

WASHERS

Gestión de Compras has extensive experience in the design, development and manufacture any kind of washers.

PRODUCT:

Washers are thin plates of metal or non-metallic material with a hole, usually in the middle. These parts are normally used to relieve friction, prevent leakage, isolate, prevent loosening or distribute pressure of a nut, an axle bearing, or a joint.

Washer Classification and standards:

There is a huge quantity of sort of washers with different shapes and works. So, in order to define a washer with any degree of accuracy, we can make the following basic classification:

- **Flat washers:** Also called as "Plain washers", it is the most common washer group. Depending of the function they may be round, symmetrically square, hexagonal, rectangular...Some examples are fender washers (DIN 9021), washers for steel structures (DIN 7989), round washers for structural steel (DIN 6916), washers for clamping devices (DIN 6340), penny washers (DIN 9021, DIN 9054), washers for hexagon bolts (DIN 125), washers for cheese head screws (DIN 433), washers for bolts with heavy clamping sleeves (DIN 7349)...



- **Beveled:** Top bearing surface is cut at an oblique angle to compensate for non-parallel surfaces in industrial leveling and shimming applications. Can be round or squared. Most common beveled angles are 8% and 14% (DIN 434, DIN 435, respectively).



- **Conical:** also called as Belleville washer, it's a type of spring washers who has a [frusto-conical](#) shape which gives the washer a spring characteristic. It is specially used for absorbing shocks and maintaining tension under dynamic loads. Some standards are DIN 6796, DIN 2093.



- **Countersunk:** Allows flat or oval head countersunk screws to be flush for finished appearance.



- **Self-sealing:** Bonded rubber to a stainless-steel compressive washer. High-pressure sealing, internally and externally for water, other liquids, dust, air and vapors. Dampens noise and vibration.



- **Spherical:** It's an equalizing assembly of two pieces that permit eliminate unequal thread loads and stress from nonparallel surfaces (DIN 6319).



- **Shoulder:** Barrel protrudes from center hole of flat-bottomed washer to isolate or insulate a screw, shaft or rivet.



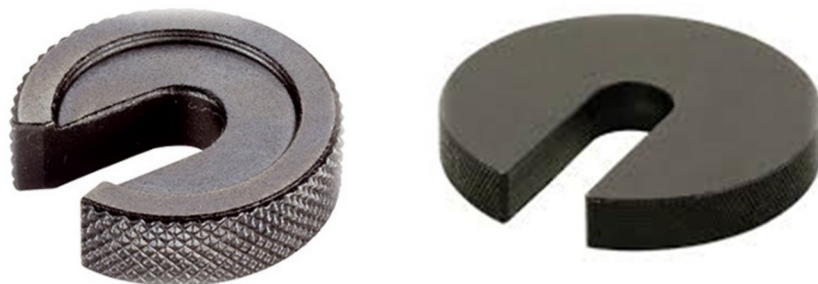
- **Waved:** Wavy shape provides compensating spring force, increases load-bearing capacity, absorbs shock and vibrations, and resist loosening and fatigue. (DIN 137B, DIN 6904).



- **Split lock:** Also known as helical lock washers, split with one end bent slightly outward to bite in and prevent loosening. Acts like a spring under compression to provide extra holding force and decrease frictional resistance during assembly and disassembly. Standars DIN 7980, DIN 127.



- **Slotted:** Also called C-washers. A slot with the same width as the hole diameter is cut from the center to the perimeter. Slips on and off shaft without removing fastener. DIN 6371



- **Toothed lock washers** or star washers. Directional teeth or serrated edges bite into fastener head/workpiece to prevent loosening. Most common standards are DIN 6797 and DIN 6798.



- **Tab washers:** It a washer that works by having a side tab that can be bent into place against a nut to lock it. Some standards are: DIN 432, DIN 463, DIN 93, and DIN 462.



PRODUCTION:

In Gestion de Compras we are experts in the design, develop and manufacture any kind of washers.

The primary method used to manufacture metallic washers is stamping and, in addition, processing may include many types of heat treating and surface coating.



The standard metallic washers made with steel, copper or aluminum as well as rubber washers for fittings has a much extended use. But when special materials, designs or dimensions is needed the options are drastically reduced. For this reason in **Gestión de Compras** we supply both standard and customized, to adapt the product to customer's needs.

MATERIALS:

Washers are available in a lot of materials including, but not limited to:

- **Steel.**
- **Stainless steel.**
- **Copper.**
- **Brass.**
- **Titanium.**
- **Aluminium.**
- **Rubber.**
- **Plastic.**
- **Nylon.**
- **Teflon.**
- **Zinc.**

STANDARD AND CERTIFICATES:

Our factories have the most demanding certifications for customers to ensure product quality as:

- ISO 9001
- ISO 14001.
- OHSAS 18001.



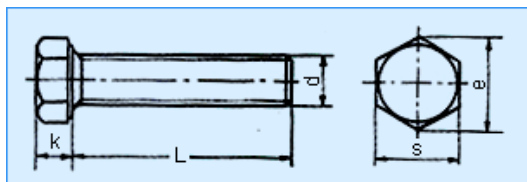


FASTENERS



BOLTS, SCREWS AND SOCKETS

HEXAGON HEAD SCREWS

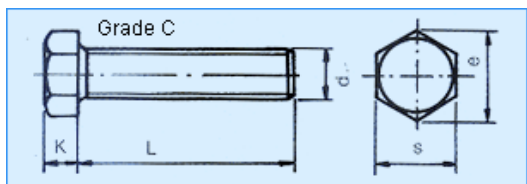
DIN 933


STRENGTH GRADE
8.8
10.9
12.9

mm

Thread size	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30
Pitch	0.7	0.8	1	1.25	1.5	1.75	2	2	2.5	2.5	2.5	3	3	3.5
k	2.8	3.5	4	5.3	6.4	7.5	8.8	10	11.5	12.5	14	15	17	18.7
e	Grade A	7.66	8.79	11.05	14.38	18.9	21.1	24.49	26.75	30.14	33.53	35.72	35.98	45.2
	Grade B	-	8.63	10.89	14.2	18.72	20.88	23.91	26.17	29.56	32.95	35.03	39.55	50.85
S	7	8	10	13	17	19	22	24	27	30	32	36	41	46
L	8-40	8-40	8-50	12-60	16-60	20-80	25-80	30-100	30-100	40-100	50-100	50-100	60-100	70-100

HEXAGON HEAD SCREWS

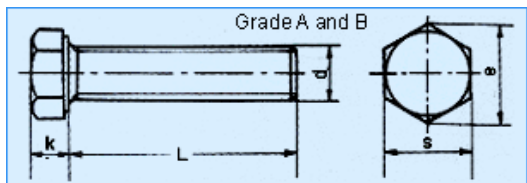
DIN 558


STRENGTH GRADE
8.8

mm

Thread size	M5	M6	M8	M10	M12	M16	M20	M24	M30	M36
Pitch	0.8	1	1.25	1.5	1.75	2	2.5	3	3.5	4
k	3.5	4	5.3	6.4	7.5	10	12.5	15	18.7	22.5
e	8.63	10.89	14.2	18.72	20.88	26.17	32.95	39.55	50.85	60.79
S	8	10	13	17	19	24	30	36	46	55
L	10-40	12-50	16-65	16-80	20-100	25-100	30-100	35-100	40-100	50-100

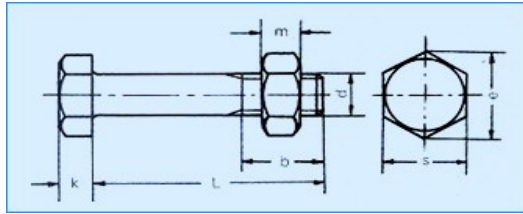
HEXAGON HEAD SCREWS

ISO 4017


STRENGTH GRADE
8.8
10.9
12.9

mm

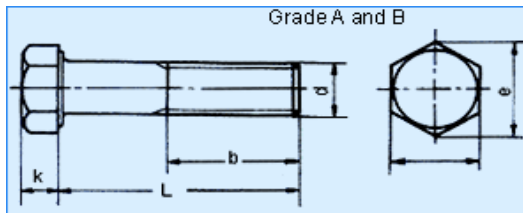
Thread size	M5	M6	M8	M10	M12	M16	M20	M24	M30	M36
Pitch	0.8	1	1.25	1.5	1.75	2	2.5	3	3.5	4
k	3.5	4	5.3	6.4	7.5	10	12.5	15	18.7	22.5
e	Grade A	8.79	11.05	14.38	17.77	20.03	26.75	33.53	39.98	-
	Grade B	-	-	-	-	-	26.17	32.95	39.55	50.85
S	8	10	13	16	18	24	30	36	46	55
L	8-40	8-50	12-60	16-60	20-80	30-100	40-100	50-100	70-100	80-100

HEXAGON BOLTS WITH HEXAGON NUT
DIN 7990


STRENGTH GRADE
10.9

mm

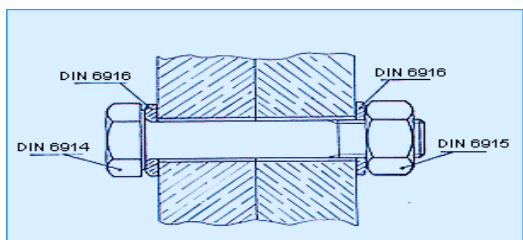
d1	M12	M16	M20	M22	M24	M27	M30
d	17.75	21	23.5	25.5	26	29	30.5
e	20.88	26.17	32.95	35.03	39.55	45.20	50.85
k	8	10	13	14	15	17	19
m	10	13	16	18	19	22	24
s	19	24	30	32	36	41	46
L	30-120	35-150	40-175	40-200	45-200	60-200	80-200

HEXAGON HEAD BOLTS
DIN 931


STRENGTH GRADE
8.8
10.9
12.9

mm

Thread size	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30
Pitch	0.7	0.8	1	1.25	1.5	1.75	2	2	2.5	2.5	2.5	3	3	3.5
b	125	14	16	18	22	26	30	34	38	42	46	50	54	60
	L ≥ 200	-	22	24	28	32	36	40	44	48	52	56	60	66
	200	-	-	-	-	45	49	53	57	61	65	69	73	79
k	2.8	3.5	4	5.3	6.4	7.5	8.8	10	11.5	12.5	14	15	17	18.7
e	A	7.66	8.79	11.05	14.38	18.9	21.1	24.49	26.75	30.14	33.53	35.72	39.98	45.2
	B	-	8.63	10.89	14.20	18.72	20.88	23.91	26.17	29.56	32.95	35.03	39.55	45.2
S	7	8	10	13	17	19	22	24	27	30	32	36	41	46
L	25-40	25-50	30-60	35-80	40-100	45-120	50-140	55-160	65-180	65-200	70-220	80-240	90-260	90-300

HEXAGON BOLTS WITH LARGE WIDTHS ACROSS FLATS
DIN 6914


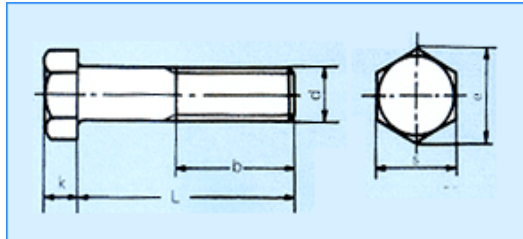
STRENGTH GRADE
10.9

mm

DIN6914	Diameter d	M12-M30	Length L	30-200
Nuts	Diameter D	M12-M30	-	-
Washers	Diameter d	M13-M31	-	-

HEXAGON HEAD BOLTS

DIN 601



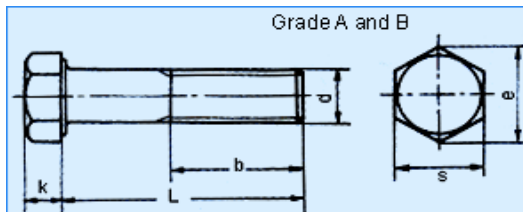
STRENGTH GRADE
4.8

mm

Thread size	M5	M6	M8	M10	M12	M16	M20	M24	M27	M30	M36	
Pitch	0.8	1	1.25	1.5	1.75	2	2.5	3	3	3.5	4	
b	L ≤ 125	16	18	22	26	30	38	46	54	60	66	78
	125 < L ≤ 200	22	24	28	32	36	44	52	60	66	72	84
	L > 200	35	37	41	45	49	57	65	73	79	85	97
k	3.5	4	5.3	6.4	7.5	10	12.5	15	17	18.7	22.5	
e	8.63	10.89	14.2	18.72	20.88	26.17	32.95	39.55	45.2	50.85	60.79	
S	8	10	13	17	19	24	30	36	41	46	55	
L	25-50	30-60	35-80	40-100	45-100	55-100	65-200	80-240	90-300	90-300	300	

HEXAGON HEAD BOLTS

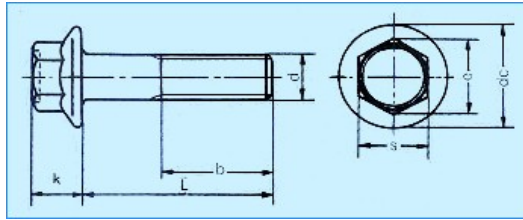
ISO 4014



STRENGTH GRADE
8.8
10.9
12.9

mm

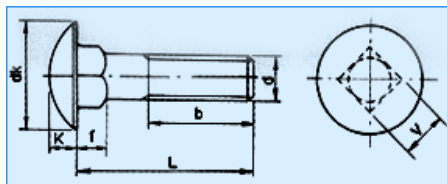
Thread size	M5	M6	M8	M10	M12	M16	M20	M24	M30	M36+	
Pitch	0.8	1	1.25	1.5	1.75	2	2.5	3	3.5	4	
b	L ≤ 125	16	18	22	26	30	38	46	54	66	-
	125 < L ≤ 200	-	-	-	-	-	44	52	60	72	84
	L > 200	-	-	-	-	-	-	73	85	97	-
k	3.5	4	5.3	6.4	7.5	10	12.5	15	18.7	22.5	
e	Grade A	8.79	11.05	14.38	17.77	20.03	26.75	33.53	39.98	-	-
	Grade B	-	-	-	-	-	26.17	32.95	39.56	50.85	60.79
S	8	10	13	16	18	24	30	36	46	55	
L	25-50	30-60	35-80	40-100	45-120	55-160	65-200	80-240	90-300	300	

HEX FLANGE BOLTS & SCREWS
DIN 6921


STRENGTH GRADE
4.8
8.8

mm

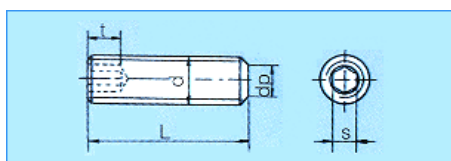
Thread size	M5	M6	M8	M10	M12	M14	M16	M20
Pitch	0.8	1	1.25	1.5	1.75	2	2	2.5
b	L ≤ 125	16	18	22	26	30	34	46
	125 < L ≤ 200	-	-	28	32	36	40	52
	L > 200	-	-	-	-	-	-	65
dc	11.8	14.2	18	22.3	26.6	30.5	35	43
k	5.4	6.6	8.1	9.2	11.5	12.8	14.4	17.1
e	8.71	10.95	14.26	16.5	17.62	19.86	23.15	29.87
S	8	10	13	15	16	18	21	27
L	oct-50	dic-60	16-80	20-100	25-120	30-140	35-160	40-200

MUSHROOM HEAD SQUARE NECK BOLTS
DIN 603


STRENGTH GRADE
4.8
8.8

mm

Thread size	M6	M8	M10	M12
Pitch	1	1.25	1.5	1.75
b	L ≤ 125	18	22	30
	125 < L ≤ 200	24	28	36
	L > 200	-	41	49
dk	16.55	20.65	24.65	30.65
f	4.6	5.6	6.6	8.75
k	3.88	4.88	5.38	6.95
v	6.48	8.58	1.58	12.7
L	16-80	20-100	20-100	30-100

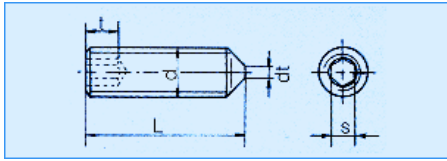
HEXAGON SOCKET SET SCREWS WITH FLAT POINT
DIN 913


mm

Thread size	M3	M4	M5	M6	M8	M10	M12	M16	M20
dp	2	2.5	3.5	4	5.5	7	8.5	12	15
s	1.5	2	2.5	3	4	5	6	8	10
t	1.2	1.5	2	2	3	4	4.8	6.4	8
L	4-16	5-20	6-25	8-30	10-40	12-50	16-60	20-60	25-60

HEXAGON SOCKET SET SCREWS WITH CONE POINT

DIN 914

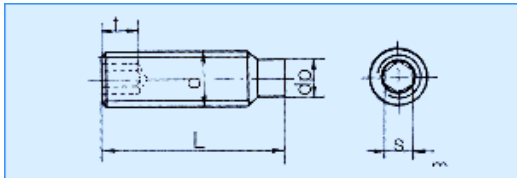


Thread size	M3	M4	M5	M6	M8	M10	M12	M16	M20
dt	-	-	-	1.5	2	2.5	3	4	5
s	1.5	2	2.5	3	4	5	6	8	10
t	1.2	1.5	2	2	3	4	4.8	6.4	8
L	5-16	6-20	8-25	10-30	12-40	16-50	20-60	25-60	30-60

mm

HEXAGON SOCKET SET SCREWS WITH DOG POINT

DIN 915

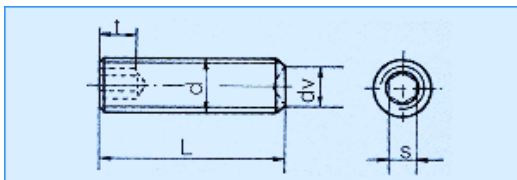


Thread size	M3	M4	M5	M6	M8	M10	M12	M16	M20
dp	2	2.5	3.5	4	5.5	7	8.5	12	15
s	1.5	2	2.5	3	4	5	6	8	10
t	1.2	1.5	2	2	3	4	4.8	6.4	8
z	short	0.75	1	1.25	1.5	2	2.5	3	4
	Long	1.5	2	2.5	3	4	5	6	8
L	6-16	8-20	10-25	14-30	16-40	20-50	25-60	30-60	35-60

mm

HEXAGON SOCKET SET SCREWS WITH CUP POINT

DIN 916

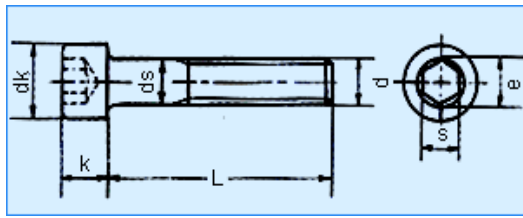


Thread size	M3	M4	M5	M6	M8	M10	M12	M16	M20
dv	1.4	2	2.5	3	5	6	8	10	14
s	1.5	2	2.5	3	4	5	6	8	10
t	1.2	1.5	2	2	3	4	4.8	6.4	8
L	4-16	5-20	6-25	8-30	10-40	12-50	16-60	20-60	25-60

mm

HEXAGON SOCKET HEAD CAP SCREWS

DIN 912



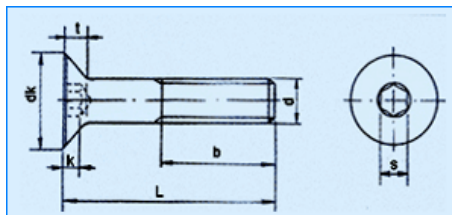
STRENGTH GRADE
8.8
10.9
12.9

mm

Thread size	M3	M4	M5	M6	M8	M10	M12	M14	M16	M20
pitch	0.5	0.7	0.8	1	1.25	1.5	1.75	2	2	2.5
dk	5.32	6.78	8.28	9.78	12.73	15.73	17.73	20.67	23.67	29.67
ds	3	4	5	6	8	10	12	14	16	20
k	2.86	3.82	4.82	5.7	7.64	9.64	11.57	13.57	15.57	19.48
e	2.87	3.44	4.58	5.72	6.86	9.15	11.43	13.72	16	19.44
s	2.5	3	4	5	6	8	10	12	14	17
L	5-30	6-40	8-50	10-60	12-80	16-100	20-120	25-140	25-160	30-200

HEXAGON SOCKET COUNTERSUNK HEAD CAP SCREWS

DIN 7991

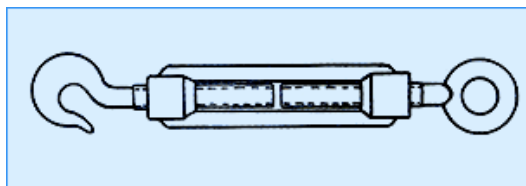


mm

Thread size	M3	M4	M5	M6	M8	M10	M12	M16	M20
b	L < 125	12	14	16	18	22	26	30	38
	125 < L ≤ 200				24	28	32	36	44
	L > 200					45	49	57	65
dk	6	8	10	12	16	20	24	30	36
k	1.70	2.30	2.80	3.30	4.40	5.50	6.50	7.50	8.50
s	2.00	2.50	3.00	4.00	5.00	6.00	8.00	10.0	12.0
t	0.95	1.55	2.05	2.25	3.20	4.10	4.30	5.00	5.60
L	8-30	8-40	10-50	12-50	16-60	20-70	25-70	35-90	40-100

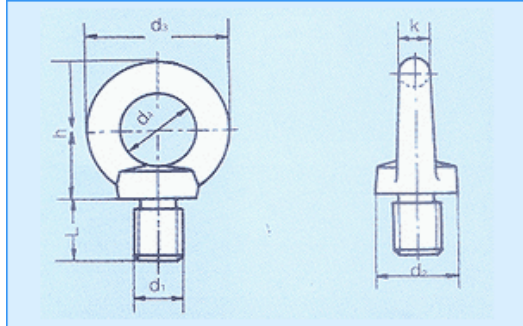
TURNBUCKLE WITH HOOK AND EYE

DIN 1480



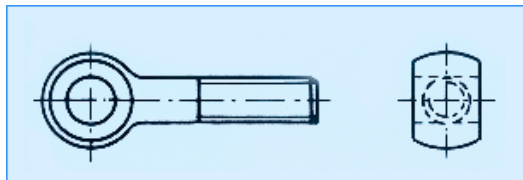
mm

SIZE AVAILABLE										
THREAD SIZE	6X10	8X110	10X12	12X12	14X14	16X17	20X20	22X22	24X25	30X25

LIFTING EYE BOLTS
DIN 580


mm

d1	M8	M10	M12	M16	M20	M24	M30	M36
d2	20	25	30	35	40	50	65	75
d3	36	45	54	63	72	90	108	128
d4	20	25	30	35	40	50	60	70
h	36	45	53	62	71	90	109	128
k	8	10	12	14	16	20	24	28
L	13	17	20.5	27	30	36	45	54

EYE BOLTS
DIN 444


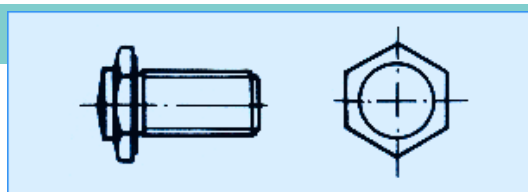
mm

Thread size	M5	M6	M8	M10	M12	M16	M20	M24	M30
Length	30-50	30-60	40-80	50-100	60-120	60-150	65-200	80-200	90-300

ANCHOR BOLTS
DIN 529


mm

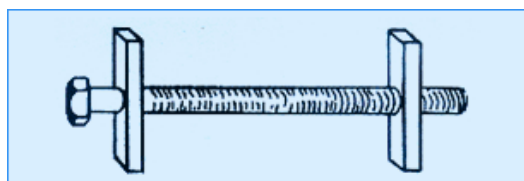
Thread size	M8	M10	M12	M16	M20	M24	M30
Length	80-125	111-160	180	200	250	320	400



S

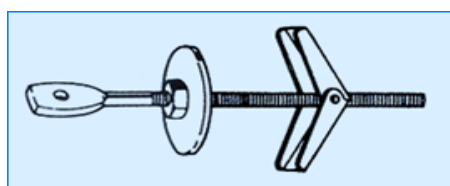
Thread size	M8×19
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DRAW BOLTS



size	1/4-20 × 3-1/2	1/4-20 × 4
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ACOUSTICAL TOGGLES

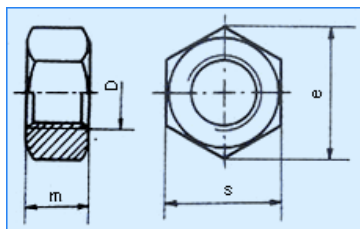


size	1/4-20 × 4-1/4
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NUTS

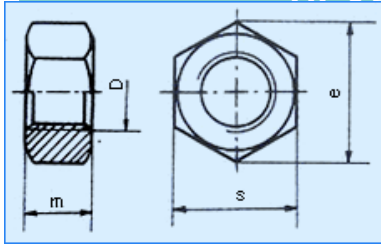
HEXAGON NUTS

DIN 555



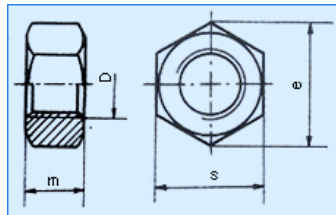
mm

Thread size	M5	M6	M8	M10	M12	M16	M20	M24	M30	M36	M42	M48	M56
Pitch	0.8	1	1.25	1.5	1.75	2	2.5	3	3.5	4	4.5	5	5.5
m	4	5	6.5	8	10	13	16	19	24	29	34	38	45
e	8.63	10.89	14.2	18.72	20.88	26.17	32.95	39.55	50.85	60.79	71.3	82.6	93.56
s	8	10	13	17	19	24	30	36	46	55	65	75	85

HEXAGON NUTS
DIN 934


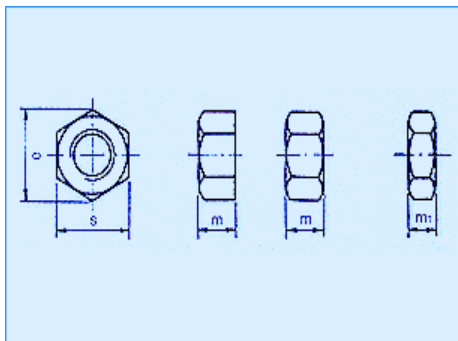
mm

Thread size	M2	M3	M4	M5	M6	M8	M10	M12	M16
Pitch	0.4	0.5	0.7	0.8	1	1.25	1.5	1.75	2
m	1.6	2.4	3.2	4	5	6.5	8	10	13
e	4.32	6.01	7.66	8.79	11.05	14.38	18.9	21.1	16.75
s	4	5.5	7	8	10	13	17	19	24
Thread size	M20	M24	M30	M36	M42	M48	M56		
Pitch	2.5	3	3.5	4	4.5	5	5.5		
m	16	19	24	29	34	38	45		
e	32.95	39.55	50.85	60.79	71.3	82.6	93.56		
s	30	36	46	55	65	75	85		

BRIGHT MILD STEEL HEX NUTS
B.S. 1083


inches

Thread size	1/8	5/32	3/16	1/4	5/16	3/8	7/16	1/2
Pitch	40	32	24	20	18	16	14	12
s	5.59	7.6	8.23	11.30	13.34	15.24	18.03	20.83
e	6.40	8.20	9.50	13.00	15.30	17.50	20.70	24.10
m	3.04	3.88	4.24	5.08	6.35	7.92	9.53	11.10

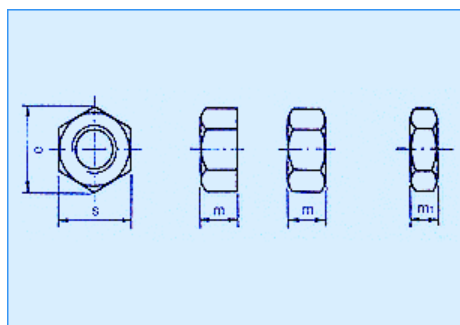


inches

Thread size	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8
e	0.505	0.577	0.650	0.794	0.866	1.010	1.083	1.300	1.515
s	0.437	0.500	0.562	0.687	0.750	0.875	0.937	1.125	1.312
m	0.224	0.271	0.333	0.380	0.442	0.489	0.552	0.651	0.760
m1	0.286	0.333	0.411	0.458	0.567	0.614	0.724	0.822	0.916
m2	0.161	0.192	0.224	0.255	0.317	0.349	0.380	0.432	0.494
Thread size	1	1 1/8	1 1/4	1 3/8	1 1/2	1 3/4	2		
e	1.732	1.948	2.165	2.382	2.598	3.031	3.461		
s	1.500	1.687	1.875	2.062	2.250	2.625	3.000		
m	0.874	0.989	1.087	1.197	1.311	1.530	1.754		
m1	1.015	1.176	1.275	1.400	1.530	-	-		
m2	0.562	0.629	0.744	0.806	0.874	0.999	1.129		

HEXAGON NUTS

B.S. 1769

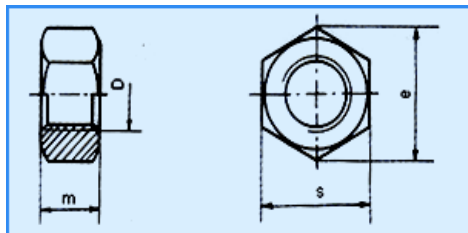


inches

Thread size	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 3/8	1 1/2	1 3/4	2
P UNC	13	11	10	9	8	7	7	6	6	5	4 1/2
P UNF	20	18	16	14	12	12	12	12	12	-	-
e	1.01	1.23	1.44	1.66	1.88	2.09	2.31	2.53	2.74	3.18	3.61
s	0.875	1.062	1.250	1.437	1.625	1.812	2.000	2.187	2.375	2.750	3.125
m	0.520	0.647	0.774	0.901	1.028	1.155	1.282	1.409	1.536	1.790	2.044
m1	0.332	0.397	0.462	0.526	0.590	0.655	0.782	0.846	0.911	1.040	1.169

HEXAGON NUTS

AS1112

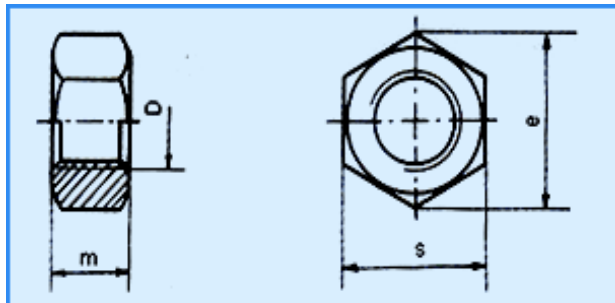


mm

Thread size	M2	M3	M4	M5	M6	M8	M10	M12	M16
Pitch	0.4	0.5	0.7	0.8	1.0	1.25	1.5	1.75	2.0
s	1.6	2.4	3.2	4.7	5.2	6.8	8.4	10.8	14.8
e	4.32	6.01	7.66	8.79	11.05	14.38	17.77	20.03	26.75
s	4	5.5	7	8	10	13	16	18	24
Thread size	M20	M24	M30	M36	M42	M48	M56		
Pitch	2.5	3.0	3.5	4.0	4.5	5.0	5.5		
s	18	21.5	25.6	31	34.8	38.8	45.8		
e	32.95	39.55	50.85	60.79	71.30	82.60	93.50		
s	30	36	46	55	65	75	85		

HEXAGON NUTS

ISO 4032

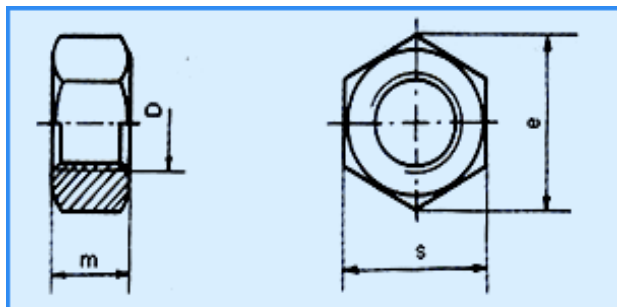


mm

Thread size	M2	M3	M4	M5	M6	M8	M10	M12	M16
Pitch	0.4	0.5	0.7	0.8	1	1.25	1.5	1.75	2
m	1.6	2.4	3.2	4.7	5.2	6.8	8.4	10.8	14.8
e	4.32	6.01	7.66	8.79	11.05	14.38	17.77	20.03	26.75
s	4	5.5	7	8	10	13	16	18	24
Thread size	M20	M24	M30	M36	M42	M48	M56		
Pitch	2.5	3	3.5	4	4.5	5	5.5		
m	18	21.5	25.6	31	34	38	45		
e	32.95	39.55	50.85	60.79	71.3	82.6	93.56		
s	30	36	46	55	65	75	85		

HEXAGON NUTS

ISO 4033

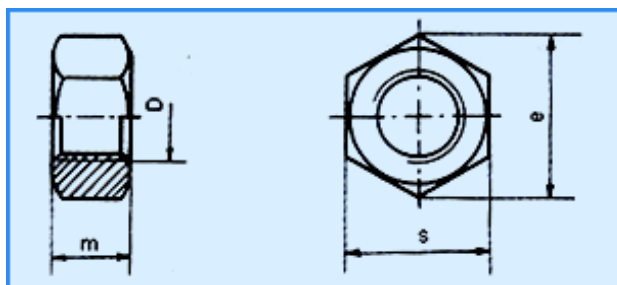


Thread size	M5	M6	M8	M10	M12	M16	M20	M24	M30	M36
Pitch	0.8	1	1.25	1.5	1.75	2	2.5	3	3.5	4
m	5.1	5.7	7.5	9.3	12	16.4	20.3	23.9	28.6	34.7
e	8.79	11.05	14.38	17.77	20.03	26.75	32.95	39.55	50.85	60.79
s	8	10	13	16	18	24	30	36	46	55

mm

HEXAGON NUTS

ISO 4034

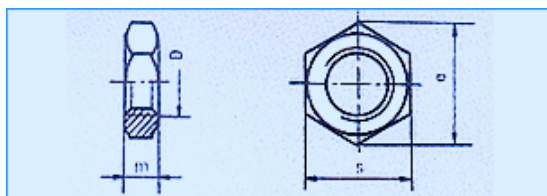


Thread size	M5	M6	M8	M10	M12	M16	M20	M24	M30	M36
Pitch	0.8	1	1.25	1.5	1.75	2	2.5	3	3.5	4
m	5.6	6.1	7.9	9.5	12.2	15.9	19	22.3	26.4	31.5
e	8.63	10.89	14.20	17.59	19.85	26.17	32.95	39.55	50.85	60.79
s	8	10	13	16	18	24	30	35	45	53.8

mm

HEXAGON THIN NUTS

ISO 4035

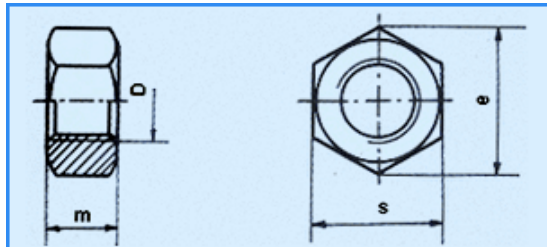


Thread size	M10	M12	M14	M22
Pitch	1.5	1.75	2	2.5
m	5	6	7	11
e	17.77	20.03	23.35	37.29
s	16	18	21	24

mm

HEXAGON NUTS

UNI 5587

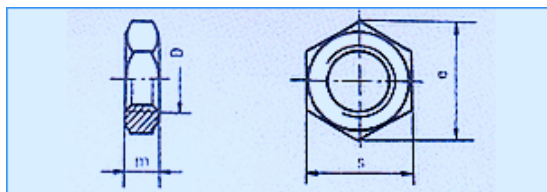


Thread size	M3	M4	M5	M6	M8	M10	M12	M16	M20	M24	M30
m	3	4	5	6	8	10	12	16	20	24	30
e	6.08	7.74	8.87	11.05	14.38	18.90	21.10	26.75	33.53	39.98	51.29
s	5.5	7	8	10	13	17	19	24	30	36	46

mm

CHAMFERED HEXAGON THIN NUTS

DIN 439

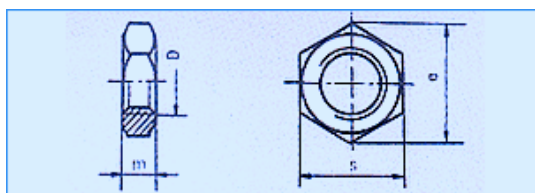


Thread size	M3	M4	M5	M6	M8	M10	M12	M16	M20	M24	M30	M36	M42	M48
Pitch	0.5	0.7	0.8	1	1.25	1.5	1.75	2	2.5	3	3.5	4	4.5	5
m	1.8	2.2	2.7	3.2	4	5	6	8	10	12	15	18	21	24
e	6.01	7.66	8.79	11.05	14.38	18.9	21.1	26.75	32.95	39.55	50.85	60.79	71.3	82.6
s	5.5	7	8	10	13	17	19	24	30	36	46	55	65	75

mm

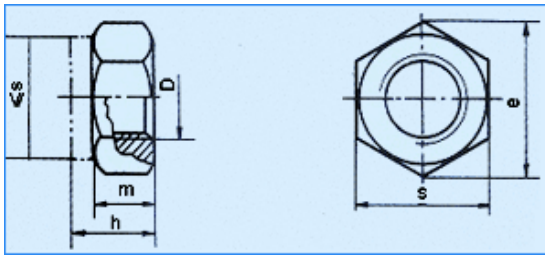
HEXAGON THIN NUTS

DIN 936



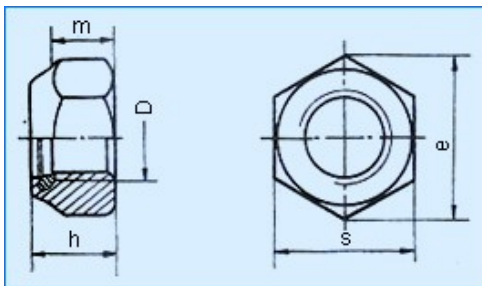
Thread size	M8	M10	M12	M16	M20	M24	M30	M36	M42	M48
Pitch	1.25	1.5	1.75	2	2.5	3	3.5	4	4.5	5
m	5	6	7	8	9	10	12	14	16	18
e	14.38	18.90	21.1	26.75	32.95	39.55	50.85	60.79	71.3	82.6
s	13	17	19	24	30	36	46	55	65	75

mm

ALL-METAL PREVALLING TORQUE TYPE HEXAGON NUTS
DIN 980


mm

Thread size	M5	M6	M8	M10	M12	M14	M16	M18	M20
Pitch	0.8	1	1.25	1.5	1.75	2	2	2.5	2.5
h	5.1	6	8	10	12	14	16	18	20
e	8.79	11.05	14.38	18.9	21.1	24.49	26.75	29.56	32.95
s	8	10	13	17	19	22	24	27	30

**PREVALLING TORQUE TYPE
HEXAGON THIN NUTS WITH NONMETALLIC INSERT**
DIN 985


mm

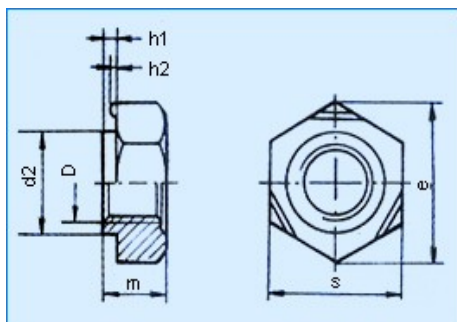
Thread size	M5	M6	M8	M10	M12	M14	M16	M18	M20
Pitch	0.8	1	1.25	1.5	1.75	2	2	2.5	2.5
h	5	6	8	10	12	14	16	18.5	20
m	3.2	4	5.5	6.5	8	9.5	10.5	13	14
e	8.79	11.05	14.38	18.9	21.1	24.49	26.75	29.56	32.95
s	8	10	13	17	19	22	24	27	30

HEX CONNECTING NUTS
DIN 6334


Thread size	M6	M8	M10	M12	M16
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HEXAGON WELD NUTS

DIN 929

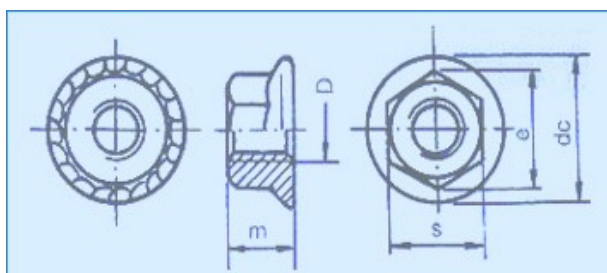


mm

Thread size	M4	M5	M6	M8	M10	M12	M16
m	3.5	4	5	6.5	8	10	13
e	9.83	10.95	12.02	15.38	18.74	20.91	26.51
s	9	10	11	14	17	19	24
h ₁	0.65	0.7	0.75	0.9	1.15	1.4	1.8
h ₂	0.35	0.4	0.4	0.5	0.65	0.8	1
d ₂	6	7	8	10.5	12.5	14.8	18.8

HEXAGON NUTS WITH FLANGE

DIN 6923

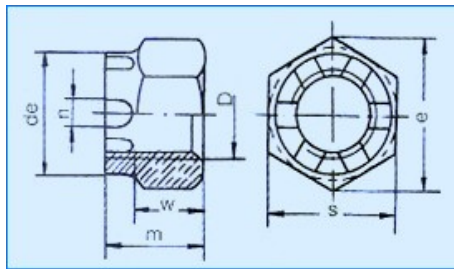


mm

Thread size	M5	M6	M8	M10	M12	M14	M16	M20
Pitch	0.8	1	1.25	1.5	1.75	2	2	2.5
m	5	6	8	10	12	14	16	20
e	8.79	11.05	14.38	16.64	20.03	23.36	26.75	32.95
s	8	10	13	15	18	21	24	30
dc	11.8	14.2	17.9	21.8	26	29.9	34.5	42.8

HEXAGON SLOTTED NUTS

DIN 935

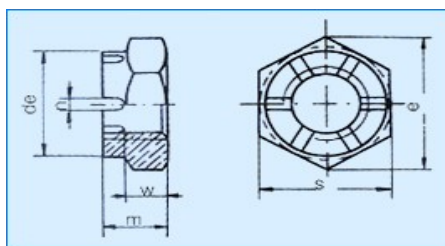


mm

Thread size	M6	M8	M10	M12	M16	M20	M24	M30	M36
m	7.5	9.5	12	15	19	22	27	33	38
e	11.05	14.38	17.77	20.03	26.75	32.95	39.55	50.85	60.79
s	10	13	16	18	24	30	36	46	55
n	2	2.5	2.8	3.5	4.5	4.5	5.5	7	7
w	5	6.5	8	10	13	16	19	24	29
de	-	-	-	16	22	28	34	42	50

HEXAGON THIN SLOTTED NUTS

DIN 937

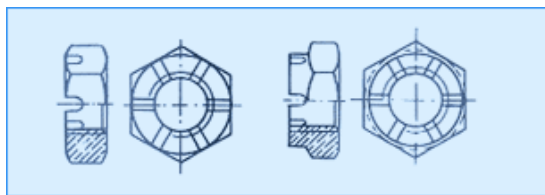


mm

Thread size	M6	M8	M10	M12	M16	M20	M24	M30	M36
m	6	8	9	10	12	13	15	18	20
e	11.05	14.38	18.9	20.1	26.75	32.95	35.55	50.85	60.79
s	10	13	17	19	24	30	36	46	55
n	2	2.5	2.8	3.5	4.5	4.5	5.5	7	7
w	3.5	4.5	5	6	7	8	9	11	13
de	-	-	-	17	22	28	33	41	49

HEXAGON THIN SLOTTED NUTS

DIN 979

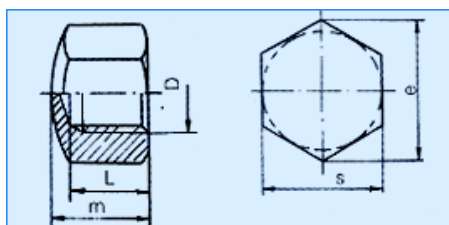


mm

Thread size	M6	M8	M10	M12	M16	M20	M24	M30	M36
m	5	6.5	8	10	13	16	19	24	29
e	11.05	14.38	17.77	20.03	26.75	32.95	39.55	50.85	60.79
s	10	13	16	18	24	30	36	46	55
n	2	2.5	2.8	3.5	4.5	4.5	5.5	7	7
w	2.5	3.5	4	5	7	10	11	15	20
de	-	-	-	16	22	28	34	42	50

HEXAGON CAP NUTS

DIN 917

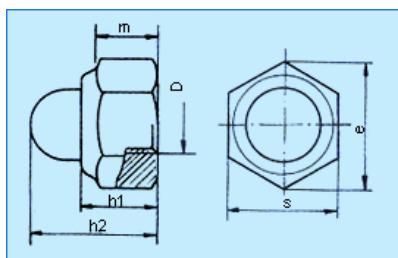


mm

Thread size	M4	M5	M6	M8	M10	M12	M16	M20	M24
m	5.5	7	9	12	14	16	20	25	30
e	7.66	8.79	11.05	14.38	17.77	20.03	26.75	32.95	39.55
s	7	8	10	13	16	18	24	30	36
L	4.16	4.96	6.71	9.21	10.65	13.15	16.65	20.58	23.58

HEXAGON DOMED CAP NUTS

DIN 986

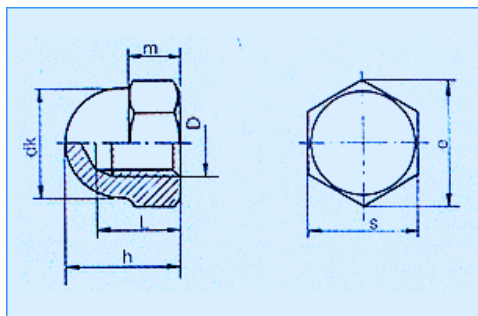


mm

Thread size	M4	M5	M6	M8	M10	M12	M16	M20
m	2.9	4.4	4.9	6.44	8.04	10.37	14.1	16.9
e	7.66	8.79	11.05	14.38	18.9	21.1	26.75	32.95
s	7	8	10	13	16	18	24	30
h ₁	5.6	6	7.5	8.9	10.5	13.5	16.5	21
h ₂	9.6	10.5	12	14	18.1	22.5	27.5	35

HEXAGON DOMED CAP NUTS

DIN 1587

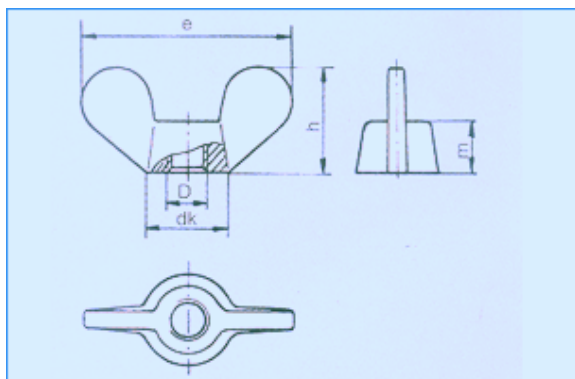


Thread size	M4	M5	M6	M8	M10	M12	M16	M20	M24
m	3.2	4	5	6.5	8	10	13	16	19
e	7.66	8.79	11.05	14.38	17.77	20.03	26.75	33.53	39.98
s	7	8	10	13	16	18	24	30	36
h	8	10	12	15	18	22	28	34	42
L	5.26	7.21	7.71	10.65	12.65	15.65	20.58	25.58	30.5
dk	6.5	7.5	9.5	12.5	15	17	23	28	34

mm

WING NUTS

DIN 315

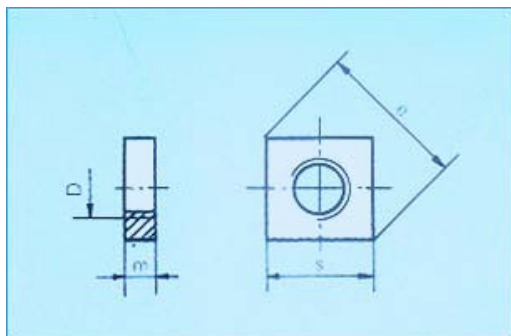


Thread size	M4	M5	M6	M8	M10	M12	M16	M20	M24
Pitch	0.7	0.8	1	1.25	1.15	1.75	2	2.5	3
dk	6	8	10	13	17	20	26	32	41
e	18	24	30	36	48	62	70	86	106
h	8.5	11	15	18	23	31	35	44	53.5
m	3.2	4	5	6.5	8	10	13	16	20

mm

SQUARE THIN NUTS

DIN 562

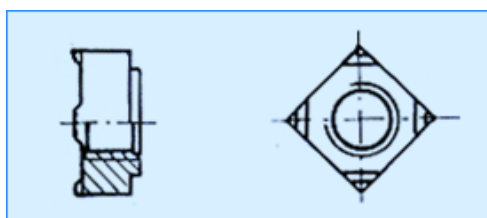


Thread size	M2	M3	M4	M5	M6	M8	M10	
Pitch	0.4	0.5	0.7	0.8	1	1.25	1.5	
m	1.2	1.8	2.2	2.7	3.2	4	5	
e	5	7	8.9	10.2	12.7	16.5	20.2	21.5
s	4	5.5	7	8	10	13	16	17

mm

SQUARE NUTS

DIN 928

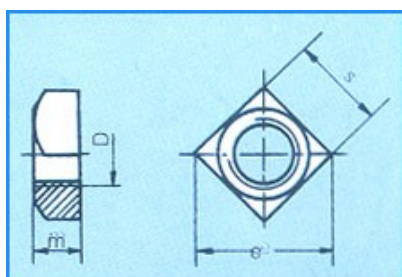


Thread size	M4	M5	M6	M8	M10	M12

mm

SQUARE NUTS

DIN 557

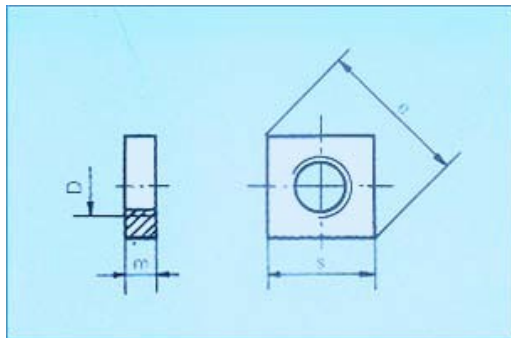


Thread size	M5	M6	M8	M10		M12		M16	M20
Pitch	0.8	1	1.25	1.5		1.75		2	2.5
m	4	5	6.5	8		10		13	16
e	11.3	14.1	18.4	22.6	24	25.4	26.9	32.9	42.4
s	8	10	13	16	17	18	19	24	30

mm

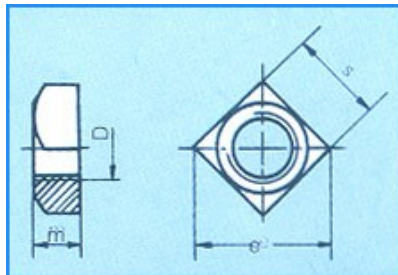
SQUARE NUTS

B.S.



Thread size	1/8	5/32	3/16	1/4
Thread per inch	40	32	24	20
m	2.13	2.74	3.12	3.38
e	7.9	10.1	11.6	15.9
s	5.59	7.16	8.23	11.30

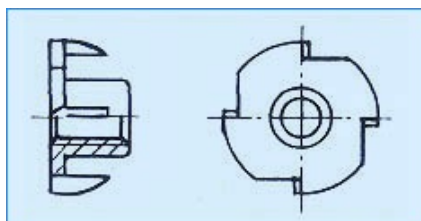
inches



Thread size	3/16	1/4	5/16	3/8	7/16	1/2
Thread per inch	24	20	18	16	14	12
m	4.24	5.08	6.35	7.92	9.53	11.10
e	11.6	15.9	18.9	21.5	25.4	29.4
s	8.23	11.3	13.34	15.24	18.03	20.83

inches

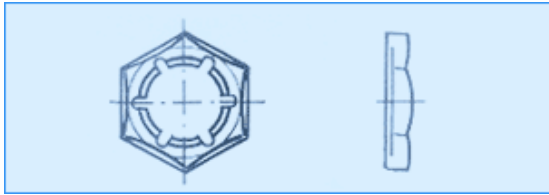
TEE NUTS WITH PRONGES



Thread size	M3	M4	M5	M6	M8	M10
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LOCK NUTS

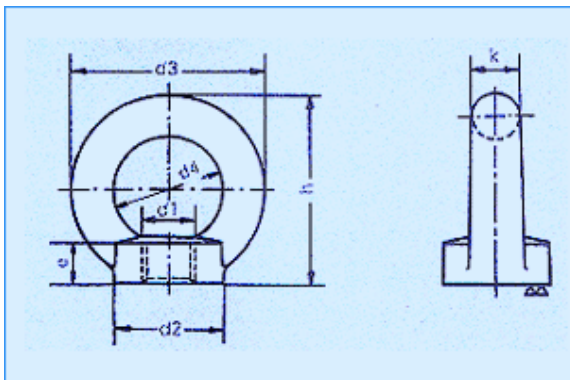
DIN 7967



For thread	M3	M4	M5	M6	M8	M10	M12	M14	M16	M18
For thread	M20	M22	M24	M27	M30	M33	M36	M39	M42	

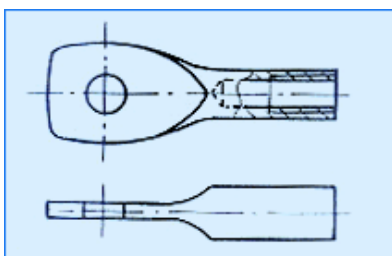
LOCK NUTS

DIN 582



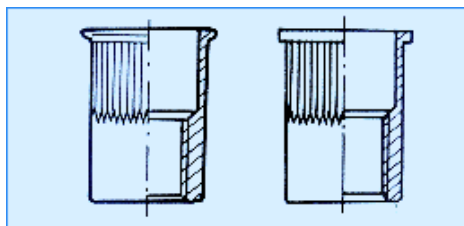
	mm							
d1	M8	M10	M12	M16	M20	M24	M30	M36
d2	20	25	30	35	40	50	65	75
d3	36	45	54	63	72	90	108	126
d4	20	25	30	35	40	50	60	70
e	8.5	10	11	13	16	20	25	30
h	36	45	53	62	71	90	109	128
k	8	10	12	14	16	20	24	28

EYE COUPLING NUTS



Thread size	M6
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ANCHOR NUTS

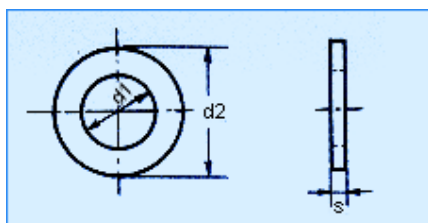


Thread size	M3	M4	M5	M6	M8	M10
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WASHERS

WASHERS (Grade A)

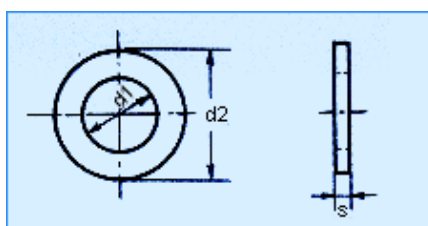
DIN 125



	mm										
d1	1.7	1.8	2.2	2.5	2.7	2.8	3.2	3.7	4.3	5.3	6.4
d2	4	4.5	5	6	6	7	7	8	9	10	12
s	0.3	0.3	0.3	0.5	0.5	0.5	0.5	0.5	0.8	1	1.6
d1	7.4	8.4	10.5	13	15	17	19	21	23	23	
d2	14	16	20	24	28	30	34	37	39	39	
s	1.6	1.6	2	2.5	2.5	3	3	3	3	3	

WASHERS (Grade C)

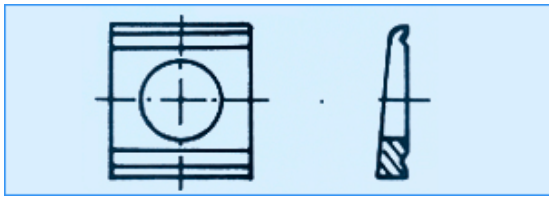
DIN 126



	mm										
d1	5.5	6.6	7.6	9	11	13.5	15.5	17.5	20	22	24
d2	10	12.5	14	16	20	24	28	30	34	37	39
s	1	1.6	1.6	1.6	2	2.5	2.5	3	3	3	3
d1	26	30	33	36	39	42	45	48	52	56	
d2	44	50	56	60	66	72	78	85	92	98	
s	4	4	4	5	5	6	7	7	8	8	

SQUARE BEVELED WASHERS

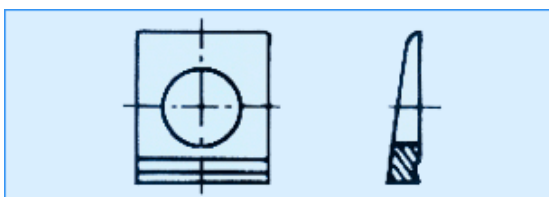
DIN 434



For screws M8 M10 M12 M16 M20 M22 M24 M27

SQUARE BEVELED WASHERS

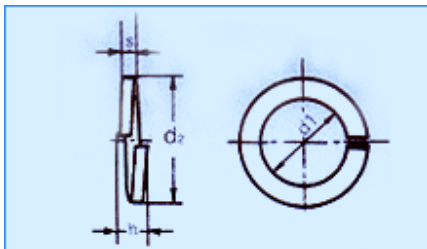
DIN 435



For screws M8 M10 M12 M16 M20 M22 M24 M27 M30

SPRING LOCK WASHERS

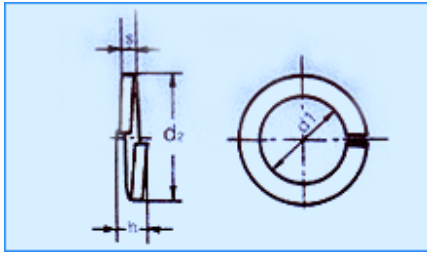
DIN 127



	mm									
Nominal size	3	3.5	4	5	6	7	8	10	12	
d1	3.4	3.9	4.4	5.4	6.5	7.5	8.5	10.7	12.7	
d2	6.2	6.7	7.6	9.2	11.8	12.8	14.8	18.1	21.1	
h	1.9	1.9	2.1	2.8	3.8	3.8	4.7	5.2	5.9	
s	0.8	0.8	0.9	1.2	1.6	1.6	2	2.2	2.5	
Nominal size	14	16	18	20	22	24	27	30		
d1	14.7	17	19	21.2	23.5	25.5	28.5	31.7		
d2	24.1	27.4	29.4	33.6	35.9	40	43	48.2		
h	7.1	8.3	8.3	9.4	9.4	11.8	11.8	14.2		
s	3	3.5	3.5	4	4	5	5	6		

SPRING LOCK WASHERS

B.S.

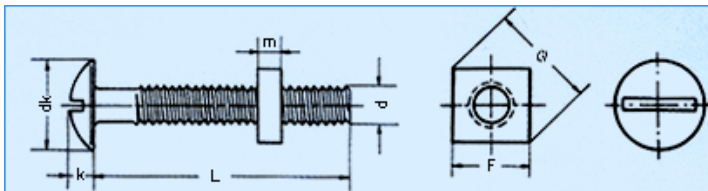


inches

Nominal	1/8	5/32	3/16	1/4	5/16	3/8	7/16	1/2	9/16
d1	0.133	0.164	0.196	0.266	0.328	0.391	0.453	0.516	0.601
b	0.053	0.061	0.075	0.108	0.130	0.142	0.161	0.173	0.189
h	0.067	0.083	0.098	0.142	0.165	0.189	0.220	0.244	0.283
s	0.033	0.041	0.049	0.071	0.083	0.094	0.110	0.122	0.142
Nominal	5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2		
d1	0.656	0.781	0.906	1.031	1.156	1.281	1.531		
b	0.213	0.248	0.276	0.291	0.307	0.331	0.354		
h	0.303	0.354	0.394	0.433	0.472	0.504	0.551		
s	0.152	0.177	0.197	0.217	0.236	0.252	0.276		

MACHINE SCREWS

GALVANIZED ROOFING BOLTS & NUTS

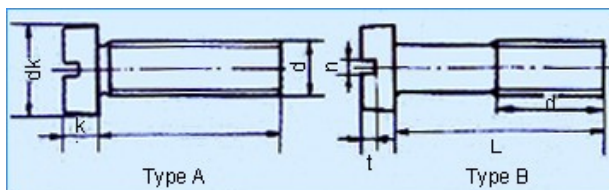


inches

Thread size	dk	k	m	F	G	L
3/6	10	2.3	3.048	8.128	11.684	3/16-3
1/4	13.3	3	0.302	11.176	16.002	1/2-5

SLOTTED CHEESE HEAD SCREWS

DIN 84

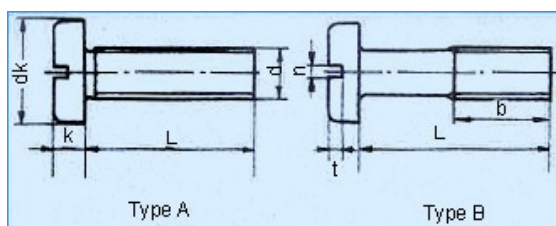


mm

Thread size	M3	M3.5	M4	M5	M6	M8	M10
dk	5.5	6	7	8.5	10	13	16
k	2	2.4	2.6	3.3	3.9	5	6
L	A	6-22	6-22	8-25	8-28	10-35	14-40
	B	25-30	25-35	28-40	30-50	40-60	45-80

SLOTTED PAN HEAD SCREWS

DIN 85

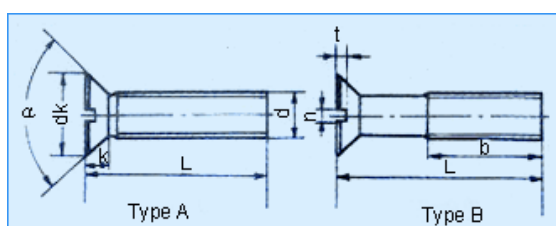


mm

Thread size	M3	M3.5	M4	M5	M6	M8	M10
dk	6	7	8	10	12	16	20
k	1.8	2.1	2.4	3	3.6	4.8	6
L	A	6-22	6-22	8-25	8-28	10-35	14-40
	B	25-30	25-35	28-40	30-50	40-60	45-80

SLOTTED COUNTERSUNK HEAD SCREWS

DIN 963

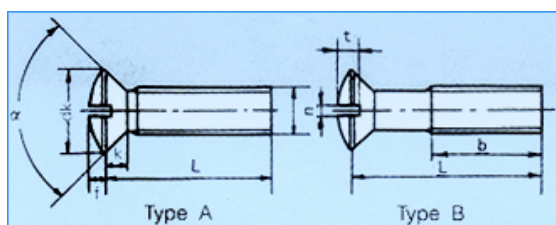


mm

Thread size	M3	M3.5	M4	M5	M6	M8	M10
dk	5.6	6.5	7.5	9.2	11	14.5	18
k	1.65	1.93	2.2	2.5	3	4	5
L	A	6-22	6-22	8-25	8-28	10-35	14-40
	B	25-30	25-35	28-40	30-50	40-60	45-80

SLOTTED RAISED COUNTERSUNK HEAD SCREWS

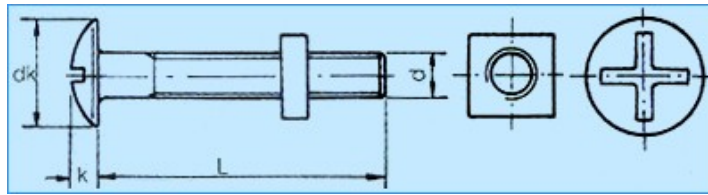
DIN 964



mm

Thread size	M3	M3.5	M4	M5	M6	M8	M10
dk	5.6	6.5	7.5	9.2	11	14.5	18
k	1.65	1.93	2.2	2.5	3	4	5
f	0.75	0.9	1	1.25	1.5	2	2.5
L	A	6-22	6-22	8-25	8-28	10-35	14-40
	B	25-30	25-35	28-40	30-50	40-60	45-80

ROOFING BOLTS & NUTS

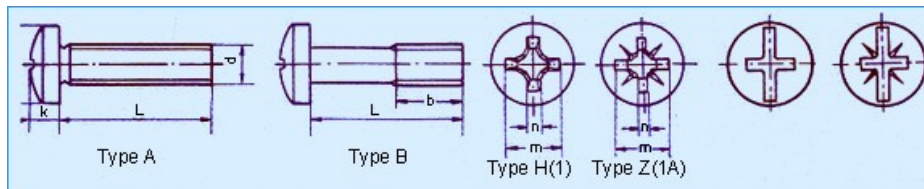


mm

Thread size	M4	M5	M6	M8
dk	9.4	11.6	13.95	18.9
k	1.90	2.65	3.33	3.80
L	10-50	10-80	12-120	16-150

CROSS RECESSED RAISED CHEESE HEAD SCREWS

DIN 7985

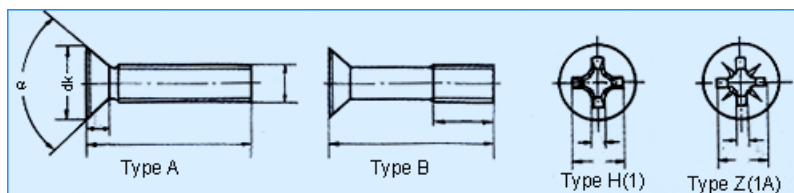


mm

Thread size	M3	M3.5	M4	M5	M6	M8	M10
dk	6	7	8	10	12	16	20
k	2.4	2.7	3.1	3.8	4.6	6	7.5
Cross recesses	(Type H)m	3.1	4.2	4.6	5.3	6.8	9
	(Type Z)m	3	4	4.3	5	6.7	8.8
	No	1	2	2	2	3	4
L	Type A	6-22	6-22	8-25	8-28	10-35	14-40
	Type B	25-30	25-35	28-40	30-50	40-60	45-80

CROSS RECESSED COUNTERSUNK FLAT HEAD SCREWS

DIN 965

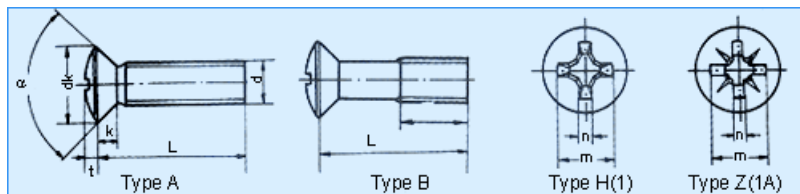


mm

Thread size	M3	M3.5	M4	M5	M6	M8	M10
dk	5.6	6.5	7.5	9.2	11	14.5	18
k	1.65	1.93	2.2	2.5	3	4	5
Cross	(Type H)m	2.9	3.9	4.4	4.6	6.6	8.7
	(Type Z)m	2.8	3.7	4	4.4	6.1	8.5
	No	1	2	2	2	3	4
L	Type A	6-22	6-22	8-25	8-28	10-35	14-40
	Type B	25-30	25-35	28-40	30-50	40-60	45-80

CROSS RECESSED RAISED COUNTERSUNK HEAD SCREWS

DIN 966

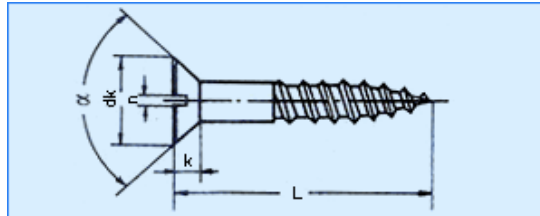


Thread size		M3	M3.5	M4	M5	M6	M8	M10
dk		5.6	6.5	7.5	9.2	11	14.5	18
k		1.65	1.93	2.2	2.5	3	4	5
f		0.75	0.9	1	1.25	1.5	2	2.5
Cross	(Type H)m	3.1	4.2	4.5	5.3	6.8	9	10
	(Type Z)m	3.1	4.3	4.6	5.3	7	8.8	9.9
	NO	1	2	2	2	3	4	4
L	Type A	6-22	6-22	8-25	8-28	10-35	14-40	18-45
	Type B	25-30	25-35	28-40	30-50	40-60	45-80	50-100

WOOD SCREWS

SLOTTED COUNTERSUNK HEAD WOOD SCREWS

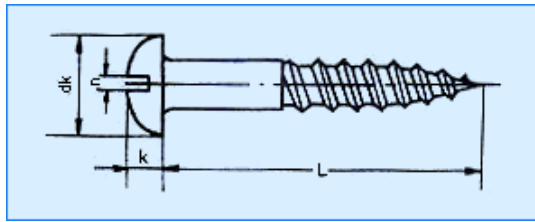
DIN 97



Thread size		2.5	3	3.5	4	4.5	5	5.5	6
dk		4.7	5.6	6.5	7.5	8.3	9.2	10.2	11
k		1.5	1.65	1.93	2.2	2.35	2.5	2.75	3
n		0.6	0.8	0.8	1	1	1.2	1.2	1.6
L		8-25	10-40	12-40	16-50	20-60	20-100	30-100	40-100

SLOTTED ROUND HEAD WOOD SCREWS

DIN 96

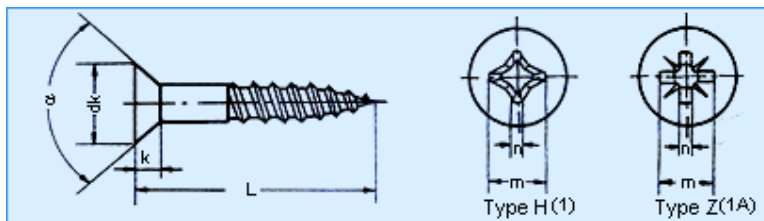


Thread size	2.5	3	3.5	4	4.5	5	5.5	6
dk	5	6	7	8	9	10	11	12
K	1.7	2.1	2.4	2.8	3.1	3.5	3.8	4.2
n	0.6	0.8	0.8	1	1	1.2	1.2	1.6
L	8-25	10-40	12-40	16-50	20-60	20-100	30-100	40-100

mm

FLAT COUNTERSUNK HEAD WOOD SCREWS

DIN 7997

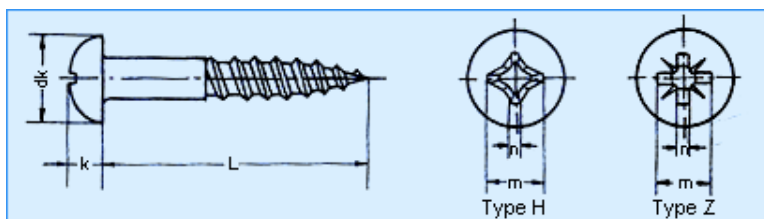


Thread size	2.5	3	3.5	4	4.5	5	5.5	6
dk	4.7	5.6	6.5	7.5	8.3	9.2	10.2	11
k	1.5	1.65	1.93	2.2	2.35	2.5	2.75	3
Cross recess	(Type H) m	2.7	2.9	3.9	4.4	4.6	4.8	6.2
	(Type Z) m	2.8	3	4	4.2	4.4	5	6.1
	No	1	1	2	2	2	3	3
L	10-25	10-40	12-45	16-50	20-60	20-100	30-100	40-100

mm

CROSS RECESSED ROUND HEAD WOOD SCREWS

DIN 7996

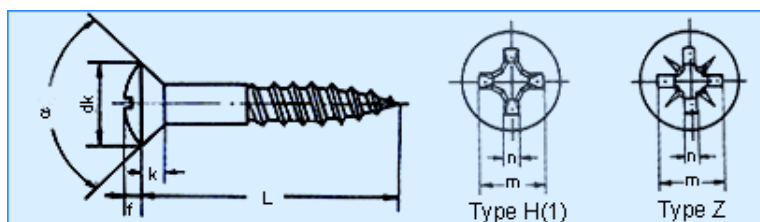


Thread size	2.5	3	3.5	4	4.5	5	5.5	6
dk	5	6	7	8	9	10	11	12
k	1.7	2.1	2.35	2.8	3.1	3.5	3.8	4.2
Cross	(Type H) m	2.3	2.7	3.7	4.1	4.4	4.8	6.2
	(Type Z) m	2.4	2.9	3.9	4.1	4.3	4.7	6.2
	No	1	1	2	2	2	2	3
L	10-25	10-40	12-40	16-50	20-60	20-100	30-100	40-100

mm

CROSS RECESSED RAISED COUNTERSUNK HEAD WOOD SCREWS

DIN 7995

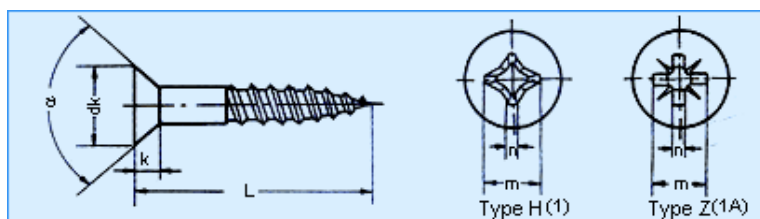


mm

Thread size	2.5	3	3.5	4	4.5	5	5.5	6
dk	4.7	5.6	6.5	7.5	8.3	9.2	10.2	11
f	0.6	0.75	0.9	1	1.1	1.25	1.4	1.5
k	1.5	1.65	1.93	2.2	2.35	2.5	2.75	3
Cross	(Type H) m	2.7	3.1	4.2	4.5	5	5.3	7.1
	(Type Z) m	2.8	3.1	4.3	4.6	5.1	5.3	6.6
No	1	1	2	2	2	3	3	3
L	10-25	10-40	12-40	16-50	20-60	20-100	30-100	40-100

PHILLIPS OVAL HEAD WOOD SCREWS

B.S. 1210

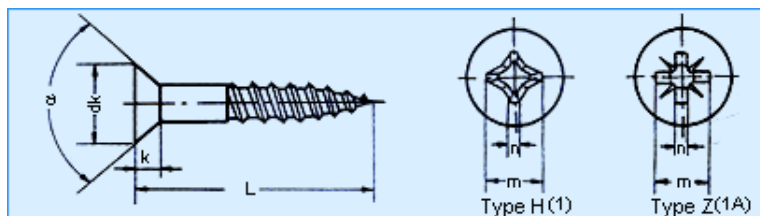


inches

Thread size	4	5	6	7	8	9	10
dk	5.21	5.90	6.58	7.24	7.93	8.59	9.28
f	0.66	0.76	0.81	0.91	1.02	1.17	1.19
k	1.62	1.85	2.08	2.31	2.54	2.76	2.97
Cross recess	(Type Z) m	3.12	3.81	4.32	4.65	5.00	5.28
	NO	1	1	2	2	2	2
L	1/2-1	1/2-1 1/4	1/2-2	3/4-2	3/4-3	3/4-3	3/4-3 1/2

CROSS RECESSED COUNTERSUNK HEAD WOOD SCREWS

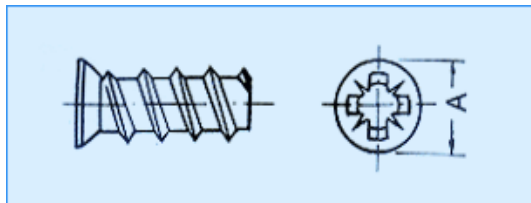
B.S. 1210



inches

Thread size	3	4	5	6	7	8	9	10	12	14	16
dk	4.55	5.21	5.90	6.56	7.24	7.93	8.59	9.28	10.62	11.99	13.31
k	1.39	1.62	1.88	2.08	2.31	2.54	2.76	2.97	3.42	3.88	4.31
(Type Z) m	2.51	2.74	3.50	4.22	4.22	4.60	4.60	4.98	6.35	6.60	7.49
Cross recess	No	1	1	2	2	2	2	2	3	3	3
	L	1/2-5/8	1/2-2	1/2-1 1/4	1/2-2	3/4-2	3/4-3	3/4-3	3/4-3 1/2	1-5	1 1/2-5

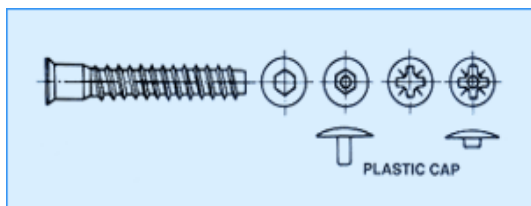
EURO SCREW



mm

Nominal size	6.3	6.3
Length	9-13	9-13
A	7	8

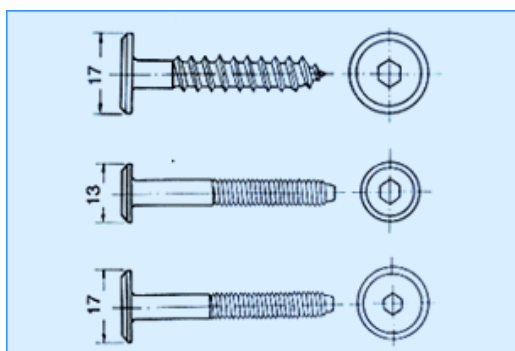
CONNECTING SCREW FLAT COUNTERSUNK HEAD



mm

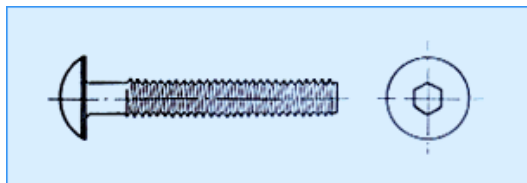
Nominal size	5	7	6.3
Length	40-60	40-80	40-80

JOINT CONNECTOR SCREW FLAT HEAD



Nominal size	M6-1.0	1/4-20	6.3
Length	20-120	20-120	20-120

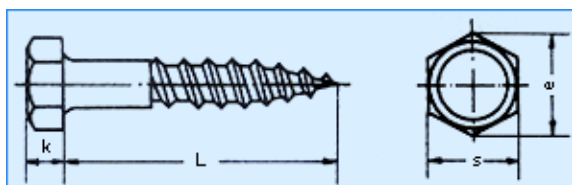
JOINT CONNECTOR SCREW ROUND HEAD



Nominal size	M6-1.0	1/4-20
Length	20-120	20-120

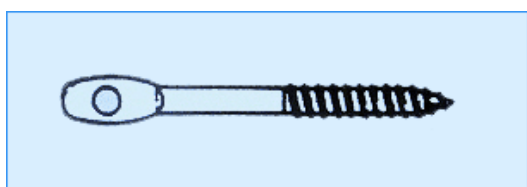
HEXAGON HEAD WOOD SCREWS

DIN 571



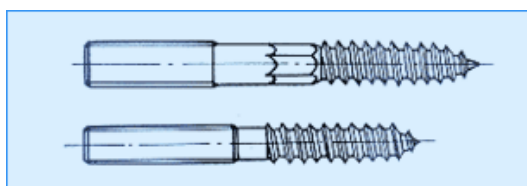
	mm							
Thread size	4	5	6	7	8	10	12	16
k	2.8	3.5	4	5	5.5	7	8	10
e	7.50	8.63	10.89	13.07	14.2	18.72	20.88	26.17
s	7	8	10	12	13	17	19	24
L	16-40	16-50	25-150	30-150	30-200	30-300	35-400	50-420

ACOUSTICALL EYELAGS



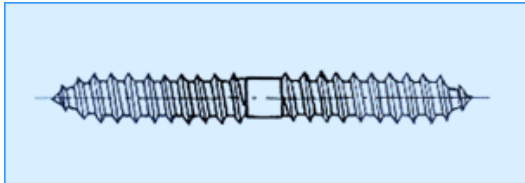
	inches		
Nominal size	1/4 x 3"	1/4 x 4"	1/4 x 5"

METAL WOOD DOWEL SCREW



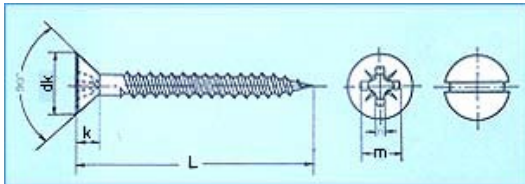
	mm
Nominal size	M8-12
Length	50-200

WOOD-WOOD DOWEL SCREW



Nominal size	3.5-6.3
Length	25-80

POZIDRIVE TWINFAST WOOD SCREWS



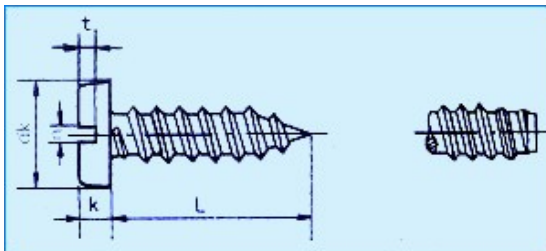
Thread size		4	5	6	7	8	10	12
dk		5.48	6.19	6.90	7.62	8.33	9.75	11.17
k		1.66	1.90	2.13	2.36	2.53	3.01	3.44
n		0.86	1.06	1.06	1.06	1.26	1.26	1.66
cross recess	No	1	2	2	2	2	2	3
	m	2.74	3.50	4.22	4.22	4.60	4.98	6.35
L(in)		1/4-1	5/16-11/4	7/16-2	1/2-21/4	5/8-3	3/4-4	1-4

mm

TAPPING AND CHIPBOARD

PAN HEAD TAPPING SCREWS WITH SLOT

DIN 7971

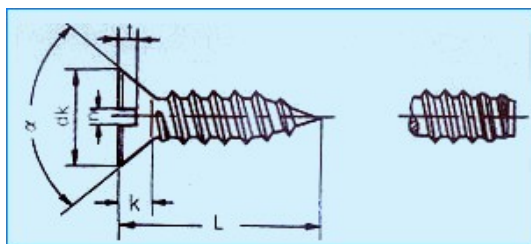


Thread size	2.9	3.5	3.9	4.2	4.8	5.5	6.3
dk	5.6	6.9	7.5	8.2	9.5	10.8	12.5
k	1.5	1.85	2	2.15	2.5	2.85	3.2
m	0.8	1	1	1.2	1.2	1.6	1.6
L(mm)	6.5-25	6.5-50	9.5-50	9.5-63	9.5-63	13-75	13-75

mm

COUNTERSUNK HEAD TAPPING SCREWS WITH SLOT

DIN 7972

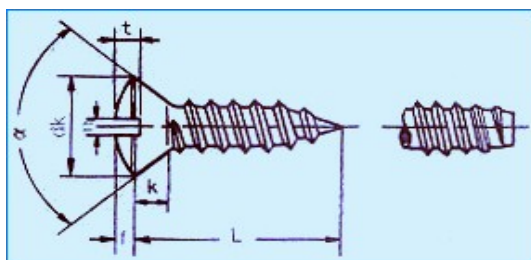


Thread size	2.9	3.5	3.9	4.2	4.8	5.5	6.3
dk	5.5	6.8	7.5	8.1	9.5	10.8	12.4
k	1.7	2.1	2.3	2.5	3	3.4	3.8
n	0.8	1	1	1.2	1.2	1.6	1.6
L	6.5-25	6.5-50	9.5-50	9.5-63	9.5-63	13-75	13-75

mm

RAISED COUNTERSUNK HEAD TAPPING SCREWS WITH SLOT

DIN 7973

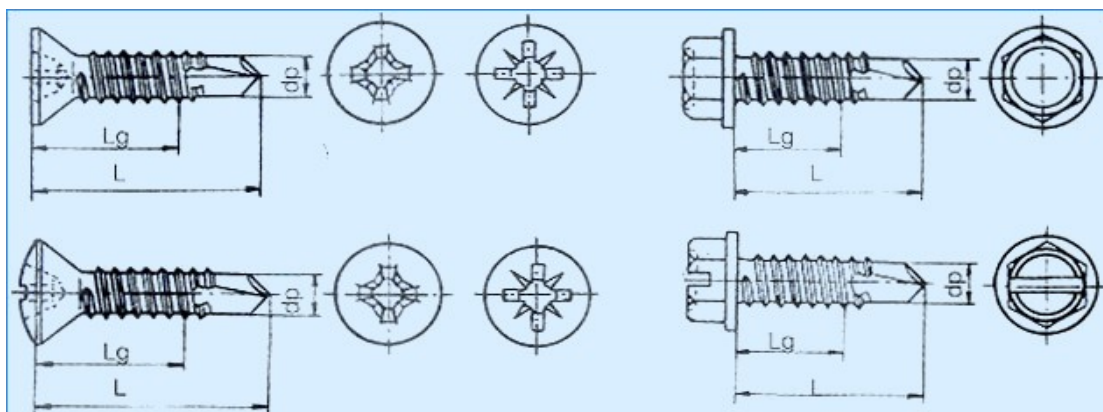


Thread size	2.9	3.5	3.9	4.2	4.8	5.5	6.3
dk	5.5	6.8	7.5	8.1	9.5	10.8	12.5
f	0.9	1.2	1.3	1.4	1.5	1.7	2
k	1.7	2.1	2.3	2.5	3	3.4	3.8
n	0.8	1	1	1.2	1.2	1.6	1.6
L	6.5-25	6.5-50	9.5-50	9.5-63	9.5-63	13-75	13-75

mm

SELF-DRILLING TAPPING SCREWS

DIN 7504

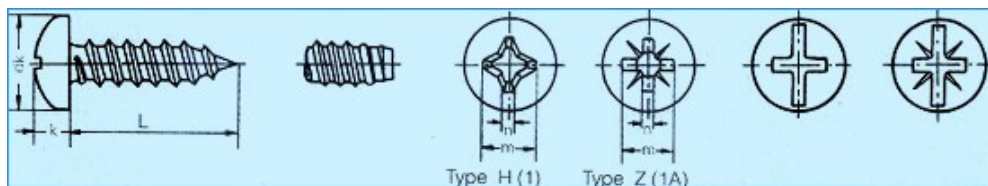


Thread size	ST2.9	ST3.5	ST4.2	ST4.8	ST5.5	ST6.3
dp	2.3	2.8	3.6	4.1	4.8	5.8
Lg	12.5	18.1	29.0	39.5	8-39	7-38
L	6.5-25	6.5-50	9.5-50	9.5-63	13-75	13-75

mm

CROSS RECESSED PAN HEAD TAPPING SCREWS

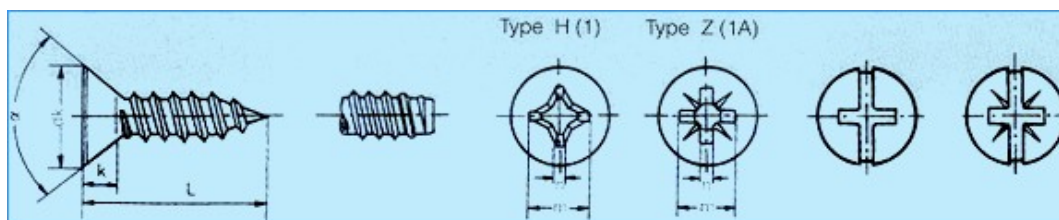
DIN 7981



		mm						
Thread size		2.9	3.5	3.9	4.2	4.8	5.5	6.3
Pitch		5.6	6.9	7.5	8.2	9.5	10.8	12.5
k		2.2	2.6	2.8	3.05	1.55	3.95	4.55
Cross recess	(Type H)m	3	4.2	4.4	4.6	5	6.5	7.1
	(Type Z)m	2.9	3.9	4.1	4.3	4.7	6.2	6.7
	No	1	1	2	2	2	3	3
L		6.5-25	6.5-50	9.5-50	9.5-63	9.5-63	13-75	13-75

CROSS RECESSED COUNTERSUNK HEAD TAPPING SCREWS

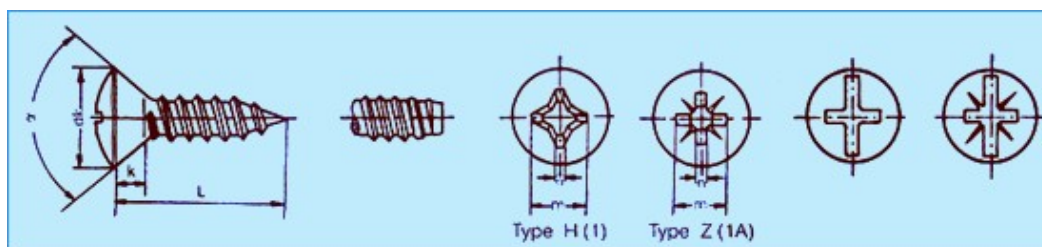
DIN 7982



		mm						
Thread size		2.9	3.5	3.9	4.2	4.8	5.5	6.3
dk		5.5	6.8	7.5	8.1	9.5	10.8	12.4
k		1.7	2.1	2.3	2.5	3	3.4	3.8
Cross recess	(Type H) m	3	4.2	4.6	4.7	5.1	5.8	7.1
	(Type Z) m	2.8	4	4.2	4.4	5	6.3	7
	No	1	1	2	2	2	3	3
L		6.5-25	6.5-50	9.5-50	9.5-63	9.5-63	13-75	13-75

CROSS RECESSED RAISED COUNTERSUNK HEAD TAPPING SCREWS

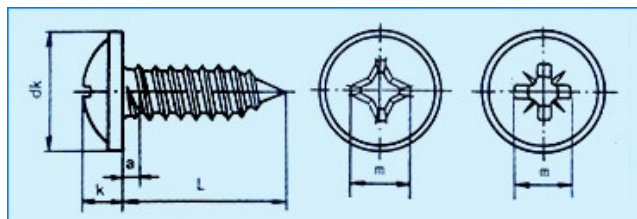
DIN 7983



		mm						
Thread size		2.9	3.5	3.9	4.2	4.8	5.5	6.3
dk		5.5	6.8	7.5	8.1	9.5	10.8	12.4
f		0.9	1.2	1.3	1.4	1.5	1.7	2
k		1.7	2.1	2.3	2.5	3	3.4	3.8
Cross	(Type H) m	3.4	4.6	4.7	4.9	5.4	7	7.4
	(Type Z) m	3.1	4.3	4.4	4.6	5.1	6.6	7.1
	No	1	1	2	2	2	3	3
L		6.5-25	6.5-50	9.5-50	9.5-63	9.5-63	13-75	13-75

CROSS RECESSED PAN HEAD TAPPING SCREWS WITH COLLAR

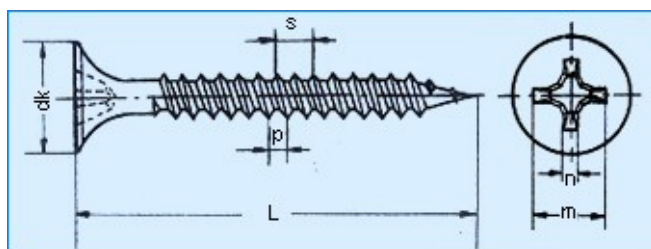
DIN 968



mm

Thread size	ST2.9	ST3.5	ST4.2	ST4.8	ST5.5	ST6.3
dk	7.50	9.00	10.0	11.5	13.0	14.5
k	2.35	2.60	3.05	3.55	3.80	4.55
Cross	(Type H) m	3.00	4.20	4.60	5.00	6.50
	(Type Z) m	2.90	3.90	4.30	4.70	6.20
No	1	2	2	2	3	3
L	6.5-19	9.5-25	9.5-32	9.5-50	13-50	13-50

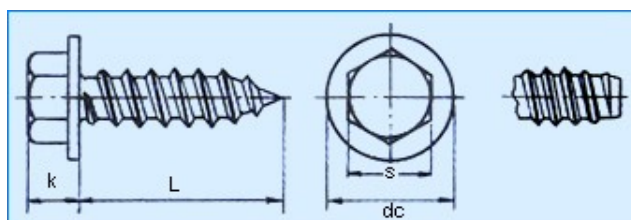
DRYWALL SCREWS TYPE S PHILLIPS RECESSED BUGLE HEAD TWINFAST



Thread size	Threads/in	dk	Cross recess		L(in)
			No	m	
6	18	8.4	2	4.9	3/4-2 1/2
7	16	8.4	2	4.9	1-2 1/2
8	15	8.4	2	4.9	2-4

HEXAGON WASHER HEAD TAPPING SCREWS

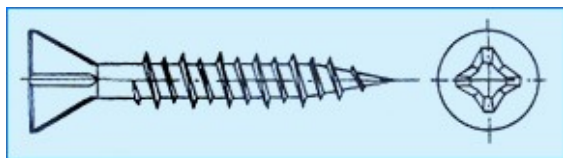
DIN 6928



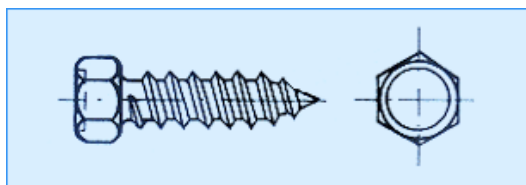
mm

Thread size	ST2.9	ST3.5	ST4.2	ST4.8	ST6.3	ST8.0
dc	6.30	8.30	8.80	10.5	13.5	18.0
k	2.80	3.40	4.0	4.30	5.90	7.00
s	4.00	5.50	7.00	8.00	10.0	13.0
L	6.5-25	6.5-50	9.5-50	9.5-63	13-75	13-75

FERMACELL SCREWS WITH RIBS UNDER THE HEAD

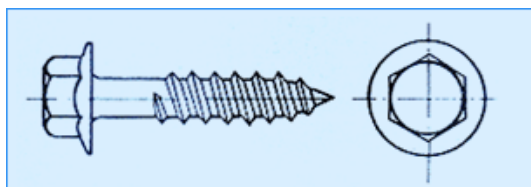


HEX HEAD TAPPING SCREWS



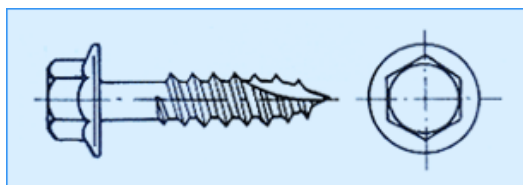
Nominal size	4.2	4.8	5.5	6.3	8#	10#	12#	1/4
Length	9.5-50	13-75	16-100	16-120	3/8-2	1/2-3	3/4-4	3/4-5

HEX FLANGE HEAD SELF-TAPPING SCREWS



Nominal	5.5	6.3	12#	14#
Length	16-120	16-180	16-120	16-180

HEX FLANGE HEAD TYPE 17 SCREWS

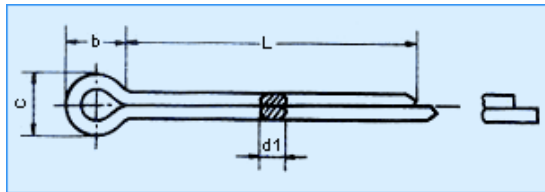


Nominal	12#	1/4	5.5	6.3
Length	1-5	1 1/2-5	25-120	30-120

PINS, RIVETS AND ANCHORS

SPLIT PINS

DIN 94

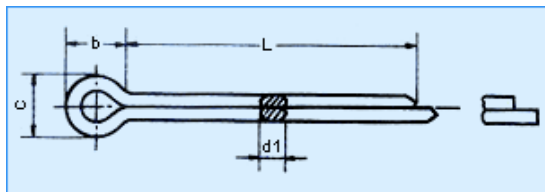


Nominal	2	2.5	3.2	4	5	6.3	8	10
d1	1.8	2.3	2.9	3.7	4.6	5.9	7.5	9.5
b	4	5	6.4	8	10	12.6	16	20
c	3.2	4	5.1	6.5	8	10.3	13.1	16.6
L	10-40	12-50	18-80	20-125	20-125	28-140	36-140	56-140

mm

SPLIT PINS

ISO 1234

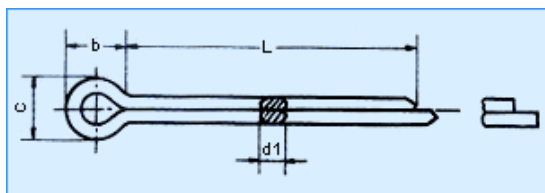


Nominal	1	1.2	1.6	2	2.5	3.2	4	5	6.3	8	10
d1	0.8	0.9	1.3	1.7	2.1	2.7	3.5	4.4	5.7	7.3	9.3
b	3	3	3.2	4	5	6.4	8	10	12.6	16	20
c	1.8	2	2.8	3.6	4.6	5.8	7.4	9.2	11.8	15	19
L	6-20	8-20	8-20	10-20	12-50	18-80	20-80	20-80	28-80	36-80	56-80

mm

COTTER PINS

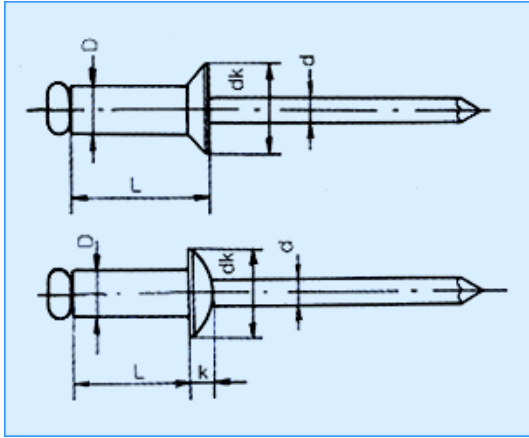
B.S.



Nominal	3/32	7/64	1/8	9/64	5/32	11/64	3/16	7/32	1/4	9/32	5/16	3/8
d1	2.11	2.57	2.70	3.36	3.51	4.09	4.40	5.29	5.69	6.86	6.29	9.10
b	4.83	5.59	6.35	7.11	7.87	8.64	9.65	11.18	12.7	14.22	15.75	19.05
c	4.72	5.48	6.29	7.11	7.87	8.68	9.44	11.07	12.64	14.22	15.97	18.94
L(in)	3/8-7/8	3/8-2	1/2-3	1/2-3	5/8-3	5/8-3	5/8-3	3/4-3	3/4-3	1 1/2-3	1 1/2-3	1 1/2-3

inches

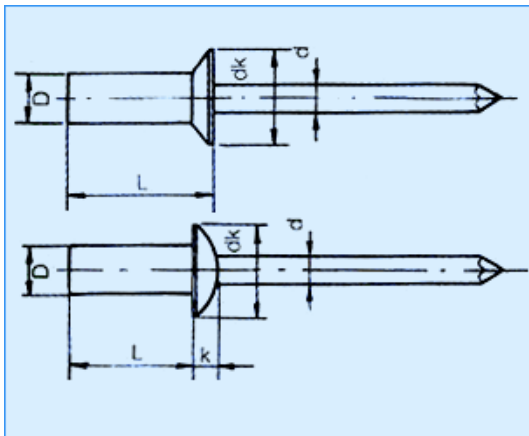
BLIND RIVET



Nominal	3	3.2	4	4.8	5
L	4.8-16	4.8-18	4.8-22	6.4-30	6.4-30
dk	6	6	8	9.5	9.5
k	1	1	1.4	1.5	1.5
d	1.8	1.8	2.2	2.6	2.8

mm

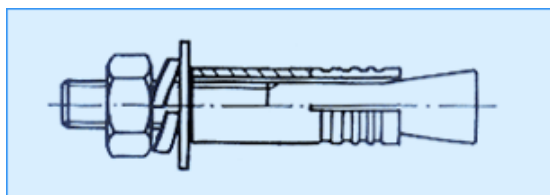
SEALED TYPE ALUMINIUM BLIND RIVET



Nominal	3.2	4	4.8	5
L	5-18	5-22	8-30	8-30
dk	6	8	9.5	9.5
k	1	1.4	1.5	1.5
d	1.7	2.2	2.64	2.8

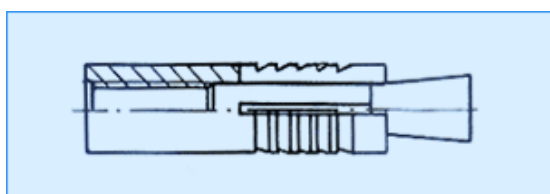
mm

BOLT ANCHORS



Thread size	M6	M8	M10	M12	M16	M20	M22	M24
-------------	----	----	-----	-----	-----	-----	-----	-----

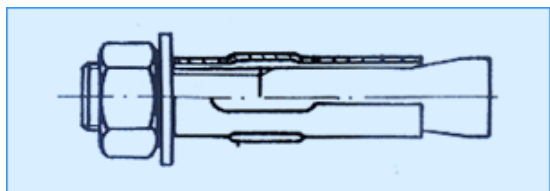
CUT ANCHORS



Thread size	M6	M8	M10	M12	M16	M20	M22
Length	30	35	40	52	63	83	93

mm

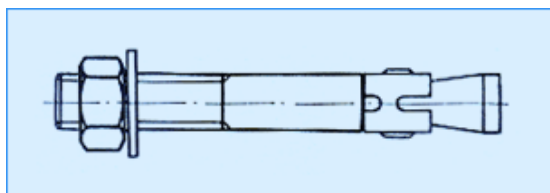
SLEEVE ANCHORS



Nominal size	6.5	8	10	12	16	20
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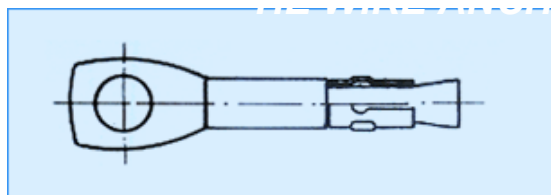
mm

WEDGE ANCHORS



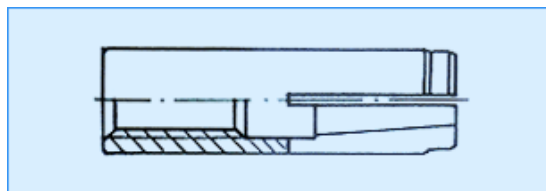
Thread size	M6	M8	M10	M12	M16	M20
Length	49-95	50-220	65-250	75-250	90-250	90-300

mm



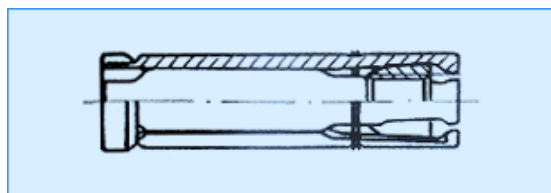
Nominal size	mm	
	6	6
L	60	67

DROP IN ANCHORS



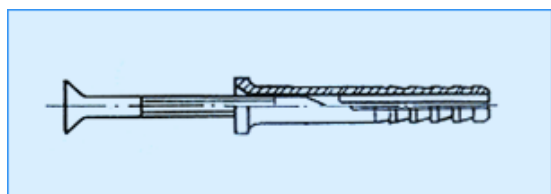
Thread size	mm					
	M6	M8	M10	M12	M16	M20
Length	25	30	40	50	65	80

HEAVY-DUTY SHELLANCHOR



Thread size	mm					
	M6	M8	M10	M12	M16	M20
Length	45	55	60	75	115	130

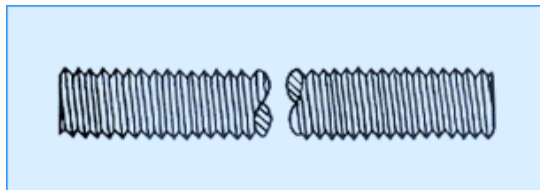
NYLON HAMMER FIXING



Nominal size	mm		
	5	6	8
Length	20-50	35-80	60-135

THREADED RODS AND OTHERS

THREADED ROD



Thread size	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24
LENGTH	1000mm-40000mm									

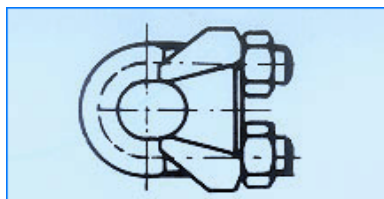
mm

Thread size	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1
LENGTH	3feet-12feet									

inches

WIRE ROPE CLAMPS

DIN 741

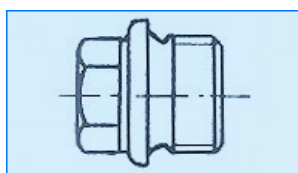


for rope dia	3	5	6.5	8	10	11	13	14	16
Thread size	M4	M5	M5	M6	M8	M8	M10	M10	M12

mm

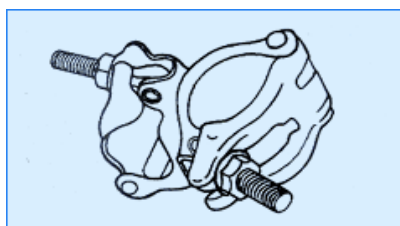
HEX HEAD PIPE PLUGS

DIN 910

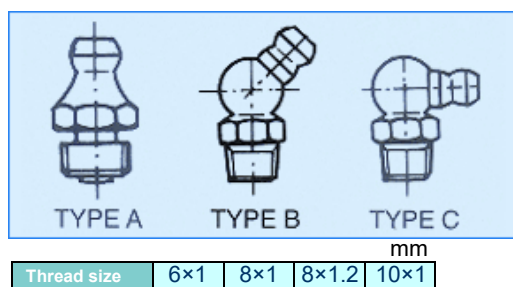


Thread size	M10	M12	M14	M16	M18	M20	M22	M24	M26	M30	M36
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STEEL PIPE SCAFFOLD



GREASE FITTING



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