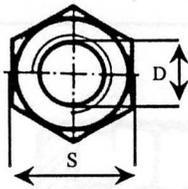


## SECTION 4

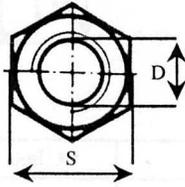
## NUTS

◆	<b>HEX NUTS</b>	
	DIN 934 M2 THRU M27.....	4-1
	RIGHT AND LEFT HAND THREAD	
	DIN 934 M30 THRU M80 .....	4-2
◆	<b>HEX JAM NUTS</b>	
	DIN 439 B CLASS 04.....	4-3
	RIGHT AND LEFT HAND THREAD	
	DIN 936 CLASS 17H .....	4-4
◆	<b>LOCK NUTS</b>	
	DIN 980V – ALL METAL .....	4-5
	DIN 982 CLASS 10 HEAVY NYLON INSERT	4-6
	DIN 985 – NYLON INSERT .....	4-6
	DIN 6927 – HEX FLANGE LOCKNUT.....	4-8
	FUJILOK-STAINLESS STEEL INSERT.....	4-9
◆	<b>CASTLE NUTS</b>	
	DIN 935.....	4-7
	DIN 937 – THIN TYPE .....	4-7
◆	<b>HEX FLANGE NUTS</b>	
	DIN 6923 – CLASS 10.....	4-8
◆	<b>HEAVY HEX NUTS</b>	
	DIN 6915 – CLASS 10 .....	4-8
	UNI 5587 – CLASS 10 .....	4-8
◆	<b>WING NUTS</b>	
	DIN 315 .....	4-9
	AMERICAN FORM .....	4-9
◆	<b>SQUARE NUTS</b>	
	DIN 557 .....	4-9
	DIN 562 – THIN TYPE .....	4-9
◆	<b>HEX WELD NUTS</b>	
	DIN 929 .....	4-10
◆	<b>TEE NUTS</b>	
	FOUR PRONG – ZINC .....	4-10
◆	<b>ACORN NUTS</b>	
	DIN 1587.....	4-11
◆	<b>HEX COUPLING NUTS</b>	
	DIN 6334.....	4-11

Stack Range

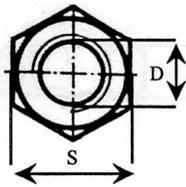


DIN 934			Class 8					Class 10			Hex Nuts	
Diameter	S	M	Plain	Zinc	ZYD	Left Hand Thread		Plain	Zinc	ZYD	Stainless A2	Brass
						Plain	Zinc					
M 2	4	1.6	X	X								
2.5	5	2	X	X								
3	5.5	2.4	X	X							X	
3.5	6	2.8	X	X								
4	7	3.2	X	X		X	X		X		X	X
5	8	4	X	X	X	X	X	X	X	X	X	X
6 6x.75	10	5	X X	X X	X	X	X	X	X	X	X	X
7	11	5.5	X	X				X	X			
8 8x1	13	6.5	X X	X X	X	X	X	X	X	X	X	X
10 10x1.25 10x1	17	8	X X X	X X X	X	X	X	X	X	X	X	X
12 12x1.5 12x1.25	19	10	X X X	X X X	X	X	X	X	X	X	X	X
14 14x1.5	22	11	X X	X X	X	X	X	X	X			
16 16x1.5	24	13	X X	X X	X	X	X	X	X	X	X	
18 18x2 18x1.5	27	15	X X X	X X X	X	X	X	X	X			
20 20x2 20x1.5	30	16	X X X	X X X	X	X	X	X	X	X	X	
22 22x2 22x1.5	32	18	X X X	X X X	X	X	X	X	X			
24 24x2 24x1.5	36	19	X X X	X X X	X	X	X	X	X	X	X	
27 27x2 27x1.5	41	22	X X X	X X X	X	X	X	X	X			



DIN 934 Hex Nuts			Class 8		Class 10		Stainless A2
Diameter	S	M	Plain	Zinc	Plain	Zinc	
M 30 30x2 30x1.5	46	24	X	X	X	X	X
			X	X	X		
			X	X	X		
33 33x2 33x1.5	50	26	X	X	X		
			X				
			X				
36 36x3 36x1.5	55	29	X	X	X		X
			X				
			X				
39 39x3 39x1.5	60	31	X	X			
			X				
			X				
42 42x3 42x1.5	65	34	X	X	X		
			X		X		
			X				
45 45x3 45x1.5	70	36	X	X	X		
			X				
			X				
48 48x3 48x1.5	75	38	X	X	X		
			X				
			X				
52	80	42	X				
56 56x4 56x2	85	45	X				
			X				
			X				
64 64x4 64x2	95	51	X				
			X				
			X				
72 72x4 72x2	105	58	X				
			X				
			X				
80 80x4	115	64	X				
			X				

Stock Range

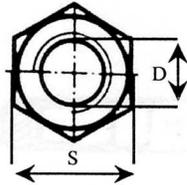


**DIN 439B - 04**

**Hex Jam Nuts**

Diameter	S	M	Plain	Zinc	Left Hand Thread Plain
<b>M 3</b>	5.5	1.8	X	X	
<b>4</b>	7	2.2	X	X	
<b>5</b>	8	2.7	X	X	
<b>6</b>	10	3.2	X	X	
<b>8</b> <b>8x1</b>	13	4	X X	X X	
<b>10</b> <b>10x1.25</b> <b>10x1</b>	17	5	X X X	X X X	X
<b>12</b> <b>12x1.5</b> <b>12x1.25</b>	19	6	X X X	X X X	X
<b>14</b> <b>14x1.5</b>	22	7	X X	X X	X X
<b>16</b> <b>16x1.5</b>	24	8	X X	X X	X X
<b>18</b> <b>18x2</b> <b>18x1.5</b>	27	9	X X X	X X X	X
<b>20</b> <b>20x1.5</b>	30	10	X X	X X	X X

Diameter	S	M	Plain	Zinc	Left Hand Thread Plain
<b>M 22</b> <b>22x1.5</b>	32	11	X X	X X	X
<b>24</b> <b>24x2</b> <b>24x1.5</b>	36	12	X X X	X X X	X
<b>27</b>	41	13.5	X	X	
<b>30</b> <b>30x1.5</b>	46	15	X X	X X	
<b>33</b> <b>33x1.5</b>	50	16.5	X X	X	
<b>36</b> <b>36x2</b> <b>36x1.5</b>	55	18	X X X	X X	
<b>39</b> <b>39x1.5</b>	60	19.5	X X		
<b>42</b> <b>42x3</b> <b>42x1.5</b>	65	21	X X X		
<b>45</b>	70	22.5	X		
<b>48</b> <b>48x3</b> <b>48x1.5</b>	75	24	X X X		

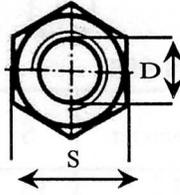


**DIN 936 - 17H**

**Hex Jam Nuts**

Diameter	S	M	Plain	Zinc	Diameter	S	M	Plain
<b>M 8</b> <b>8x1</b>	13	5	X	X	<b>M 33</b> <b>33x2</b> <b>33x1.5</b>	50	14	X
			X	X				X
<b>10</b> <b>10x1.25</b> <b>10x1</b>	17	6	X	X	<b>36</b> <b>36x3</b> <b>36x1.5</b>	55	14	X
			X	X				X
			X	X				X
<b>12</b> <b>12x1.5</b> <b>12x1.25</b>	19	7	X	X	<b>39</b> <b>39x3</b> <b>39x1.5</b>	60	16	X
			X	X				X
			X	X				X
<b>14</b> <b>14x1.5</b>	22	8	X	X	<b>42</b> <b>42x3</b> <b>42x1.5</b>	65	16	X
			X	X				X
<b>20</b> <b>20x2</b> <b>20x1.5</b>	30	9	X	X	<b>45</b> <b>45x3</b> <b>45x1.5</b>	70	18	X
			X					X
			X	X				X
<b>22</b> <b>22x2</b> <b>22x1.5</b>	32	10	X	X	<b>48</b> <b>48x3</b> <b>48x1.5</b>	75	18	X
			X					X
			X	X				X
<b>24</b> <b>24x2</b> <b>24x1.5</b>	36	10	X	X	<b>52</b> <b>52x3</b> <b>52x1.5</b>	80	20	X
			X	X				X
			X					X
<b>27</b> <b>27x2</b> <b>27x1.5</b>	41	12	X		<b>30</b> <b>30x2</b> <b>30x1.5</b>	46	12	X
			X					X
			X					X
<b>30</b> <b>30x2</b> <b>30x1.5</b>	46	12	X	X				
			X					
			X					

Stock Range

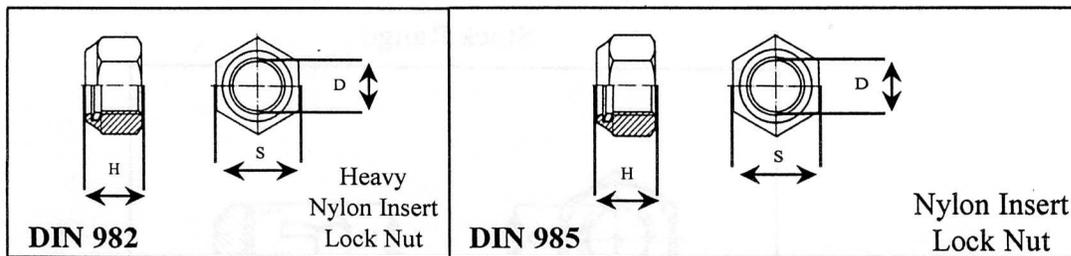


DIN 980 - Form V

All Metal  
Lock Nut

Diameter	S	H	Class 8 Zinc	Class 10 Zinc	Stainless A-2
M 4	7	2.4	X		
5	8	3	X	X	X
6	10	3.6	X	X	X
8	13	8	X	X	X
8x1			X		
10	17	10	X	X	X
10x1.25			X		
10x1			X	X	
12	19	12	X	X	X
12x1.5			X	X	
12x1.25			X	X	
14	22	14	X	X	
14x1.5			X	X	
16	24	16	X	X	X
16x1.5			X	X	
18	27	18	X	X	
18x1.5			X	X	
20	30	20	X	X	X
20x1.5			X	X	
22	32	22	X	X	
22x1.5			X	X	
24	36	24	X	X	
24x2			X	X	
24x1.5				X	
27	41	27	X		
27x2			X		
30	46	30	X	X	
30x2			X		
36	55	36	X		

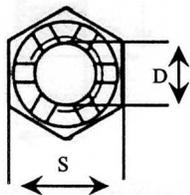
Stock Range



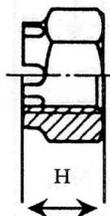
DIN 982			DIN 985			DIN 982			DIN 985						
Diameter	S	H	Class 10 Zinc	Diameter	S	H	Class 8 Zinc	Class 8 ZYD	Stainless A-2	Diameter	S	H	Class 8 Zinc	Class 8 ZYD	Stainless A-2
M 8	13	9.5	X	M 3	5.5	4	X		X	M 3	5.5	4	X		X
10	17	11.5	X	4	7	5	X		X	4	7	5	X		X
				5	8	5	X		X	5	8	5	X		X
				6	10	6	X	X	X	6	10	6	X	X	X
				7	11	7.5	X			7	11	7.5	X		
				8	13	8	X	X	X	8	13	8	X	X	X
				8x1			X								
				10	17	10	X		X	10	17	10	X		X
				10x1.25			X								
				10x1			X								
				12	19	12	X		X	12	19	12	X		X
				12x1.5			X								
				12x1.25			X								
				14	22	14	X			14	22	14	X		
				14x1.5			X								
				16	24	16	X		X	16	24	16	X		X
				16x1.5			X								
				18	27	18.5	X			18	27	18.5	X		
				18x1.5			X								
				20	30	20	X		X	20	30	20	X		X
				20x2.0			X								
				20x1.5			X								
				22	32	22	X			22	32	22	X		
				22x1.5			X								
				24	36	24	X		X	24	36	24	X		X
				24x2			X								
				24x1.5			X								
				27	41	27	X			27	41	27	X		
				30	46	30	X			30	46	30	X		
				33	50	33	X			33	50	33	X		
				36	55	36	X			36	55	36	X		
				39	60	39	X			39	60	39	X		
				42	65	42	X			42	65	42	X		
				45	70	45	X			45	70	45	X		
				48	75	48	X			48	75	48	X		

Stock Range

For nuts M10 and under



For nuts M12 and over



**DIN 935**

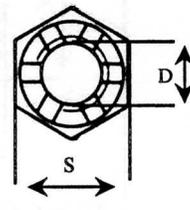
**Castle Nuts**

Diameter	S	H	Plain	Zinc
M 6	10	7.5	X	
7	11	8	X	
8	13	9.5	X	
10	17	12	X	X
10x1.25			X	
10x1			X	
12	19	15	X	X
12x1.5			X	
12x1.25			X	
14	22	16	X	
14x1.5			X	
16	24	19	X	X
16x1.5			X	
18	27	21	X	
18x1.5			X	
20	30	22	X	X
20x2			X	
20x1.5			X	
22	32	26	X	
22x1.5			X	
24	36	27	X	X
24x2			X	
24x1.5			X	
27	41	30	X	
27x1.5			X	
30	46	33	X	X
30x2			X	
30x1.5			X	

Diameter	S	H	Plain
M 33	50	35	X
33x2			X
33x1.5			X
36	55	38	X
36x3			X
36x1.5			X
39	60	40	X
39x3			X
39x1.5			X
42	65	46	X
42x3			X
42x1.5			X
45	70	48	X
48	75	50	X
48x3			X
48x1.5			X

Stock Range

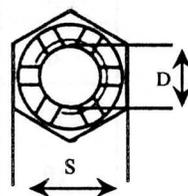
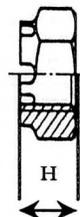
For nuts M10 and under



**DIN 937**

**Thin Castle Nuts**

For nuts M12 and over

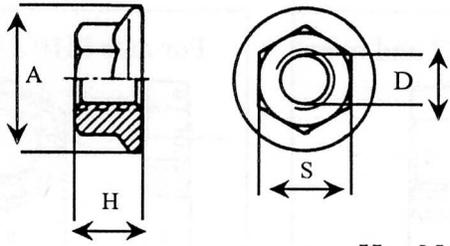


**DIN 937**

**Thin Castle Nuts**

Diameter	S	H	Plain
M 6	10	6	X
8	13	8	X
10	17	9	X
10x1.25			X
10x1			X
12	19	10	X
12x1.5			X
14	22	11	X
14x1.5			X
16	24	12	X
16x1.5			X
20	30	13	X
20x1.5			X
24	36	15	X
24x1.5			X

Stock Range

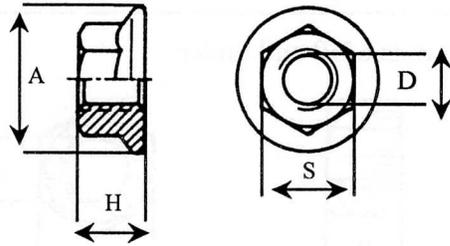


**DIN 6923 - 10**

Hex Nut  
with Flange

Diameter	S	H	A	Plain	Zinc
<b>M 5</b>	8	5	11.8	X	X
<b>6</b>	10	6	14.2	X	X
<b>8</b>	13	8	17.9	X	X
<b>10</b>	15	10	21.8	X	X
<b>12</b>	18	12	26	X	X
<b>16</b>	24	16	34.5	X	
<b>20</b>	30	20	42.8	X	

Stock Range

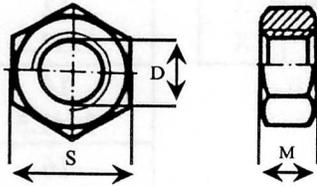


**DIN 6927 - Zinc**

All Metal Flange  
Locking Nut

Diameter	S	H	A	Class 8	Class 10
<b>M 6</b>	10	7.3	14.2		X
<b>8</b>	13	9.4	17.9	X	X
<b>10</b>	15	11.4	21.8		X
<b>12</b>	18	13.8	26		X
<b>16</b>	24	18.3	34.5	X	

Stock Range

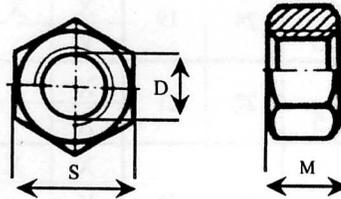


**DIN 6915 - 10**

Heavy  
Hex Nut

Diameter	S	M	Plain
<b>M 12</b>	22	10	X
<b>14</b>	24	11	X
<b>16</b>	27	13	X
<b>18</b>	30	15	X
<b>20</b>	32	16	X
<b>22</b>	36	18	X
<b>24</b>	41	19	X
<b>27</b>	46	22	X
<b>30</b>	50	24	X

Stock Range

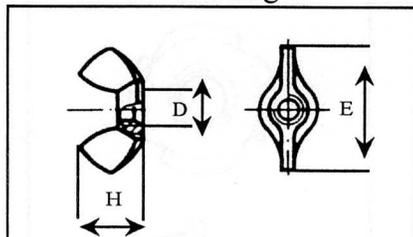


**UNI 5587 - 10**

Heavy  
Hex Nut

Diameter	S	M	Plain
<b>M 8</b>	13	8	X
<b>10</b>	17	10	X
<b>12</b>	19	12	X
<b>14</b>	22	14	X
<b>16</b>	24	16	X
<b>18</b>	27	18	X
<b>20</b>	30	20	X
<b>22</b>	32	22	X
<b>24</b>	36	24	X
<b>27</b>	41	27	X
<b>30</b>	46	30	X

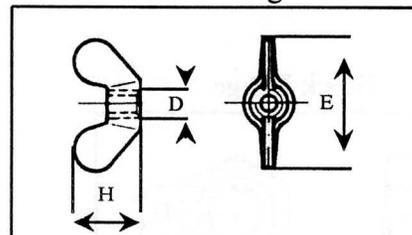
Stock Range



Wing Nut  
American Form - Steel

Diameter	E	H	Zinc
<b>M4</b>	17.6	8.6	X
<b>5</b>	22.5	11	X
<b>6</b>	27.8	13.6	X
<b>8</b>	30.3	14.8	X
<b>10</b>	36.2	17.7	X
<b>12</b>	49.4	24.1	X

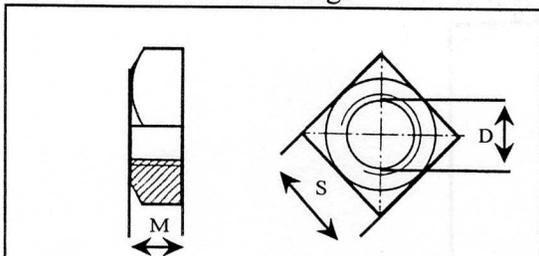
Stock Range



Wing Nut  
**DIN 315** - Malleable Cast Iron

Diameter	E	H	Zinc
<b>M 6</b>	33	17	X
<b>8</b>	39	20	X
<b>10</b>	51	25	X
<b>12</b>	65	33.5	X

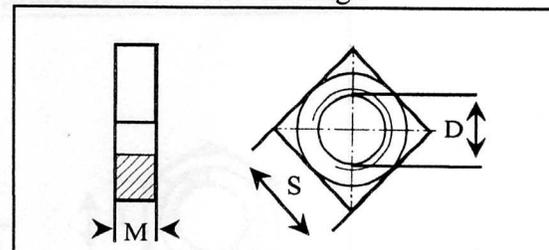
Stock Range



**DIN 557 - 5** Square Nuts

Diameter	S	M	Plain	Zinc
<b>M5</b>	8	4	X	X
<b>6</b>	10	5	X	X
<b>8</b>	13	6.5	X	X
<b>10</b>	17	8	X	X
<b>12</b>	19	10	X	X
<b>16</b>	24	13	X	X

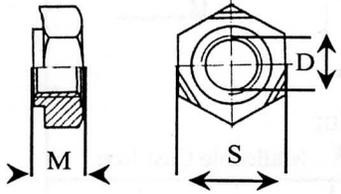
Stock Range



**DIN 562 - 04** Thin Square Nuts

Diameter	S	M	Plain	Zinc
<b>M3</b>	5.5	1.8	X	X
<b>4</b>	7	2.2	X	X
<b>5</b>	8	2.7	X	X
<b>6</b>	10	3.2	X	X
<b>8</b>	13	4	X	X
<b>10</b>	17	5	X	X

Stock Range

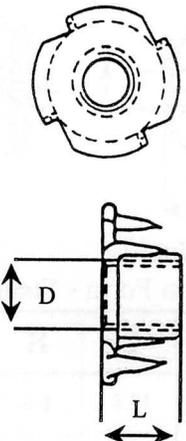


**Hex  
Weld Nut**

**DIN 929 - Steel**

Diameter	S	M	Plain
<b>M 6</b>	11	5	X
<b>8</b>	14	6.5	X
<b>10</b>	17	8	X
<b>12</b>	19	10	X

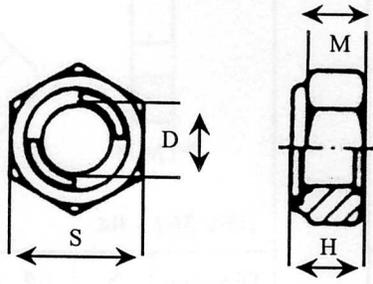
Stock Range



**Tee Nuts - Steel  
Four Prong Nut - Zinc**

Diameter	L	Zinc
<b>M 4</b>	6	X
<b>5</b>	8	X
<b>6</b>	9	X
<b>8</b>	11	X
<b>10</b>	13	X

Stock Range

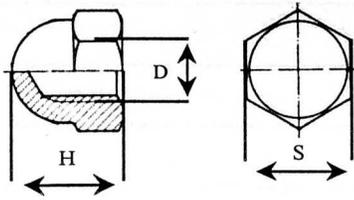


**Lock Nut with  
Stainless Steel Insert**

**Fujilok**

Diameter	S	M	H	Zinc
<b>M 6</b>	10	4.2	5.1 $\pm$ 0.3	X
<b>8</b>	13	6.1	7.3 $\pm$ 0.4	X
<b>10</b>	17	7.1	8.3 $\pm$ 0.4	X
<b>12</b>	19	9	10.5 $\pm$ 0.4	X

Stock Range

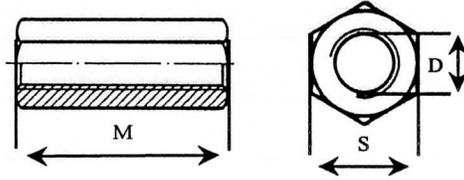


**DIN 1587 - 6**

Acorn Nuts

Diameter	S	H	Zinc
<b>M 3</b>	5.5	7	X
<b>4</b>	7	8	X
<b>5</b>	8	10	X
<b>6</b>	10	12	X
<b>8</b>	13	15	X
<b>10</b>	17	18	X
<b>12</b>	19	22	X
<b>14</b>	22	25	X
<b>16</b>	24	28	X
<b>20</b>	30	34	X
<b>24</b>	36	42	X

Stock Range



**DIN 6334 - Steel**

Hex Coupling Nuts

Diameter	S	M	Zinc
<b>M 6</b>	10	18	X
<b>8</b>	13	24	X
<b>10</b>	17	30	X
<b>12</b>	19	36	X
<b>16</b>	24	48	X
<b>20</b>	30	60	X
<b>24</b>	36	72	X

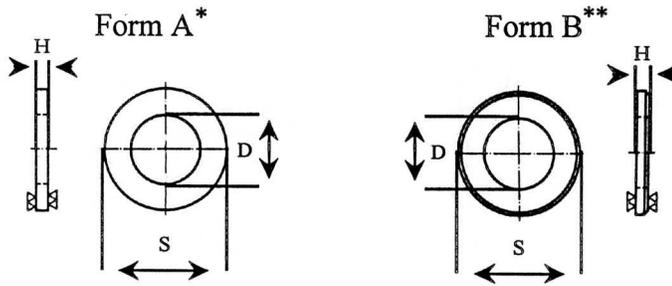
## SECTION 5

## WASHERS

### ♦ WASHERS

DIN 125 FLATWASHERS.....	5-1
DIN 127 SPLIT LOCKWASHERS.....	5-2
DIN 137 SPRING WASHERS.....	5-3
DIN 7980 HI COLLAR LOCKWASHERS .....	5-4
SCHNORR – RIBBED LOCKWASHERS.....	5-4
DIN 9021 LARGE OD FLATWASHERS.....	5-5
DIN 433 SMALL OD FLATWASHERS.....	5-5
DIN 7349 HEAVY FLATWASHERS .....	5-5
DIN 6916 CONSTRUCTION WASHERS .....	5-5
DIN 7603 SEALING RINGS..... ALUMINUM, COPPER, COPPER-FIBER	5-6
DIN 471 EXTERNAL RETAINING RINGS.....	5-7
DIN 472 INTERNAL RETAINING RINGS.....	5-7
DIN 6799 E CLIPS FOR SHAFTS.....	5-7
DIN 6798 SERRATED LOCKWASHERS..... INTERNAL, EXTERNAL, COUNTERSUNK	5-8
DIN 6797 TOOTHED LOCKWASHERS..... INTERNAL, EXTERNAL	5-8

Stock Range

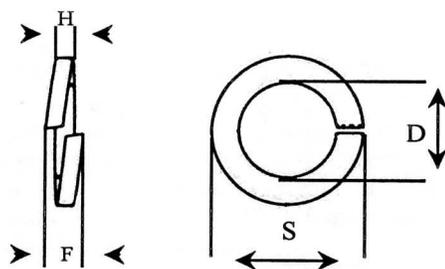


DIN 125 Flatwashers				Steel			Heat Treated		Stainless A2
For Fastener Diameter	D	S	H	Plain	Zinc	ZYD	Zinc	ZYD	
M2	2.2	5	.3		X				
3	3.2	7	.5	X	X				X
3.5	3.7	8	.5	X	X				
4	4.3	9	.8	X	X	X			X
5	5.3	10	1	X	X	X			X
6	6.4	12	1.6	X	X	X	X		X
7	7.4	14	1.6		X				
8	8.4	16	1.6	X	X	X	X	X	X
10	10.5	20	2	X	X	X	X	X	X
12	13	24	2.5	X	X	X	X	X	X
14	15	28	2.5	X	X		X		
16	17	30	3	X	X		X	X	X
18	19	34	3	X	X		X		
20	21	37	3	X	X		X	X	X
22	23	39	3	X	X		X		
24	25	44	4	X	X		X		X
27	28	50	4	X	X				
30	31	56	4	X	X				X
33	34	60	5	X	X				
36	37	66	5	X	X				
39	40	72	6	X	X				
42	43	78	7	X	X				
45	46	85	7	X	X				
48	50	92	8	X	X				
52	54	98	8	X					
56	58	105	9	X	X				
64	66	115	9	X					

\* For M2 thru M30 - Form A

\*\* For M33 thru M64 - Form B

Stock Range

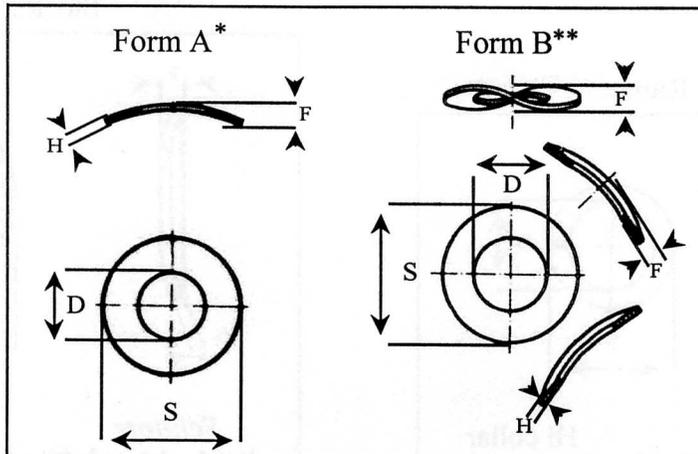


DIN 127 - Spring Steel

Split Lockwashers

For Fastener Diameter	D	S max	H	F nom	Plain	Zinc	ZYD	Stainless A2
<b>M2</b>	2.1	4.4	.5	1.1	X	X		
<b>2.3</b>	2.4	4.9	.6	1.3	X			
<b>2.5</b>	2.6	5.1	.6	1.3	X	X		
<b>2.6</b>	2.7	5.2	.6	1.3	X			
<b>3</b>	3.1	6.2	.8	1.7	X	X		X
<b>3.5</b>	3.6	6.7	.8	1.7	X			
<b>4</b>	4.1	7.6	.9	2	X	X		X
<b>5</b>	5.1	9.2	1.2	2.6	X	X	X	X
<b>6</b>	6.1	11.8	1.6	3.5	X	X	X	X
<b>7</b>	7.1	12.8	1.6	3.5	X	X		
<b>8</b>	8.1	14.8	2	4.5	X	X	X	X
<b>10</b>	10.2	18.1	2.2	5	X	X	X	X
<b>12</b>	12.2	21.1	2.5	5.5	X	X	X	X
<b>14</b>	14.2	24.1	3	6.5	X	X		
<b>16</b>	16.2	27.4	3.5	7.5	X	X		X
<b>18</b>	18.2	29.4	3.5	7.5	X	X		
<b>20</b>	20.2	33.6	4	9	X	X		X
<b>22</b>	22.5	35.9	4	9	X	X		
<b>24</b>	24.5	40	5	11	X	X		X
<b>27</b>	27.5	43	5	11	X	X		
<b>30</b>	30.5	48.2	6	13.5	X	X		X
<b>33</b>	33.5	55.2	6	13.5	X			
<b>36</b>	36.5	58.2	6	13.5	X	X		X
<b>39</b>	39.5	61.2	6	13.5	X			
<b>42</b>	42.5	68.2	7	16	X			
<b>45</b>	45.5	71.2	7	16	X			
<b>48</b>	49	75	7	16	X			
<b>56</b>	57	87	8	18	X			

Stock Range



DIN 137 - Spring Steel

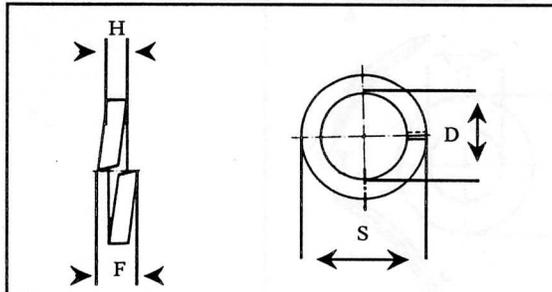
Spring washers

For Fastener Diameter	D	S	H	F <sub>min</sub>	Plain	Zinc	ZYD
<b>M2</b>	2.2	4.5	.3	.5	X		
<b>2.3</b>	2.5	4.9	.3	.5	X		
<b>3</b>	3.2	6	.4	.65	X	X	
<b>3.5</b>	3.7	7	.4	.7	X		
<b>4</b>	4.3	9	.5	1	X	X	
<b>5</b>	5.3	11	.5	1.1	X	X	X
<b>6</b>	6.4	12	.5	1.3	X	X	X
<b>7</b>	7.4	14	.8	1.5	X	X	
<b>8</b>	8.4	15	.8	1.5	X	X	X
<b>10</b>	10.5	21	1	2.1	X	X	X
<b>12</b>	13	24	1.2	2.5	X	X	X
<b>14</b>	15	28	1.6	3	X	X	
<b>16</b>	17	30	1.6	3.2	X	X	
<b>18</b>	19	34	1.6	3.3	X	X	
<b>20</b>	21	36	1.6	3.7	X	X	
<b>22</b>	23	40	1.8	3.9	X		
<b>24</b>	25	44	1.8	4.1	X	X	

\* For M2 thru M3.5 - Form A

\*\* For M4 thru M24 - Form B

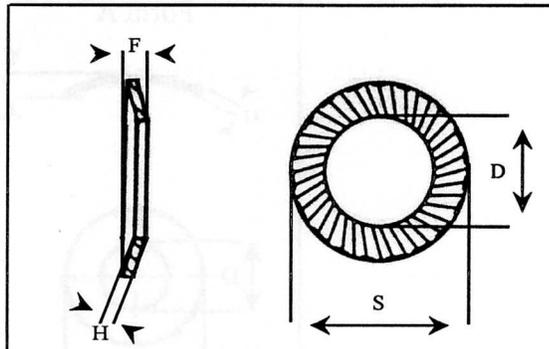
Stock Range



**DIN 7980 - Spring Steel** Hi collar Lockwasher

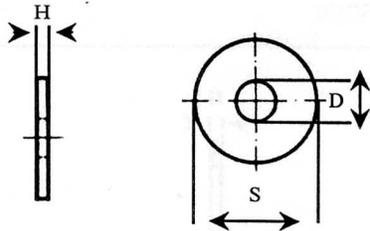
For Fastener Diameter	D	S	H	F nom	Plain	Zinc
<b>M 3</b>	3.1	5.6	1	2.2	X	X
<b>4</b>	4.1	7	1.2	2.6	X	X
<b>5</b>	5.1	8.8	1.6	3.5	X	X
<b>6</b>	6.1	9.9	1.6	3.5	X	X
<b>8</b>	8.1	12.7	2	4.5	X	X
<b>10</b>	10.2	16	2.5	5.5	X	X
<b>12</b>	12.2	18	2.5	5.5	X	X
<b>14</b>	14.2	21.1	3	6.6	X	X
<b>16</b>	16.2	24.4	3.5	7.7	X	X
<b>18</b>	18.2	26.4	3.5	7.7	X	X
<b>20</b>	20.2	30.6	4.5	10	X	X
<b>22</b>	22.5	32.9	4.5	10	X	X
<b>24</b>	24.5	35.9	5	11	X	X
<b>27</b>	27.5	38.9	5	11	X	
<b>30</b>	30.5	44.1	6	13	X	X
<b>33</b>	33.5	47.1	6	13	X	
<b>36</b>	36.5	52.2	7	15	X	

Stock Range



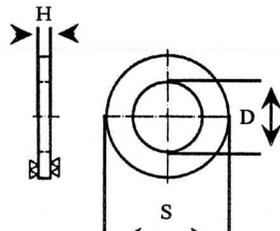
**Schnorr**  
**Ribbed Lock Washer - Spring Steel**

For Fastener Diameter	D	S	H	F	Plain	Zinc
<b>M 3</b>	3.2	5.5	.45	.9	X	X
<b>4</b>	4.3	7	.5	1	X	X
<b>5</b>	5.3	9	.6	1.1	X	X
<b>6</b>	6.4	10	.7	1.2	X	X
<b>7</b>	7.4	12	.7	1.3	X	X
<b>8</b>	8.4	13	.8	1.4	X	X
<b>10</b>	10.5	16	1	1.6	X	X
<b>12</b>	13	18	1.1	1.7	X	X
<b>14</b>	15	22	1.2	2	X	X
<b>16</b>	17	24	1.3	2.1	X	X
<b>18</b>	19	27	1.5	2.3	X	X
<b>20</b>	21	30	1.5	2.4	X	X
<b>22</b>	23	33	1.5	2.5	X	X
<b>24</b>	25.6	36	1.8	2.7	X	X
<b>30</b>	31.6	45	2	3.2	X	X
<b>36</b>	38	54	2.5	4	X	X



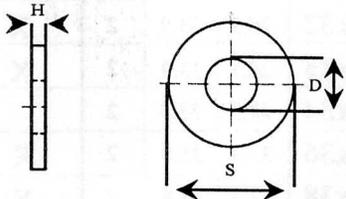
**DIN 9021 - Steel** Flat Washers With Large OD

For Fastener Diameter	D	S	H	Plain	Zinc	ZYD
M 3	3.2	9	.8	X	X	
4	4.3	12	1	X	X	X
5	5.3	15	1.2	X	X	X
6	6.4	18	1.6	X	X	X
8	8.4	25	2	X	X	X
10	10.5	30	2.5	X	X	X
12	13	37	3	X	X	X
14	15	45	3	X	X	
16	17	50	3	X	X	
18	19	56	4	X	X	
20	21	60	4	X	X	



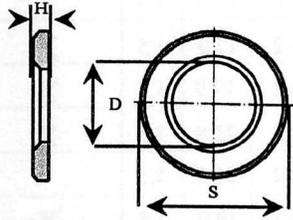
**DIN 433 - Steel** Flat Washers With Small OD

For Fastener Diameter	D	S	H	Plain	Zinc
M 3	3.2	6	.5	X	X
4	4.3	8	.5	X	X
5	5.3	9	1	X	X
6	6.4	11	1.6	X	X
8	8.4	15	1.6	X	X
10	10.5	18	1.6	X	X
12	13	20	2	X	X
14	15	24	2.5	X	X
16	17	28	2.5	X	X
18	19	30	2.5	X	X
20	21	34	3	X	X



**DIN 7349 - Steel** Heavy Flat Washers

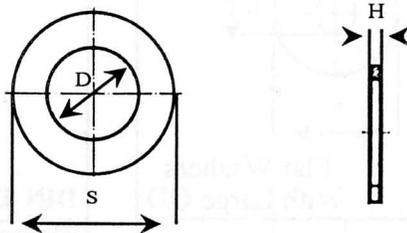
For Fastener Diameter	D	S	H	Plain	Zinc
4	4.3	12	1.6	X	X
5	5.3	15	2	X	X
6	6.4	17	3	X	X
8	8.4	21	4	X	X
10	10.5	25	4	X	X
12	13	30	6	X	X
14	15	36	6	X	X
16	17	40	6	X	X
18	19	44	8	X	X
20	21	44	8	X	X
24	25	50	10	X	X
30	31	68	10	X	X



**DIN 6916 - 295 - 350 HV10** Construction Washers

For Fastener Diameter	D	S	H	Plain
M 12	13	24	3	X
14	15	28	4	X
16	17	30	4	X
18	19	34	4	X
20	21	37	4	X
22	23	39	4	X
24	25	44	4	X
27	28	50	5	X
30	31	56	5	X

Stock Range

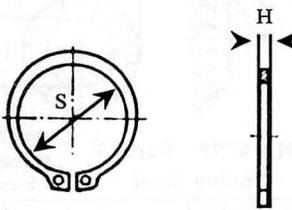


DIN 7603

Sealing Rings

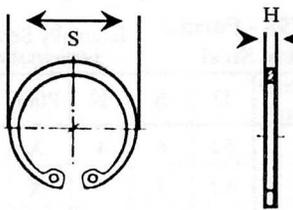
Nominal Size	D +3	S -2	H ±.2	Aluminum	Copper	Copper Fiber	Nominal Size	D +3	S -2	H ±.2	Aluminum	Copper	Copper Fiber
6x10	6.2	9.9	1	X	X		18x22	18.2	21.9	1.5	X	X	
6x12	6.2	11.9	1	X	X		18x24	18.2	23.9	1.5	X	X	
8x12	8.2	11.9	1	X	X	X	20x24	20.2	23.9	1.5	X	X	X
8x14	8.2	13.9	1	X	X	X	20x26	20.2	25.9	1.5	X	X	
10x14	10.2	13.9	1	X	X		21x26	21.2	25.9	1.5		X	
10x16	10.2	15.9	1		X	X	21x28	21.2	27.9	1.5	X	X	
10x18	10.2	17.9	1		X		22x27	22.2	26.9	1.5	X	X	X
12x16	12.2	15.9	1.5	X	X	X	22x29	22.2	28.9	1.5	X	X	
12x18	12.2	17.9	1.5	X	X		24x30	24.3	29.9	2		X	
12x19	12.2	18.9	1.5	X			24x32	24.3	31.9	2	X		
13x18	13.2	17.9	1.5		X		26x32	26.3	31.9	2	X	X	X
14x18	14.2	17.9	1.5	X	X		26x34	26.3	33.9	2	X		
14x20	14.2	19.9	1.5	X	X		28x34	28.3	33.9	2		X	
14x22	14.2	21.9	1.5	X	X		30x36	30.3	35.9	2	X	X	
14x27	14.2	26.9	1.5		X		32x38	32.3	38.9	2	X	X	
16x20	16.2	19.9	1.5	X	X	X	33x39	33.3	38.9	2		X	
16x22	16.2	21.9	1.5	X	X		36x42	36.3	41.9	2		X	
16x24	16.2	23.9	1.5		X								
17x21	17.2	20.9	1.5		X								
17x23	17.2	22.9	1.5		X								

Stock Range



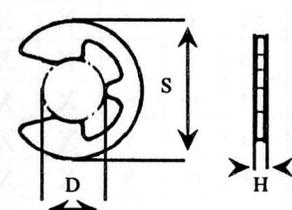
**DIN 471 - Spring Steel**  
External Retaining Rings

For Shaft Diameter	S	H	Plain
4	3.7	0.4	X
5	4.7	0.6	X
6	5.6	0.7	X
8	7.4	0.8	X
10	9.3	1	X
11	10.2	1	X
12	11	1	X
14	12.9	1	X
15	13.8	1	X
16	14.7	1	X
18	16.5	1.2	X
19	17.5	1.2	X
20	18.5	1.2	X
21	19.5	1.2	X
22	20.5	1.2	X
24	22.2	1.2	X
25	23.2	1.2	X
30	27.9	1.5	X
35	32.2	1.5	X
45	41.5	1.75	X
60	55.8	2	X
95	89.5	3	X



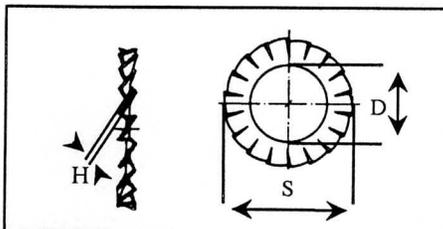
**DIN 472 - Spring Steel**  
Internal Retaining Rings

For Bore Diameter	S	H	Plain
8	8.7	0.8	X
10	10.8	1	X
12	13	1	X
14	15.1	1	X
16	17.3	1	X
17	18.3	1	X
18	19.5	1	X
20	21.5	1	X
21	22.5	1	X
22	23.5	1	X
24	25.9	1.2	X
30	32.1	1.2	X
62	66.2	2	X
65	69.2	2.5	X
80	85.5	2.5	X
100	105.5	3	X
110	117	4	X



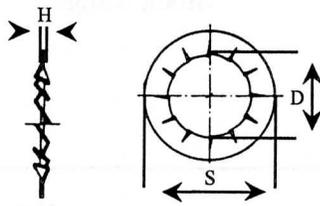
**DIN 6799 - Spring Steel**  
E Clips For Shafts

For Groove Diameter D	S max	For Shaft Diameter	H	Plain
3.2	7.3	4-5	.6	X
4	9.3	5-7	.7	X
5	11.3	6-8	.7	X
6	12.3	7-9	.7	X
7	14.3	8-11	.9	X
8	16.3	9-12	1	X
9	18.8	10-14	1.1	X
10	20.4	11-15	1.2	X
12	23.4	13-18	1.3	X
15	29.4	16-24	1.5	X



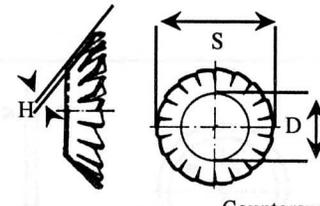
**DIN 6798 - Form A** Externally Serrated Spring Steel Lockwasher

For Fastener Diameter	D	S	H	Plain	Zinc
M 3	3.2	6	.4	X	X
4	4.3	8	.5	X	X
5	5.3	10	.6	X	X
6	6.4	11	.7	X	X
8	8.4	15	.8	X	X
10	10.5	18	.9	X	X
12	12.5	20.5	1	X	X
14	14.5	24	1	X	X



**DIN 6798 - Form J** Internally Serrated Spring Steel Lockwasher

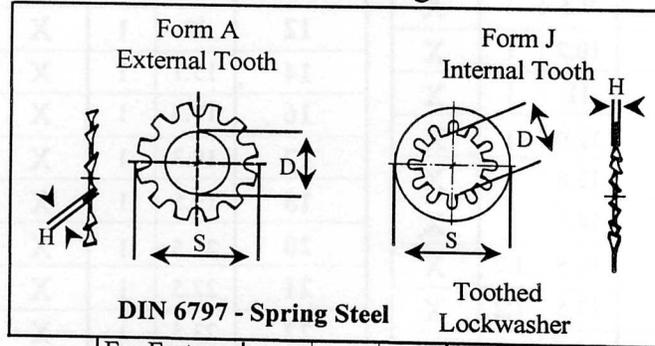
For Fastener Diameter	D	S	H	Plain	Zinc
M 3	3.2	6	.4	X	X
4	4.3	8	.5	X	X
5	5.3	10	.6	X	X
6	6.4	11	.7	X	X
8	8.4	15	.8	X	X
10	10.5	18	.9	X	X
12	12.5	20.5	1	X	X



**DIN 6798 - Form V** Countersunk Serrated Spring Steel Lockwasher

For Fastener Diameter	D	S	H	Plain
M 3.5	3.7	7	.25	X
4	4.3	8	.25	X
5	5.3	9.8	.3	X
6	6.4	11.8	.4	X
8	8.4	15.3	.4	X
10	10.5	19	.5	X

**Stock Range**



**DIN 6797 - Spring Steel** Toothed Lockwasher

For Fastener Diameter	D	S	H	Plain	Zinc
M 3	3.2	6	.4	X	X
4	4.3	8	.5	X	X
5	5.3	10	.6	X	X
6	6.4	11	.7	X	X
7	7.4	12.5	.8	X	
8	8.4	15	.8	X	X
10	10.5	18	.9	X	X
12	12.5	20.5	1	X	X
14	14.5	24	1	X	X
16	16.5	26	1.2	X	X
18	19	30	1.4	X	X
20	21	33	1.4	X	X
24	25	38	1.5	X	X
30	31	48	1.6	X	X

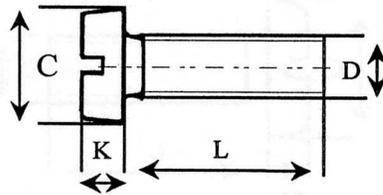
## SECTION 6

## MACHINE SCREWS

### ◆ MACHINE SCREWS

DIN 84 CLASS 4.8 ZINC SLOTTED CHEESE .....	6-1
DIN 85 CLASS 4.8 ZINC SLOTTED PAN.....	6-2
DIN 963 CLASS 4.8 ZINC SLOTTED FLAT.....	6-3
DIN 965 CLASS 4.8 ZINC PHILLIPS FLAT .....	6-4
DIN 966 CLASS 4.8 ZINC PHILLIPS OVAL .....	6-5
DIN 7985 CLASS 4.8 ZINC PHILLIPS PAN.....	6-6

### Stock Range

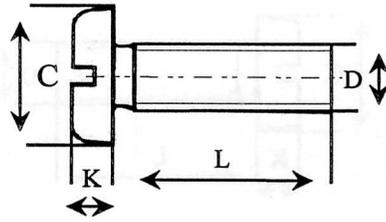


**DIN 84 4.8 Zinc**

**Slotted Cheese Head  
Machine Screw**

C	5.5	6	7	8.5	10	13	16
K	2	2.4	2.6	3.3	3.9	5	6
L \ D	M3	M3.5	M4	M5	M6	M8	M10
4	X						
5	X		X				
6	X		X	X			
8	X	X	X	X	X		
10	X	X	X	X	X		
12	X		X	X	X		
14				X			
16	X	X	X	X	X	X	
18			X	X	X		
20	X	X	X	X	X	X	
22	X		X				
25	X		X	X	X	X	X
30		X	X	X	X	X	X
35			X	X	X		
40			X	X	X		
45			X	X	X		
50				X	X		
55							
60					X		

### Stock Range

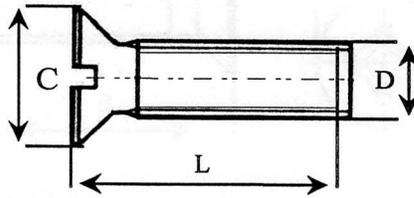


**DIN 85 4.8 Zinc**

**Slotted Pan Head  
Machine Screw**

<b>C</b>	6	8	10	12	16	20
<b>K</b>	1.8	2.4	3	3.6	4.8	6
<b>L \ D</b>	<b>M3</b>	<b>M4</b>	<b>M5</b>	<b>M6</b>	<b>M8</b>	<b>M10</b>
<b>5</b>	X					
<b>6</b>	X	X	X			
<b>8</b>	X	X	X	X		
<b>10</b>	X	X	X	X		
<b>12</b>	X	X	X	X	X	X
<b>16</b>	X	X	X	X	X	
<b>20</b>	X	X	X	X	X	X
<b>25</b>	X	X	X	X	X	
<b>30</b>		X	X	X	X	
<b>35</b>		X	X	X	X	
<b>40</b>		X	X	X		
<b>45</b>						
<b>50</b>			X			

### Stock Range

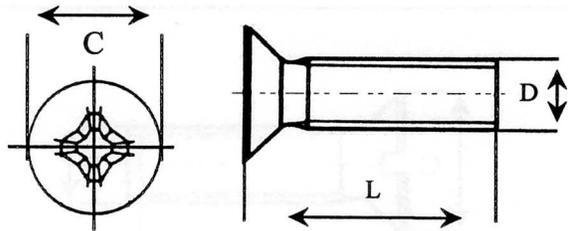


**DIN 963 4.8 Zinc**

**Slotted Flat Head  
Machine Screw**

<b>C</b>	5.6	7.5	9.2	11	14.5	18
<b>L \ D</b>	<b>M3</b>	<b>M4</b>	<b>M5</b>	<b>M6</b>	<b>M8</b>	<b>M10</b>
<b>4</b>	X					
<b>5</b>	X	X				
<b>6</b>	X	X	X			
<b>8</b>	X	X	X	X		
<b>10</b>	X	X	X	X	X	
<b>12</b>	X	X	X	X	X	
<b>14</b>	X	X	X		X	
<b>16</b>	X	X	X	X	X	X
<b>20</b>	X	X	X	X	X	X
<b>25</b>	X	X	X	X	X	X
<b>30</b>	X	X	X	X	X	X
<b>35</b>				X	X	X
<b>40</b>			X	X	X	
<b>50</b>			X			

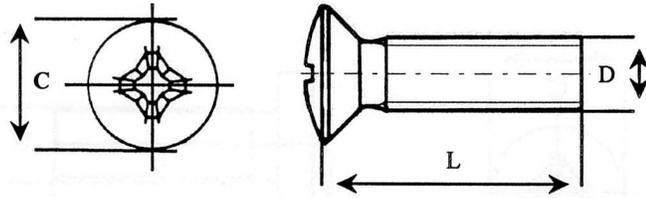
Stock Range



**DIN 965 4.8 Zinc** **Phillips Flat Head  
Machine Screw**

<b>C</b>	5.6	7.5	9.2	11	14.5
<b>Driver</b>	1	2	2	3	4
<b>L \ D</b>	<b>M3</b>	<b>M4</b>	<b>M5</b>	<b>M6</b>	<b>M8</b>
<b>5</b>	X				
<b>6</b>	X	X			
<b>8</b>	X	X	X		
<b>10</b>	X	X	X	X	
<b>12</b>	X	X	X	X	
<b>16</b>	X	X	X	X	X
<b>20</b>	X	X	X	X	X
<b>25</b>	X	X	X	X	X
<b>30</b>	X	X	X	X	X
<b>35</b>		X	X	X	X
<b>40</b>		X	X	X	X
<b>50</b>				X	

### Stock Range

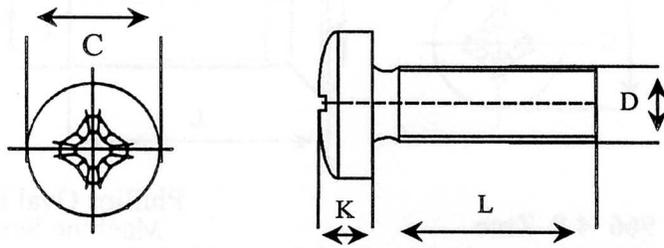


**DIN 966 4.8 Zinc**

**Phillips Oval Head  
Machine Screw**

<b>C</b>	5.6	7.5	9.2	11	14.5
<b>Driver</b>	1	2	2	3	4
<b>L \ D</b>	<b>M3</b>	<b>M4</b>	<b>M5</b>	<b>M6</b>	<b>M8</b>
<b>6</b>	X	X			
<b>8</b>	X	X	X		
<b>10</b>	X	X	X	X	
<b>12</b>	X	X	X	X	
<b>16</b>	X	X	X	X	X
<b>18</b>		X	X		
<b>20</b>	X	X	X	X	X
<b>25</b>	X	X	X	X	X
<b>30</b>		X	X	X	X
<b>35</b>		X		X	
<b>40</b>		X	X	X	X
<b>45</b>			X	X	
<b>50</b>			X	X	
<b>55</b>					
<b>60</b>				X	

### Stock Range



**DIN 7985 4.8 Zinc**

**Phillips Pan Head  
Machine Screw**

<b>C</b>	6	7	8	10	12	16
<b>K</b>	2.4	2.7	3.1	3.8	4.6	6
<b>Driver</b>	1	2	2	2	3	4
<b>L \ D</b>	<b>M3</b>	<b>M3.5</b>	<b>M4</b>	<b>M5</b>	<b>M6</b>	<b>M8</b>
<b>5</b>	X					
<b>6</b>	X	X	X	X		
<b>8</b>	X		X	X		
<b>10</b>	X		X	X	X	
<b>12</b>	X	X	X	X	X	
<b>16</b>	X		X	X	X	X
<b>20</b>	X		X	X	X	X
<b>22</b>			X			
<b>25</b>	X		X	X	X	X
<b>30</b>		X	X	X	X	X
<b>35</b>			X	X	X	X
<b>40</b>			X	X	X	X
<b>45</b>			X	X	X	
<b>50</b>			X	X	X	
<b>60</b>					X	

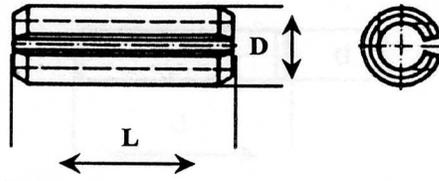
## SECTION 7

## PINS

### ◆ PINS

DIN 1481	SPLIT ROLL PIN.....	7-1
DIN 6325	DOWEL PIN.....	7-2
DIN 7978A	TAPER PIN W/INTERNAL THREAD..	7-3
DIN 7979D	PULL DOWEL.....	7-3
DIN 94	COTTER PIN.....	7-3

Stock Range

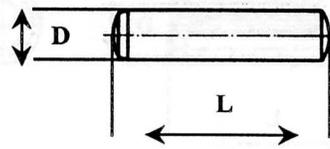


DIN 1481 - Spring Steel

Heavy Type  
Split Roll Pin

L \ D	1	1.5	2	2.5	3	3.5	4	4.5	5	6	8	10	12	16
4	X	X	X	X	X	X								
5	X	X	X	X	X	X								
6	X	X	X	X	X	X	X	X	X					
8	X	X	X	X	X	X	X	X	X					
10	X	X	X	X	X	X	X	X	X	X	X	X		
12	X	X	X	X	X	X	X	X	X	X	X	X	X	
14	X	X	X	X	X	X	X	X	X	X	X	X	X	
16	X	X	X	X	X	X	X	X	X	X	X	X	X	
18	X	X	X	X	X	X	X	X	X	X	X	X	X	
20	X	X	X	X	X	X	X	X	X	X	X	X	X	X
22			X	X	X	X	X	X	X	X	X	X	X	
24			X	X	X	X	X	X	X	X	X	X	X	
26			X	X	X	X	X	X	X	X	X	X	X	
28			X	X	X	X	X	X	X	X	X	X	X	
30			X	X	X	X	X	X	X	X	X	X	X	
32					X		X	X	X	X	X	X	X	
36					X	X	X		X	X	X	X	X	
40					X	X	X	X	X	X	X	X	X	X
45							X	X	X	X	X	X	X	
50							X	X	X	X	X	X	X	X
55									X	X	X	X	X	
60									X	X	X	X	X	X
65										X	X	X	X	
70									X	X	X	X	X	X
75									X	X	X	X	X	X
80									X	X	X	X	X	X
90										X	X	X	X	X
100										X	X	X	X	X
120														X
140														X

Stock Range



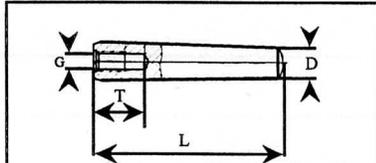
**DIN 6325 - m6 Tolerance**

Hardened and Ground 52-58 HRC

Dowel Pin

L \ D	2	3	4	5	6	8	10	12	14	16	20
6	X										
8	X	X									
10	X	X	X		X						
12		X	X	X	X						
14	X	X	X	X	X						
16	X	X	X	X	X						
18	X	X	X	X	X	X					
20	X	X	X	X	X	X					
24		X	X	X	X	X	X				
28		X	X	X	X	X	X	X			
30					X	X	X				
32		X	X	X	X	X	X	X			
36			X	X	X	X	X	X			
40			X	X	X	X	X	X	X	X	
45				X	X	X	X	X		X	
50	X			X	X	X	X	X	X	X	X
55					X	X	X	X		X	
60					X	X	X	X	X	X	X
70						X	X	X	X	X	X
80						X	X	X		X	X
90							X	X		X	X
100							X	X		X	X
120										X	X

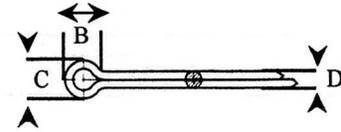
Stock Range



Taper Pin with Internal Thread  
**DIN 7978-A**

<b>T</b>	10	12	16	20
<b>G</b>	M4	M5	M6	M8
<b>L \ D</b>	6	8	10	12
<b>32</b>		X	X	
<b>36</b>		X	X	X
<b>40</b>	X	X	X	X
<b>50</b>			X	X

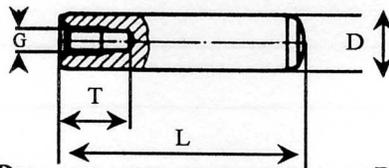
Stock Range



**DIN 94 - Steel - Zinc** Cotter Pin

<b>B</b>	3	3.2	4	5	6.4	8	10	12.6
<b>C</b> Min	1.6	2.4	3.2	4	5.1	6.5	8	10.3
<b>C</b> Max	1.8	2.8	3.6	4.6	5.8	7.4	9.2	11.8
<b>L \ D</b>	1	1.6	2	2.5	3.2	4	5	6.3
<b>12</b>	X		X		X			
<b>16</b>		X			X			
<b>18</b>			X					
<b>20</b>	X	X			X			X
<b>22</b>			X					
<b>25</b>		X		X	X	X		X
<b>32</b>		X	X	X	X	X	X	X
<b>40</b>		X	X	X	X	X		X
<b>45</b>								X
<b>50</b>			X	X	X	X		X
<b>56</b>								X
<b>63</b>							X	X

Stock Range



**DIN 7979-D** Pull Dowel

<b>T</b>	10	12	16	16	20	20	20	25	35
<b>G</b>	M4	M5	M6	M6	M8	M8	M8	M10	M16
<b>L \ D</b>	6	8	10	12	13	14	16	20	25
<b>16</b>	X								
<b>20</b>	X	X							
<b>24</b>	X	X	X						
<b>28</b>	X	X	X	X			X		
<b>30</b>					X	X			
<b>32</b>	X	X	X	X	X	X	X		
<b>36</b>	X	X	X	X			X	X	
<b>40</b>	X	X	X	X	X	X	X	X	
<b>45</b>	X	X	X	X			X	X	
<b>50</b>	X	X	X	X	X	X	X	X	X
<b>60</b>	X	X	X	X	X	X	X	X	X
<b>70</b>		X	X	X	X	X	X	X	X
<b>80</b>		X	X	X		X	X	X	X
<b>90</b>			X	X		X			
<b>100</b>			X	X			X	X	X
<b>120</b>				X			X	X	
<b>140</b>								X	
<b>160</b>							X	X	

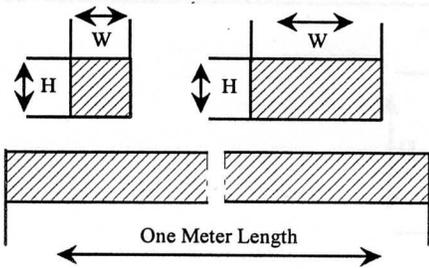
## SECTION 8

## MISCELLANEOUS FASTENERS

### ◆ MISCELLANEOUS FASTENERS

DIN 6880	KEY STOCK .....	8-1
	SQUARE AND RECTANGULAR	
DIN 975	THREADED ROD.....	8-1
DIN 580	LIFTING EYE BOLTS.....	8-2
DIN 582	LIFTING EYE NUTS.....	8-2
DIN 603	CARRIAGE BOLTS.....	8-3
	GREASE FITTINGS .....	8-3
	STRAIGHT, 45 DEGREE, 90 DEGREE	
DIN 939	STUDS.....	8-3
DIN 6888	WOODRUFF KEYS.....	8-3
DIN 7981-C	PHILLIPS TAPPING SCREW	8-4
DIN 6921	FLANGE BOLT.....	8-4

Stock Range

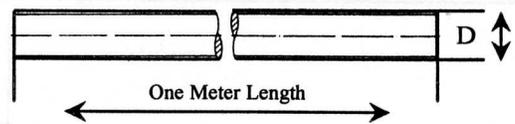


DIN 6880

Key Stock

Square H x W	Stock One Meter Length	Rectangular H x W	Stock One Meter Length
3 x 3	X	6 x 4	X
4 x 4	X	8 x 5	X
5 x 5	X	8 x 7	X
6 x 6	X	10 x 6	X
7 x 7	X	10 x 8	X
8 x 8	X	12 x 8	X
10 x 10	X	12 x 10	X
12 x 12	X	14 x 9	X
14 x 14	X	16 x 10	X
16 x 16	X	18 x 11	X
18 x 18	X	20 x 12	X
20 x 20	X	22 x 14	X
22 x 22	X	25 x 14	X
		28 x 16	X
		32 x 18	X
		36 x 20	X

Stock Range

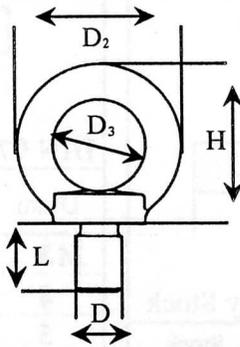


DIN 975

Threaded Rod

Diam	Plain 4.8	Zinc 4.8	Plain 8.8	Plain B-7	Plain 10.9	Stainless A-2
M3		X				
4		X				
5		X	X			
6		X	X		X	X
8		X	X	X	X	X
8x1	X			X		
10		X	X		X	X
10x1.25	X			X		
10x1	X			X		
12		X	X		X	X
12x1.5	X			X		
12x1.25	X			X		
14		X	X	X	X	
14x1.5	X			X		
16		X	X		X	X
16x1.5	X			X		
18		X	X	X		
18x1.5	X			X		
20		X	X	X	X	X
20x2				X		
20x1.5	X			X		
22		X	X	X	X	
22x1.5	X			X		
24		X	X	X	X	
24x2	X			X		
24x1.5	X			X		
27		X	X	X		
30	X		X	X	X	
30x2	X					
30x1.5	X					
33			X	X		
36	X		X	X		
39				X		
42			X	X		
45				X		
48			X	X		
52				X		

Stock Range

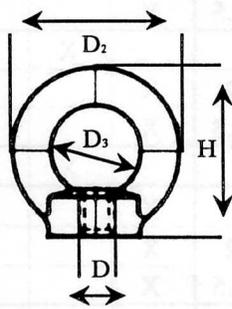


DIN 580 - C 15 Steel

Lifting Eye Bolt

D	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30	M33	M36	M39	M42	M45	M48	M52	M56	M64	M72	
L	13	13	17	20.5	27	27	30	30	36	36	45	45	54	54	63	63	68	68	78	78	90	100	
H	36	36	45	53	62	62	71	71	90	90	109	109	128	128	147	147	168	168	187	187	208	260	
D <sub>2</sub>	36	36	45	54	63	63	72	72	90	90	108	108	126	126	144	144	166	166	184	184	206	260	
D <sub>3</sub>	20	20	25	30	35	35	40	40	50	50	60	60	70	70	80	80	90	90	100	100	110	140	
In Stock	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Safe working load in lbs												Safe working load in lbs											
One bolt firmly tightened		154	308	506	748	1,078	1,540	2,200	2,640	3,300	3,960	5,500	7,920	9,460	11,220	13,200	15,400	17,600	18,920	21,780	25,300	35,200	46,200
Two bolts overall		110	209	374	528	748	1,100	1,500	1,826	2,310	2,794	3,630	5,720	7,040	8,140	9,200	11,000	12,100	13,420	16,060	18,260	24,200	33,000

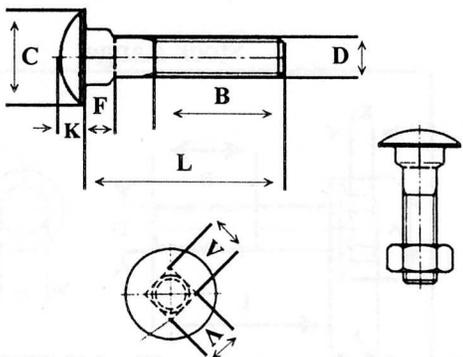
Stock Range



Lifting Eye Nut  
DIN 582-C 15 Steel

D	M10	M12	M16	M20	M24	M30	
H	45	53	62	71	90	109	
D <sub>2</sub>	45	54	63	72	90	108	
D <sub>3</sub>	25	30	35	40	50	60	
In Stock	X	X	X	X	X	X	
Safe working load in lbs							
One bolt firmly tightened		506	748	1,540	2,640	3,960	7,920
Two bolts overall		374	528	1,100	1,826	2,794	5,720

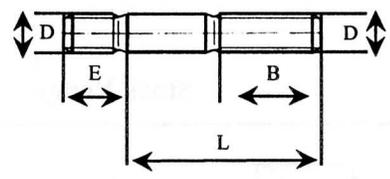
Stock Range



**DIN 603 - Zinc Carriage Bolt**

B	18	22	26	30
C	16	20	24	30
F	4	5	6	8
K	3.5	4.5	5	6.5
V	6	8	10	12
L \ D	M6	M8	M10	M12
16	X			
20	X	X		
25	X	X	X	
30	X	X	X	X
35	X	X	X	
40	X	X	X	X
45	X	X	X	
50	X	X	X	
60	X	X	X	X
70				X
80				X

Stock Range



**DIN 939 Stud**

B	16	18	22	26	30	38
E	6.5	7.5	10	12	15	20
L \ D	M5	M6	M8	M10	M12	M16
20		X				
25	X	X				
30	X	X	X			
35	X		X	X		
40	X	X	X	X	X	
45	X		X	X	X	
50	X	X	X	X	X	X
55			X	X	X	
60		X	X	X	X	X
65			X	X	X	
70			X	X	X	X
75			X	X	X	X
80			X	X	X	X
100				X	X	X

Stock Range

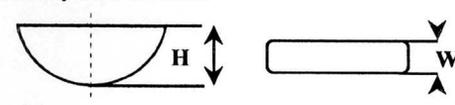


**Grease Fittings**

Diameter	Straight	45 Degree	90 Degree
M6	X	X	X
M8 x 1	X	X	X
M10 x 1	X	X	X

Stock Range

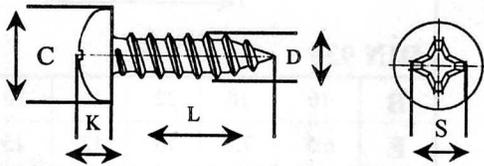
Designation of a Woodruff key of width W = 4mm and height H = 5mm:  
Woodruff key 4 x 5 DIN 6888



**Din 6888 Woodruff Keys**

H \ W	2	2.5	3	4	5	6	8	10
3.7	X	X	X					
5	X		X	X				
6.5				X	X			
7.5			X	X	X	X		
9					X	X		
11						X	X	
13							X	X
16								X

Stock Range

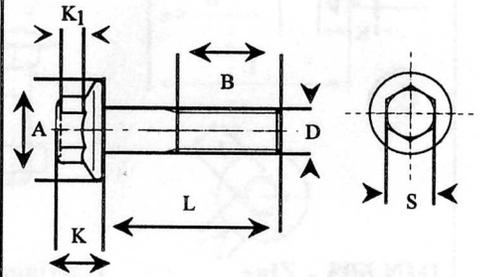


DIN 7981 - C

Phillips Pan Head Tapping Screw

K	1.8	2.2	2.6	2.8	3.05	3.55	3.95	4.55
C	4.2	5.6	6.9	7.5	8.2	9.5	10.8	12.5
Driver S	1	1	2	2	2	2	3	3
L \ D	2.2	2.9	3.5	3.9	4.2	4.8	5.5	6.3
6.5	X							
9.5	X	X						
13	X	X	X	X	X	X	X	X
16	X	X	X	X	X	X	X	X
19	X	X	X	X	X	X	X	X
22	X	X	X	X	X	X	X	X
25	X	X	X	X	X	X	X	X
32		X	X	X	X	X	X	X

Stock Range



DIN 6921 - 10.9

Flange Bolt

S	13	15	16	21
A	18	22.3	26.6	35
K	8.1	9.2	11.5	14.4
K1	3.2	3.6	4.6	5.8
B	22	26	30	38
L \ D	M8	M10	M12	M16
20		X		
25		X	X	
30		X	X	
35		X	X	
40	X	X	X	X
45	X	X	X	
50	X	X	X	X
55	X	X		
60	X	X	X	X
70	X	X	X	X
80	X	X	X	X
90	X	X	X	X
100	X	X	X	X
120		X	X	
150				X