-CZ Curved - Carbon Steel -- Suits Screw: 3/8
10.00 mm (0.394 inch.)				
10.00	11.70	1.05	0.20	Part Number: W0100-T-012-011-W3-S400 3 Wave Series - Heat Treated 400 Grade Stainless, Edges Radiused -- Suits Screw: M10
10.00	16.00	1.02	0.20	Part Number: W0100-T-016-010-W3-S2 3 Wave Series - 302 Stainless -- Suits Screw: M10
10.00	16.00	1.20	0.15	Part Number: W0100-T-016-012-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 625, 634 Bearings (Equiv EPL004) -- Suits Screw: M10
10.00	16.00	1.30	0.15	Part Number: W0100-T-016-013-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 625, 634 Bearings (Equiv EPL005) -- Suits Screw: M10
10.00	18.00	2.00	0.80	Part Number: ** W0100-T-018-020-WC-CZ Curved DIN 137 Type A - Zinc Plated Spring Steel -- Suits Screw: M10
10.00	21.00	2.10	1.00	Part Number: W0100-T-022-021-W2-CZ 2 Wave Din 137 Type B - Zinc Plated Spring Steel -- Suits Screw: M10
11.00 mm (0.433 inch.)				
11.00	17.00	1.40	0.20	Part Number: W0110-T-017-014-W3-C 3 Wave Series - Carbon Spring Steel - Equiv EPL006 -- Suits Screw: 7/16
11.11 mm (0.437 inch.)				
11.11	12.70	1.30	0.20	Part Number: W0111-T-013-013-W3-S400 3 Wave Series - Heat Treated 400 Grade Stainless, Edges Radiused -- Suits Screw: 7/16
11.11	17.07	2.13	0.38	Part Number: W0111-T-018-021-WC-S2 Curved - 302 Stainless -- Suits Screw: 7/16
11.11	17.07	2.13	0.38	Part Number: W0111-T-018-021-WC-CZ Curved - High Carbon Steel -- Suits Screw: 7/16
11.11	17.07	2.92	0.25	Part Number: W0111-T-018-029-WC-S2 Curved - 302 Stainless -- Suits Screw: 7/16
11.11	17.40	2.18	0.38	Part Number: W0111-T-018-022-WC-S2 Curved DIN 137 Type A - 301 Stainless -- Suits Screw: 7/16
11.11	19.05	3.81	0.43	Part Number: W0111-T-020-038-WC-CZ Curved - Carbon Steel -- Suits Screw: 7/16
11.11	21.77	2.54	0.46	Part Number: W0111-T-022-025-WC-CZ Curved DIN 137 Type A - AISI C1075 Spring Steel - Blued -- Suits Screw: 7/16
11.11	21.77	2.54	0.46	Part Number: W0111-T-022-025-WC-S2 Curved DIN 137 Type A - 301 Stainless -- Suits Screw: 7/16
11.11	21.77	3.86	0.30	Part Number: W0111-T-022-039-WC-CZ Curved - High Carbon Steel -- Suits Screw: 7/16
11.11	24.89	2.72	0.53	Part Number: W0111-T-025-027-WC-CZ Curved - High Carbon Steel -- Suits Screw: 7/16
12.00 mm (0.472 inch.)				
12.00	13.70	1.30	0.22	Part Number: W0120-T-014-013-W3-S400 3 Wave Series - Heat Treated 400 Grade Stainless, Edges Radiused -- Suits Screw: M12

 Usually stocked or Short Delivery
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
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

Nominal ID (mm)	Nominal OD (mm)	Approx. Height (mm)	Material Thickness (mm)	
12.00 mm (0.472 inch.)				
12.00	19.00	1.50	0.20	Part Number: W0120-T-019-015-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 607, 626, 635 Bearings (Equiv EPL008) -- Suits Screw: M12
12.00	19.00	2.00	0.20	Part Number: W0120-T-019-020-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 607, 626, 635 Bearings (Equiv EPL007) -- Suits Screw: M12
12.00	19.05	3.81	0.38	Part Number: W0120-T-020-038-WC-CZ Curved - Carbon Steel -- Suits Screw: M12
12.00	24.00	2.50	1.20	Part Number: W0120-T-024-025-W2-CZ 2 Wave Din 137 Type B - Zinc Plated Spring Steel -- Suits Screw: M12
12.70 mm (0.500 inch.)				
12.70	14.70	1.30	0.22	Part Number: W0127-T-015-013-W3-S400 3 Wave Series - Heat Treated 400 Grade Stainless, Edges Radiused -- Suits Screw: 1/2
12.70	19.00	1.27	0.23	Part Number: W0127-T-020-013-W3-S2 3 Wave Series - 302 Stainless -- Suits Screw: 1/2
12.70	19.05	1.27	0.23	Part Number: W0127-T-020-013-W3-C 3 Wave Series - Carbon Spring Steel -- Suits Screw: 1/2
12.70	20.20	2.49	0.43	Part Number: W0127-T-021-025-WC-CZ Curved - High Carbon Steel -- Suits Screw: 1/2
12.70	20.20	3.28	0.29	Part Number: W0127-T-021-033-WC-CZ Curved - High Carbon Steel -- Suits Screw: 1/2
12.70	24.13	1.93	0.56	Part Number: W0127-T-025-019-W3-S2 3 Wave Series - 302 Stainless -- Suits Screw: 1/2
12.70	24.13	1.93	0.56	Part Number: W0127-T-025-019-W3-BC 3 Wave Series - Beryllium Copper -- Suits Screw: 1/2
12.70	24.89	2.79	0.53	Part Number: W0127-T-025-028-WC-S2 Curved DIN 137 Type A - 301 Stainless -- Suits Screw: 1/2
12.70	24.89	2.79	0.53	Part Number: ** W0127-T-025-028-WC-CZ Curved DIN 137 Type A - AISI C1075 Spring Steel - Blued -- Suits Screw: 1/2
12.70	24.89	3.33	0.46	Part Number: W0127-T-025-033-WC-CZ Curved - High Carbon Steel -- Suits Screw: 1/2
12.70	24.89	4.16	0.36	Part Number: W0127-T-025-042-WC-CZ Curved DIN 137 Type A - AISI C1075 Spring Steel - Blued -- Suits Screw: 1/2
12.70	31.12	3.84	0.53	Part Number: W0127-T-032-038-WC-CZ Curved - High Carbon Steel -- Suits Screw: 1/2
14.00 mm (0.551 inch.)				
14.00	15.65	1.55	0.25	Part Number: W0140-T-016-016-W3-S400 3 Wave Series - Heat Treated 400 Grade Stainless, Edges Radiused -- Suits Screw: M14
14.00	21.00	1.80	0.20	Part Number: W0140-T-021-018-W3-C 3 Wave Series - Carbon Spring Steel - Equiv EPL010 -- Suits Screw: M14
15.00 mm (0.591 inch.)				
15.00	16.65	1.55	0.25	Part Number: W0150-T-017-016-W3-S400 3 Wave Series - Heat Treated 400 Grade Stainless, Edges Radiused -- Suits Screw: M15
15.00	21.77	2.79	0.46	Part Number: W0150-T-022-028-WC-CZ Curved - High Carbon Steel -- Suits Screw: M15
15.00	21.77	3.68	0.30	Part Number: W0150-T-022-037-WC-CZ Curved - High Carbon Steel -- Suits Screw: M15
15.00	22.00	1.40	0.20	Part Number: W0150-T-022-014-W4-C 4 Wave Series - Carbon Spring Steel - Suits OD of 608 and 627 Bearings (Equiv EPL012X) -- Suits Screw: M15
15.00	22.00	2.10	0.20	Part Number: W0150-T-022-021-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 608 and 627 and E7 Bearings (Equiv EPL012) -- Suits Screw: M15
15.88 mm (0.625 inch.)				
15.88	22.23	1.52	0.25	Part Number: W0159-T-023-015-W3-C 3 Wave Series - Carbon Spring Steel -- Suits Screw: 5/8
15.88	22.23	1.52	0.25	Part Number: W0159-T-023-015-W3-S2 3 Wave Series - 302 Stainless -- Suits Screw: 5/8
15.88	22.48	3.05	0.38	Part Number: W0159-T-023-030-W3-C 3 Wave Series - Carbon Steel -- Suits Screw: 5/8
15.88	24.89	3.00	0.53	Part Number: W0159-T-025-030-WC-CZ Curved - High Carbon Steel -- Suits Screw: 5/8
15.88	24.89	4.29	0.36	Part Number: W0159-T-025-043-WC-CZ Curved - High Carbon Steel -- Suits Screw: 5/8

 Usually stocked or Short Delivery
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
 Long Delivery or Large Minimum Quantities
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

Nominal ID (mm)	Nominal OD (mm)	Approx. Height (mm)	Material Thickness (mm)	
16.00 mm (0.630 inch.)				
16.00	18.55	2.15	0.30	Part Number: W0160-T-019-022-W3-S400 3 Wave Series - Heat Treated 400 Grade Stainless, Edges Radiused -- Suits Screw: M16
16.00	22.00	1.52	0.25	Part Number: W0159-T-022-015-W3-S2 3 Wave Series - 302 Stainless -- Suits Screw: M16
16.00	22.00	2.80	0.30	Part Number: W0160-T-022-028-W3S-C 3 Wave Series - With Split - Carbon Spring Steel -- Suits Screw: M16
16.00	24.00	2.20	0.20	Part Number: W0160-T-024-022-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 609 and E8 Bearing (Equiv EPL013) -- Suits Screw: M16
16.00	30.00	3.20	1.60	Part Number: W0160-T-030-032-W2-CZ 2 Wave Din 137 Type B - Zinc Plated Spring Steel -- Suits Screw: M16
17.46 mm (0.688 inch.)				
17.46	23.81	2.30	0.25	Part Number: W0175-T-024-023-W3-C 3 Wave Series - Carbon Spring Steel -- Suits Screw: 11/16
18.00 mm (0.709 inch.)				
18.00	26.00	1.90	0.43	Part Number: W0180-T-026-019-W4-C 4 Wave Series - Carbon Spring Steel - Suits OD of 629 and 6000 Bearings (Equiv EPL016X) -- Suits Screw: M18
18.00	26.00	2.00	0.30	Part Number: W0180-T-026-020-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 629 and 6000 Bearings (Equiv EPL015) -- Suits Screw: M18
18.00	26.00	2.10	0.30	Part Number: W0180-T-026-021-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 629 and 6000 Bearings (Equiv EPL016) -- Suits Screw: M18
19.05 mm (0.750 inch.)				
19.05	26.99	1.80	0.28	Part Number: W0191-T-027-018-W3-C 3 Wave Series - Carbon Spring Steel -- Suits Screw: 3/4
19.05	28.02	3.51	0.53	Part Number: W0191-T-029-035-WC-CZ Curved - High Carbon Steel -- Suits Screw: 3/4
19.05	28.02	4.70	0.41	Part Number: W0191-T-029-047-WC-CZ Curved - High Carbon Steel -- Suits Screw: 3/4
20.00 mm (0.787 inch.)				
20.00	28.00	1.91	0.31	Part Number: W0200-T-028-019-W3-S2 3 Wave Series - 302 Stainless -- Suits Screw: M20
20.00	28.00	2.10	0.30	Part Number: W0200-T-028-021-W4-C 4 Wave Series - Carbon Spring Steel - Suits OD of 6001 Bearings (Equiv EPL019X) -- Suits Screw: M20
20.00	28.00	2.20	0.30	Part Number: W0200-T-028-022-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6001 Bearings (Equiv EPL017) -- Suits Screw: M20
20.00	28.00	2.50	0.30	Part Number: W0200-T-028-025-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6001 Bearings (Equiv EPL019) -- Suits Screw: M20
20.00	36.00	3.70	1.60	Part Number: ** W0200-T-036-037-W2-CZ 2 Wave Din 137 Type B - Zinc Plated Spring Steel -- Suits Screw: M20
20.64 mm (0.813 inch.)				
20.64	28.58	2.50	0.30	Part Number: W0206-T-029-025-W3-C 3 Wave Series - Carbon Spring Steel -- Suits Screw: 13/16
22.00 mm (0.866 inch.)				
22.00	30.00	2.50	0.30	Part Number: W0220-T-030-025-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6200 Bearings (Equiv EPL020) -- Suits Screw: M22
22.23 mm (0.875 inch.)				
22.23	30.16	2.50	0.33	Part Number: W0222-T-031-025-W3-S2 3 Wave Series - 302 Stainless -- Suits Screw: 7/8
23.81 mm (0.938 inch.)				
23.81	31.75	2.50	0.36	Part Number: W0238-T-032-025-W3-C 3 Wave Series - Carbon Spring Steel -- Suits Screw: 15/16
24.00 mm (0.945 inch.)				
24.00	32.00	2.50	0.30	Part Number: W0240-T-032-025-W4-C 4 Wave Series - Carbon Spring Steel - Suits OD of 6002 and 6201 Bearings (Equiv EPL024X) -- Suits Screw: M24
24.00	32.00	2.80	0.30	Part Number: W0240-T-032-028-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6002 and 6201 Bearings (Equiv EPL022) -- Suits Screw: M24
24.00	32.00	3.10	0.30	Part Number: W0240-T-032-031-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6002, 6201 bearing (Equiv EPL024) -- Suits Screw: M24
24.00	32.00	3.50	0.30	Part Number: W0240-T-032-035-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6002, 6201 bearing (Equiv EPL025) -- Suits Screw: M24

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
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

Nominal ID (mm)	Nominal OD (mm)	Approx. Height (mm)	Material Thickness (mm)	
24.00 mm (0.945 inch.)				
24.00	32.00	4.00	0.35	Part Number: W0240-T-032-040-W3-C
3 Wave Series - Carbon Spring Steel -- Suits Screw: M24				
24.00	44.00	4.10	1.80	Part Number: ** W0240-T-044-041-W2-CZ
2 Wave Din 137 Type B - Zinc Plated Spring Steel -- Suits Screw: M24				
24.61 mm (0.969 inch.)				
24.60	34.93	2.30	0.48	Part Number: W0246-T-035-023-W3-C
3 Wave Series - Carbon Spring Steel -- Suits Screw: 31/32				
25.40 mm (1.000 inch.)				
25.40	34.93	2.30	0.38	Part Number: W0254-T-035-023-W3-C
3 Wave Series - Carbon Spring Steel -- Suits Screw: 1 Inch				
27.00 mm (1.063 inch.)				
27.00	35.00	2.30	0.40	Part Number: W0270-T-035-023-W4-C
4 Wave Series - Carbon Spring Steel - Suits OD of 6003, 6202 and 6300 Bearings (Equiv EPL028X) -- Suits Screw: M27				
27.00	35.00	2.70	0.40	Part Number: W0270-T-035-027-W3-C
3 Wave Series - Carbon Spring Steel - Suits OD of 6003, 6202 and 6300 bearing (Equiv EPL028) -- Suits Screw: M28				
27.00	35.00	2.90	0.40	Part Number: W0270-T-035-029-W3-C
3 Wave Series - Carbon Spring Steel - Suits OD of 6003, 6202 and 6300 Bearings (Equiv EPL029) -- Suits Screw: M27				
29.00 mm (1.142 inch.)				
29.00	37.00	2.70	0.40	Part Number: W0290-T-037-027-W3-C
3 Wave Series - Carbon Spring Steel - Suits OD of 6301 Bearings (Equiv EPL030) -- Suits Screw: M29				
29.00	37.00	2.90	0.40	Part Number: W0290-T-037-029-W3-C
3 Wave Series - Carbon Spring Steel - Suits OD of 6301 Bearings (Equiv EPL031) -- Suits Screw: M29				
30.00 mm (1.181 inch.)				
30.00	38.00	3.20	0.40	Part Number: W0300-T-038-032-W3-C
3 Wave Series - Carbon Spring Steel - Equiv EPL032 -- Suits Screw: M30				
30.16 mm (1.188 inch.)				
30.16	41.28	3.20	0.43	Part Number: W0302-T-042-032-W3-C
3 Wave Series - Carbon Spring Steel -- Suits Screw: 1.3/16				
30.16	41.28	3.20	0.51	Part Number: W0302-T-042-032-W3-CZ
3 Wave Series - Carbon Spring Steel -- Suits Screw: 1.3/16				
30.16	41.28	3.30	0.51	Part Number: W0302-T-042-033-W3-C
3 Wave Series - Carbon Spring Steel -- Suits Screw: 1.3/16				
30.16	41.28	3.40	0.56	Part Number: W0302-T-042-034-W3-C
3 Wave Series - Carbon Spring Steel -- Suits Screw: 1.3/16				
31.00 mm (1.220 inch.)				
31.00	40.00	5.10	0.46	Part Number: W0310-T-040-051-W3S-C
3 Wave Series - With Split - Carbon Spring Steel -- Suits Screw: M31				
31.75 mm (1.250 inch.)				
31.75	42.86	5.10	0.47	Part Number: W0318-T-043-051-W3-C
3 Wave Series - Carbon Spring Steel -- Suits Screw: 1.1/4				
32.00 mm (1.260 inch.)				
32.00	40.00	2.80	0.40	Part Number: W0320-T-040-028-W4-C
4 Wave Series - Carbon Spring Steel - Suits OD of 6203 Bearings (Equiv EPL034X) -- Suits Screw: M32				
32.00	40.00	3.60	0.40	Part Number: W0320-T-040-036-W3-C
3 Wave Series - Carbon Spring Steel - Suits OD of 6203 Bearings (Equiv EPL034) -- Suits Screw: M32				
32.50 mm (1.280 inch.)				
32.50	42.00	2.90	0.40	Part Number: W0325-T-042-029-W4-C
4 Wave Series - Carbon Spring Steel - Suits OD of 6004 and 6302 Bearings (Equiv EPL037X)				
32.50	42.00	3.20	0.40	Part Number: W0325-T-042-032-W3-C
3 Wave Series - Carbon Spring Steel - Suits OD of 6004 and 6302 Bearings (Equiv EPL037)				
32.50	42.00	3.60	0.40	Part Number: W0325-T-042-036-W3-C
3 Wave Series - Carbon Spring Steel - Suits OD of 6004 and 6302 Bearings (Equiv EPL038)				
34.00 mm (1.339 inch.)				
34.00	44.00	3.70	0.40	Part Number: W0340-T-044-037-W3-C
3 Wave Series - Carbon Spring Steel - Equiv EPL039 -- Suits Screw: M34				

 Usually stocked or Short Delivery
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

 Long Delivery or Large Minimum Quantities
 Not in current production



Nominal ID (mm)	Nominal OD (mm)	Approx. Height (mm)	Material Thickness (mm)	
34.93 mm (1.375 inch.)				
34.93	47.63	3.00	0.51	Part Number: W0349-T-048-030-W3-C 3 Wave Series - Carbon Spring Steel
37.00 mm (1.457 inch.)				
37.00	47.00	3.00	0.50	Part Number: W0370-T-047-030-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6005, 6204 and 6303 Bearings (Equiv EPL040)
37.00	47.00	3.00	0.50	Part Number: W0370-T-047-030-W4-C 4 Wave Series - Carbon Spring Steel - Suits OD of 6005, 6204 and 6303 Bearings (Equiv EPL041X)
37.00	47.00	3.10	0.50	Part Number: W0370-T-047-031-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6005, 6204 and 6303 Bearings (Equiv EPL041)
37.00	47.00	3.50	0.50	Part Number: W0370-T-047-035-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6005, 6204 and 6303 Bearings (Equiv EPL042)
38.10 mm (1.500 inch.)				
38.10	52.37	3.30	0.56	Part Number: W0381-T-053-033-W3-C 3 Wave Series - Carbon Spring Steel
38.10	52.37	3.30	0.56	Part Number: W0381-T-053-033-W3-CZY 3 Wave Series - Carbon Spring Steel
40.00 mm (1.575 inch.)				
40.00	52.00	3.30	0.50	Part Number: W0400-T-052-033-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6205 and 6304 Bearings (Equiv EPL043)
40.00	52.00	3.50	0.50	Part Number: W0400-T-052-035-W4-C 4 Wave Series - Carbon Spring Steel - Suits OD of 6205 and 6304 Bearings (Equiv EPL044X)
40.00	52.00	3.80	0.50	Part Number: W0400-T-052-038-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6205 and 6304 Bearings (Equiv EPL044)
41.28 mm (1.625 inch.)				
41.28	55.56	3.76	0.58	Part Number: W0413-T-056-038-W3-C 3 Wave Series - Carbon Spring Steel
42.00 mm (1.654 inch.)				
42.00	55.00	4.10	0.50	Part Number: W0420-T-055-041-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6006 Bearings (Equiv EPL045)
46.04 mm (1.813 inch.)				
46.04	63.50	3.70	0.64	Part Number: W0460-T-064-037-W3-C 3 Wave Series - Carbon Spring Steel
49.00 mm (1.929 inch.)				
49.00	62.00	3.70	0.60	Part Number: W0490-T-062-037-W4-C 4 Wave Series - Carbon Spring Steel - Suits OD of 6007, 6206, 6305 and 6403 Bearings (Equiv EPL048X)
49.00	62.00	3.90	0.60	Part Number: W0490-T-062-039-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6007, 6206, 6305 and 6403 Bearings (Equiv EPL048)
49.00	62.00	4.00	0.50	Part Number: W0490-T-062-040-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6007, 6206, 6305 and 6403 Bearings (Equiv EPL046)
49.00	62.00	4.90	0.50	Part Number: W0490-T-062-049-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6007, 6206, 6305 and 6403 Bearings (Equiv EPL047)
53.00 mm (2.087 inch.)				
53.00	68.00	5.00	0.60	Part Number: W0530-T-068-050-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6008 Bearings (Equiv EPL050)
53.98 mm (2.125 inch.)				
53.98	73.03	5.00	0.76	Part Number: W0540-T-074-050-W3-C 3 Wave Series - Carbon Spring Steel
55.00 mm (2.165 inch.)				
55.00	70.00	5.00	0.60	Part Number: W0550-T-070-050-W3-C 3 Wave Series - Carbon Spring Steel - Equiv EPL051
57.00 mm (2.244 inch.)				
57.00	72.00	4.70	0.60	Part Number: W0570-T-072-047-W4-C 4 Wave Series - Carbon Spring Steel - Suits OD of 6207, 6306 and 6404 Bearings (Equiv EPL054X)
57.00	72.00	4.80	0.60	Part Number: W0570-T-072-048-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6207, 6306 and 6404 Bearings (Equiv EPL053)
57.00	72.00	5.20	0.60	Part Number: W0570-T-072-052-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6207, 6306 and 6404 Bearings (Equiv EPL054)

 Usually stocked or Short Delivery
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

 Long Delivery or Large Minimum Quantities
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

Nominal ID (mm)	Nominal OD (mm)	Approx. Height (mm)	Material Thickness (mm)	
60.00 mm (2.362 inch.)				
60.00	75.00	7.10	0.60	Part Number: W0600-T-076-071-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6009 Bearings (Equiv EPL055)
60.33 mm (2.375 inch.)				
60.33	80.96	5.20	0.89	Part Number: W0603-T-081-052-W3-C 3 Wave Series - Carbon Spring Steel
61.50 mm (2.421 inch.)				
61.50	80.00	5.20	0.60	Part Number: W0615-T-080-052-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6010, 6208, 6307 and 6405 Bearings (Equiv EPL057)
61.50	80.00	5.60	0.60	Part Number: W0615-T-080-056-W4-C 4 Wave Series - Carbon Spring Steel - Suits OD of 6010, 6208, 6307 and 6405 Bearings (Equiv EPL058X)
61.50	80.00	5.80	0.60	Part Number: W0615-T-080-058-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6010, 6208, 6307 and 6405 Bearings (Equiv EPL058)
63.50 mm (2.500 inch.)				
63.50	85.73	5.80	0.91	Part Number: W0635-T-086-058-W3-C 3 Wave Series - Carbon Spring Steel
65.00 mm (2.559 inch.)				
65.00	85.00	6.80	0.60	Part Number: W0650-T-085-068-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6209 Bearings (Equiv EPL060)
66.68 mm (2.625 inch.)				
66.68	90.49	5.30	0.97	Part Number: W0667-T-091-053-W3-C 3 Wave Series - Carbon Spring Steel
70.00 mm (2.756 inch.)				
70.00	90.00	5.30	0.60	Part Number: W0700-T-090-053-W4-C 4 Wave Series - Carbon Spring Steel - Suits OD of 6011, 6210, 6308 and 6406 Bearings (Equiv EPL062X)
70.00	90.00	6.00	0.60	Part Number: W0700-T-090-060-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6011, 6210, 6308 and 6406 Bearings (Equiv EPL061)
70.00	90.00	6.40	0.70	Part Number: W0700-T-090-064-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6011, 6210, 6308 and 6406 Bearings (Equiv EPL064)
70.00	90.00	7.00	0.60	Part Number: W0700-T-090-070-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6011, 6210, 6308 and 6406 Bearings (Equiv EPL062)
73.50 mm (2.894 inch.)				
73.50	95.00	7.20	0.70	Part Number: W0735-T-095-072-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6012 Bearings (Equiv EPL065)
76.20 mm (3.000 inch.)				
76.20	101.60	6.50	1.07	Part Number: W0762-T-102-065-W3-C 3 Wave Series - Carbon Spring Steel
78.50 mm (3.091 inch.)				
78.50	100.00	6.50	0.70	Part Number: W0785-T-100-065-W4-C 4 Wave Series - Carbon Spring Steel - Suits OD of 6013, 6211, 6309 and 6407 Bearings (Equiv EPL067X)
78.50	100.00	6.90	0.70	Part Number: W0785-T-100-069-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6013, 6211, 6309 and 6407 Bearings (Equiv EPL067)
82.50 mm (3.248 inch.)				
82.50	105.00	6.60	0.70	Part Number: W0825-T-106-066-W3-C 3 Wave Series - Carbon Spring Steel - Equiv EPL070
82.55 mm (3.250 inch.)				
82.55	111.13	6.60	1.14	Part Number: W0826-T-112-066-W3-C 3 Wave Series - Carbon Spring Steel
88.50 mm (3.484 inch.)				
88.50	110.00	6.80	0.76	Part Number: W0885-T-110-068-W4-C 4 Wave Series - Carbon Spring Steel - Suits OD of 6014, 6212, 6310 and 6408 Bearings (Equiv EPL072X)
88.50	110.00	7.00	0.70	Part Number: W0885-T-110-070-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6014, 6212, 6310 and 6408 Bearings (Equiv EPL072)
88.90 mm (3.500 inch.)				
88.90	120.65	7.00	1.19	Part Number: W0889-T-121-070-W3-C 3 Wave Series - Carbon Spring Steel

 Usually stocked or Short Delivery
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
 Long Delivery or Large Minimum Quantities
 Not in current production



Nominal ID (mm)	Nominal OD (mm)	Approx. Height (mm)	Material Thickness (mm)	
93.00 mm (3.661 inch.)				
93.00	115.00	10.00	0.80	Part Number: W0930-T-115-100-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6015 Bearings (Equiv EPL075)
95.00 mm (3.740 inch.)				
95.00	117.00	9.00	0.80	Part Number: W0950-T-117-090-W3-C 3 Wave Series - Carbon Spring Steel - Equiv EPL077
95.25 mm (3.750 inch.)				
95.25	130.18	9.00	1.27	Part Number: W0953-T-131-090-W3-C 3 Wave Series - Carbon Spring Steel
98.00 mm (3.858 inch.)				
98.00	120.00	10.00	0.80	Part Number: W0980-T-120-100-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6213 and 6311 Bearings (Equiv EPL079)
103.00 mm (4.055 inch.)				
103.00	125.00	13.00	0.80	Part Number: W1030-T-125-130-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6016 and 6214 Bearings (Equiv EPL082)
104.78 mm (4.125 inch.)				
104.78	139.70	13.00	1.35	Part Number: W1048-T-140-130-W3-C 3 Wave Series - Carbon Spring Steel
105.00 mm (4.134 inch.)				
105.00	127.00	14.00	0.80	Part Number: W1050-T-127-140-W3-C 3 Wave Series - Carbon Spring Steel - Equiv EPL084
108.00 mm (4.252 inch.)				
108.00	130.00	8.80	1.00	Part Number: W1080-T-130-088-W4-C 4 Wave Series - Carbon Spring Steel - Suits OD of 6017, 6215, 6312 and 6410 Bearings (Equiv EPL086X)
108.00	130.00	10.00	1.00	Part Number: W1080-T-130-100-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6017, 6215, 6312 and 6410 Bearings (Equiv EPL087)
108.00	130.00	13.00	1.00	Part Number: W1080-T-130-130-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6017, 6215, 6312 and 6410 Bearings (Equiv EPL086)
111.00 mm (4.370 inch.)				
111.00	135.00	10.70	1.00	Part Number: W1110-T-136-107-W3-C 3 Wave Series - Carbon Spring Steel - Equiv EPL089
111.13 mm (4.375 inch.)				
111.13	149.23	9.30	1.40	Part Number: W1111-T-150-093-W3-C 3 Wave Series - Carbon Spring Steel
113.00 mm (4.449 inch.)				
113.00	137.00	9.30	1.00	Part Number: W1130-T-137-093-W3-C 3 Wave Series - Carbon Spring Steel - Equiv EPL090
116.00 mm (4.567 inch.)				
116.00	140.00	7.50	1.00	Part Number: W1160-T-140-075-W4-C 4 Wave Series - Carbon Spring Steel - Suits OD of 6018, 6216, 6313 and 6411 Bearings (Equiv EPL092X)
116.00	140.00	9.80	1.00	Part Number: W1160-T-140-098-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6018, 6216, 6313 and 6411 Bearings (Equiv EPL092)
120.65 mm (4.750 inch.)				
120.65	158.75	9.80	1.47	Part Number: W1207-T-159-098-W3-C 3 Wave Series - Carbon Spring Steel
121.00 mm (4.764 inch.)				
121.00	145.00	14.50	1.00	Part Number: W1210-T-145-145-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6012 Bearings (Equiv EPL096)
126.00 mm (4.961 inch.)				
126.00	150.00	8.10	1.00	Part Number: W1260-T-150-081-W4-C 4 Wave Series - Carbon Spring Steel - Suits OD of 6020, 6217, 6314 and 6412 Bearings (Equiv EPL099X)
126.00	150.00	11.00	1.00	Part Number: W1260-T-150-110-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6020, 6217, 6314 and 6412 Bearings (Equiv EPL099)
127.00 mm (5.000 inch.)				
127.00	168.28	11.00	1.55	Part Number: W1270-T-169-110-W3-C 3 Wave Series - Carbon Spring Steel

 Usually stocked or Short Delivery
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 Long Delivery or Large Minimum Quantities
 Not in current production

Nominal ID (mm)	Nominal OD (mm)	Approx. Height (mm)	Material Thickness (mm)	
133.00 mm (5.236 inch.)				
133.00	157.00	15.50	1.00	Part Number: W1330-T-157-155-W3-C 3 Wave Series - Carbon Spring Steel - Equiv EPL103
136.00 mm (5.354 inch.)				
136.00	160.00	8.00	1.00	Part Number: W1360-T-160-080-W4-C 4 Wave Series - Carbon Spring Steel - Suits OD of 6021, 6218, 6315 and 6413 Bearings (Equiv EPL105X)
136.00	160.00	16.00	1.00	Part Number: W1360-T-160-160-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6021, 6218, 6315 and 6413 Bearings (Equiv EPL105)
136.53 mm (5.375 inch.)				
136.53	177.80	8.50	1.60	Part Number: W1365-T-178-085-W3-C 3 Wave Series - Carbon Spring Steel
146.00 mm (5.748 inch.)				
146.00	170.00	8.50	1.20	Part Number: W1460-T-170-085-W4-C 4 Wave Series - Carbon Spring Steel - Suits OD of 6022, 6219 and 6316 Bearings (Equiv EPL109X)
146.00	170.00	12.00	1.20	Part Number: W1460-T-170-120-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6022, 6219 and 6316 Bearings (Equiv EPL109)
156.00 mm (6.142 inch.)				
156.00	180.00	8.50	1.20	Part Number: W1560-T-180-085-W4-C 4 Wave Series - Carbon Spring Steel - Suits OD of 6024, 6220, 6317 and 6414 Bearings (Equiv EPL113X)
156.00	180.00	14.00	1.20	Part Number: W1560-T-180-140-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6024, 6220, 6317 and 6414 Bearings (Equiv EPL113)
164.00 mm (6.457 inch.)				
164.00	190.00	8.50	1.20	Part Number: W1640-T-190-085-W4-C 4 Wave Series - Carbon Spring Steel - Suits OD of 6221, 6318 and 6415 Bearings (Equiv EPL118X)
164.00	190.00	16.00	1.20	Part Number: W1640-T-190-160-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6221, 6318 and 6415 Bearings (Equiv EPL118)
174.00 mm (6.850 inch.)				
174.00	200.00	11.00	1.20	Part Number: W1740-T-200-110-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6222, 6319 and 6416 Bearings (Equiv EPL122)
182.00 mm (7.165 inch.)				
182.00	210.00	11.50	1.20	Part Number: W1820-T-210-115-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6223 and 6417 Bearings (Equiv EPL124)
187.00 mm (7.362 inch.)				
187.00	215.00	12.20	1.20	Part Number: W1870-T-215-122-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6224 and 6320 Bearings (Equiv EPL127)
192.00 mm (7.559 inch.)				
192.00	220.00	7.40	1.60	Part Number: W1920-T-220-074-W3-C 3 Wave Series - Carbon Spring Steel - Equiv EPL129
197.00 mm (7.756 inch.)				
197.00	225.00	10.70	1.60	Part Number: W1970-T-225-107-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6321 and 6418 Bearings (Equiv EPL131)
202.00 mm (7.953 inch.)				
202.00	230.00	10.80	1.80	Part Number: W2020-T-230-108-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6226 Bearings (Equiv EPL132)
211.00 mm (8.307 inch.)				
211.00	240.00	12.20	1.80	Part Number: W2110-T-240-122-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6322 Bearings (Equiv EPL134)
221.00 mm (8.701 inch.)				
221.00	250.00	17.00	2.00	Part Number: W2210-T-250-170-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6228 and 6323 Bearings (Equiv EPL136)
231.00 mm (9.094 inch.)				
231.00	260.00	18.20	2.30	Part Number: W2310-T-260-182-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6229 and 6224 Bearings (Equiv EPL138)
239.00 mm (9.409 inch.)				
239.00	270.00	26.70	2.60	Part Number: W2390-T-270-267-W3-C 3 Wave Series - Carbon Spring Steel - Suits OD of 6230 Bearings (Equiv EPL140)

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Notes



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