

MADE IN CHINA
FASTEN THE WORLD



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SCREW MANUFACTURER

www.hy-fastener.com

宁波市弘愿精密五金制造有限公司
Ningbo Hongyuan Precision Hardware Manufacturing Co., Ltd





COMPANY PROFILE

Ningbo Hongyuan Precision Hardware Manufacturing Co., Ltd. Was founded in 2005. The factory is located at Binhai Avenue, China-Italy Ecological Park, Xiaocaoe, Yuyao City, Ningbo, Zhejiang Province, covering a plant area of 13, 000 square meters. With 100 employees, including over 20 R&D personnel, the company has been deeply rooted in the industry for two decades. Driven by technological innovation and customer-oriented, Hongyuan is committed to providing high-precision, high-reliability fastener one-stop solutions.

Currently equipped with 400 high-precision machines, the company has an annual production capacity of 3 billion screws and annual sales of 300 million RMB, making it a fast-growing professional fastener manufacturer. Its main products include stainless steel screws, rivets, nuts, and flat washers. The production facility houses 150 cold heading machines, 100 thread-rolling machines, 12 automatic packaging machines, inspection equipment, 18 optical sorting machines for screws, and 8 full-set quality inspection machines for screw screening.

Hongyuan has obtained RoHS and REACH certifications and is expected to achieve IATF 16949 certification in Q3 2025. In 2025, Hongyuan was jointly recognized by third-party authorities (Made-in-China and SGS) as a "Leading Factory" in China's fastener industry, further solidifying its market position.

Specializing in stainless steel fastener manufacturing, Hongyuan employs seasoned technicians with over 20 years of experience. Each production process undergoes strict quality checks by dedicated inspectors, ensuring compliance with rigorous quality control standards. The company's products are widely used in electronics, machinery, medical equipment, new energy, telecommunications, and other industries.

With a daily production capacity exceeding 8 million pieces and over 10 million standard products in stock for same-day shipment, Hongyuan supports custom orders based on drawings or samples, guaranteeing one-hour confirmation and two-hour prototyping.

"Though screws are small, safety is paramount-connecting the world, securing safety." This remains the unwavering goal of Hongyuan. We strive to provide customers with satisfactory products, superior service, and reliable after-sales support.

Hongyuan: Empowering Global Industrial Advancement with Precision Fastening Technology.

Made in China, Fasten the World!

QUALIFICATION CERTIFICATE



Quality Management System

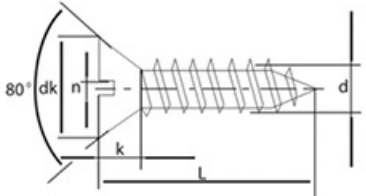
- Passed ISO9001:2015
- Quality Management System Certification



TAPPING SCREWS

ISO 1482 EN-

DIN 7972



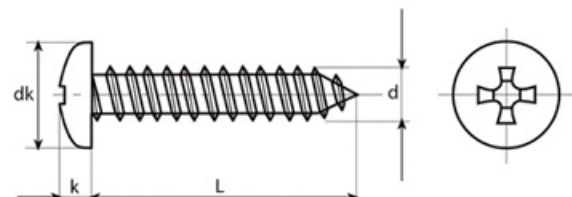


Slotted countersunk head tapping screws

d	ST2,9	ST3,5	ST3,9	ST4,2	ST4,8	ST5,5	ST6,3
P	1,1	1,3	1,3	1,4	1,6	1,8	1,8
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
No. ISO	4 #	6 #	7 #	8 #	10 #	12 #	14 #

ISO 7049 EN-

DIN 7981



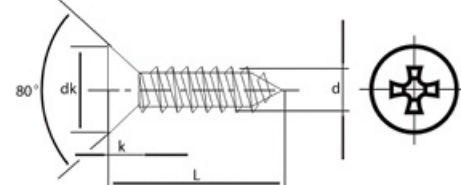


Cross recessed pan head tapping screws

d	ST2,9	ST3,5	ST3,9	ST4,2	ST4,8	ST5,5	ST6,3
P	1,1	1,3	1,3	1,4	1,6	1,8	1,8
dk	5,6	6,9	7,5	8,2	9,5	10,8	12,5
k	2,2	2,6	2,8	3,05	3,55	3,95	4,55
No. Phillips(H)	1	2	2	2	2	3	3
No. ISO	4 #	6 #	7 #	8 #	10 #	12 #	14 #

ISO 7050 EN-

DIN 7982





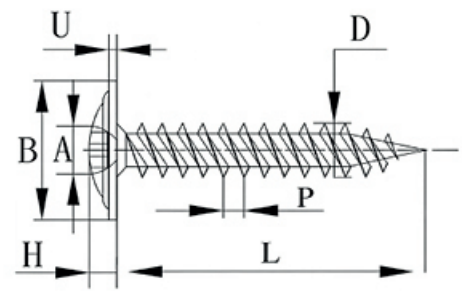
Cross recessed flat countersunk head tapping screws

d	ST2,9	ST3,5	ST3,9	ST4,2	ST4,8	ST5,5	ST6,3
P	1,1	1,3	1,3	1,4	1,6	1,8	1,8
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
No. Phillips(H)	1	2	2	2	2	3	3
No. ISO	4 #	6 #	7 #	8 #	10 #	12 #	14 #

TRUSS HEAD SCREWS

MTS-Sharp

ISO -EN-



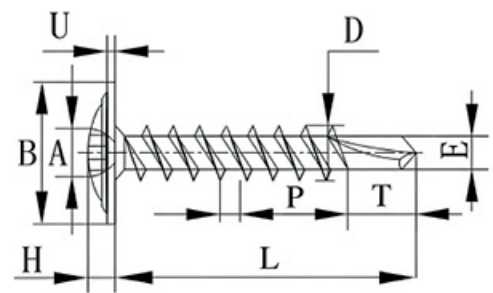


Modified Truss Head Self Tapping Screws,Twinfast Thread

Size	A	B	U	H	D	P	Torque Min(N*m)
#8-15 (4,2-1,7)	#2Phil	10,60	1,20	2,40	4,22	Ref.	3,7
		10,20	0,80	2,00	4,05	1,70	
Notes:				Nominal Length L:			
1、 Case Depth:0.10-2.23mm				10-19mm incl. +0 / -0.76			
2、 Case Hardness:Hv 550-700				19-38mm incl. +0 / -1.27			
3、 Core hardness:Hv 320-420				41-76mm incl. +0 / -1.52			

MTS-Drilling

ISO-EN-



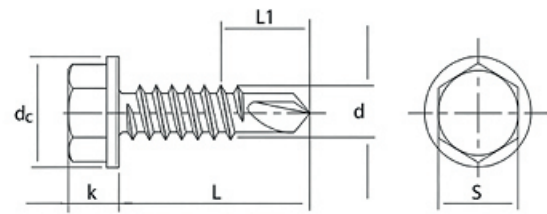


Modified Truss Head Self Drilling Screw

Size	A	B	U	H	D	P	T	E	Torque Min(N*m)
#8-18 (4,2-1,4)	#2Phil	10,60	1,20	2,40	4,22	Ref.	5,80	3,45	4,2
		10,20	0,80	2,00	4,05	1,41	4,45	3,35	
Notes:							Nominal Length L:		
1、 Case Depth:0.10-2.23mm							10-19mm incl. +0 / -0.76		
2、 Case Hardness:Hv 550-700							19-38mm incl. +0 / -1.27		
3、 Core hardness:Hv 320-420							41-76mm incl. +0 / -1.52		

SELF DRILLING SCREWS

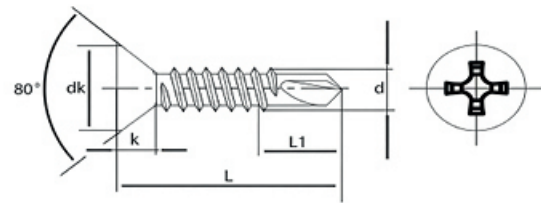
ISO-EN- DIN 7504-K



Hexagon washer Head Self-drilling screws

d	ST3,5	ST4,2	ST4,8	ST5,5	ST6,3
P	1	1,4	1,6	1,8	1,8
dc	8,3	8,8	10,5	1	13,2
k (max)	3,45	4,25	4,45	5,45	6,45
s	5,5	7	8	8	10
L1	6	7	9	11	12
No.ISO	6 #	8 #	10 #	12 #	14 #

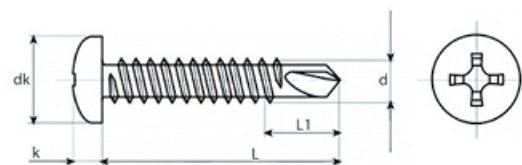
ISO-EN- DIN 7504-P



Phillips flat head self-drilling screws

d	ST3,5	ST(3,9)	ST4,2	ST4,8	ST5,5
P=pitch	1,3	1,3	1,4	1,6	1,8
dk	6,8	7,5	8,1	9,5	10,8
L1	5	6	7	8	10
No. Phillips(H)	2	2	2	2	3
No. ISO	6 #	7 #	8 #	10 #	12 #

ISO-EN- DIN 7504-N

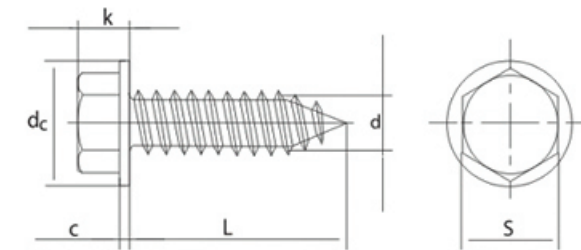


Phillips pan head self-drilling screws

d	ST2,9	ST3,5	ST(3,9)	ST4,2	ST4,8	ST5,5
P = pitch	1,1	1,3	1,3	1,4	1,6	1,8
dk	5,6	6,9	7,5	8,2	9,5	10,8
k	2,2	2,6	2,8	3,05	3,55	3,95
L1	4,5	5	6	7	8	9
No. Phillips(H)	1	2	2	2	2	3
No. ISO	4 #	6 #	7 #	8 #	10 #	12 #

TAPPING SCREWS

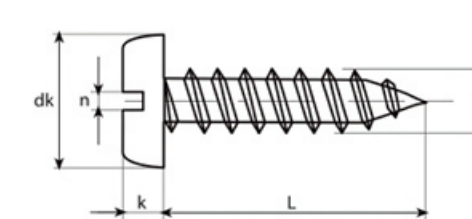
LSO 7053 EN - DIN 6928



Hexagon washer head tapping screws

d	ST3,5	ST4,2	ST4,8	ST6,3
P	1,3	1,4	1,6	1,8
dc min	7,6	8,1	9,8	12,2
dc max	8,3	8,8	10,5	13,5
k	2,5	2,8	3,1	4,95
c	0,5	0,6	0,7	0,9
s	5,5	7	8	10
No. ISO	6 #	8 #	10 #	14 #

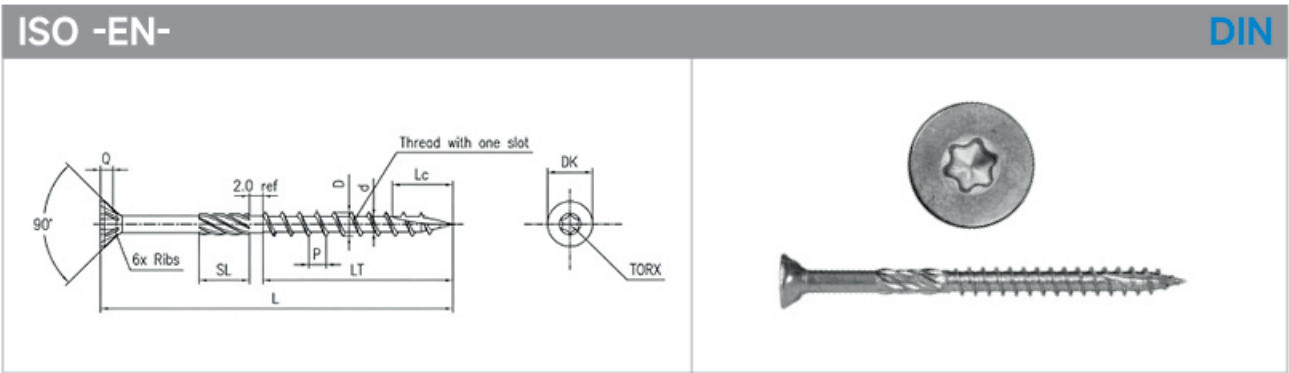
ISO 1482 EN - DIN 7971



Hexagon washer head tapping screws

d	ST2,9	ST3,5	ST3,9	ST4,2	ST4,8	ST5,5	ST6,3
P	1,1	1,3	1,3	1,4	1,6	1,8	1,8
dk	5,6	6,9	7,5	8,2	9,5	10,8	12,5
k	1,75	2,1	2,25	2,45	2,8	3,2	3,65
n	0,8	1	1	1,2	1,2	1,6	1,6
No. ISO	4 #	6 #	7 #	8 #	10 #	12 #	14 #

TIMBER SCREWS

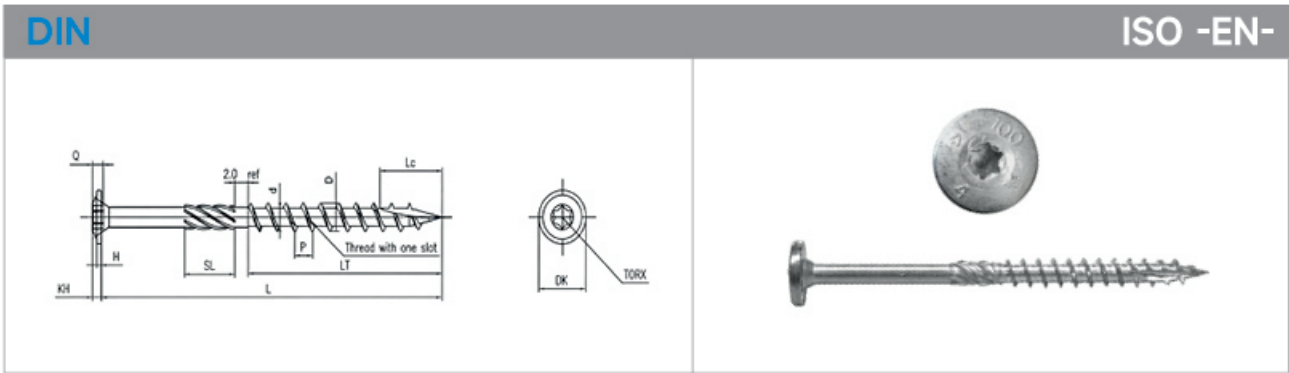


Torx Drive Flat Head Timber Screws

SIZE	DK	Q	TORX	D	d	P±10%	SL	Lc
3.0	5.6-6.0	1.10-1.40	T10	2.8-3.1	1.7-1.9	1.45	Ref 4	5.0-6.0
3.5	6.6-7.0	1.30-1.60	T15	3.3-3.6	1.9-2.2	2.20	Ref 5	6.0-7.0
4.0	7.5-8.0	1.70-2.00	T20	3.8-4.1	2.2-2.5	2.60	Ref 5	7.0-8.0
4.5	8.5-9.0	1.70-2.00	T25	4.2-4.6	2.6-3.0	2.80	Ref 6	8.0-9.0
5.0	9.5-10.0	2.00-2.40	T25	4.7-5.1	2.7-3.1	3.20	Ref 8	10.0-12.0
6.0	11.5-12.0	2.40-2.85	T30	5.8-6.2	3.6-4.0	4.50	Ref 12	12.0-14.0
8.0	14.3-15.2	3.00-3.45	T40	7.8-8.3	5.1-5.5	5.50	Ref 12	14.0-16.0
10.0	17.4-18.2	3.40-3.85	T40	9.7-10.3	6.0-6.5	6.60	Ref 12	16.0-18.0

3.0		3.5		4.0		4.5		5.0		6.0		8.0		10.0					
L	LT	L	LT	L	LT	L	LT	L	LT	L	LT	L	LT	L	LT				
16	Full	16	Full	16	Full	25	Full	25	Full	40	25	80	50	80	50				
20	Full	20	Full	20	Full	30	15	30	15	50	25	90	50	90	50				
25	Full	25	Full	25	Full	35	15	35	15	60	35	100	50	100	50				
30	15	30	15	30	15	40	25	40	25	70	35	110	50	110	50				
35	15	35	15	35	15	45	25	45	25	80	50	120 360	80	120 360	80				
40	25	40	25	40	25	50	25	50	25	90	50								
45	25	45	25	45	25	60	35	60	35	100	50								
		50	25	50	25	70	35	70	35	110	50								
				55	35	80	35	80	35	120 300	80								
				60	35			90	50										
				70	35			100	50										
								120	50										
											80								
L		L ≤ 50		50<L ≤ 80		80<L ≤ 120		L>120											
Tolerance		-1.25		-1.5		-1.75		-2											

TIMBER SCREWS



Torx Drive Flat Head Timber Screws

SIZE	DK	Q	TORX	D	d	P±10%	SL	Lc
3.0	5.6-6.0	1.10-1.40	T10	2.8-3.1	1.7-1.9	1.45	Ref 4	5.0-6.0
3.5	6.6-7.0	1.30-1.60	T15	3.3-3.6	1.9-2.2	2.20	Ref 5	6.0-7.0
4.0	7.5-8.0	1.70-2.00	T20	3.8-4.1	2.2-2.5	2.60	Ref 5	7.0-8.0
4.5	8.5-9.0	1.70-2.00	T25	4.2-4.6	2.6-3.0	2.80	Ref 6	8.0-9.0

5.0			6.0			8.0			10.0					
L	LT	SL	L	LT	SL	L	LT	SL	L	LT	SL			
25	Full	8	50	30	6	80	50	12	80	50	12			
30	15	8	60	35	6	100	50	12	100	50	12			
35	15	8	70	35	6	120 l 360	80	12	120 l 360	80	12			
40	25	8	80	50	10									
45	25	8	100	50	12									
50	25	8	120 l 300	80	12									
60	35	8												
70	35	8												
80	35	8												
90	50	8												
100	50	8												
120	50	8												
		L		L ≤ 50		50<L ≤ 80		80<L ≤ 120		L>120		Tolerance		
												-1.25		
												-1.5		
												-1.5		
												-2		

CHIPBOARD SCREWS

DECK SCREWS

Wood Screw,Twinfast Thread Double leads

Pozi Drive Countersunk Flat Head Wood Screw,Twinfast Thread Double leads

Size	A		H		Q		M	Drive	D		d	P	ds	Trosion
	Min	Max	Ref.	Max	Min	Max			Min	Max				
#4-2.9	5.21	5.49	1.85	2.05	1.32	1.73	2.74	1	2.72	2.92	1.65	1.10	2.15-2.25	1.50
#5-3.2	5.89	6.20	2.08	2.28	1.14	1.80	3.50	2	3.05	3.25	1.88	1.27	2.35-2.40	1.50
#6-3.5	6.55	6.91	2.28	2.54	1.85	2.31	4.22	2	3.38	3.58	2.16	1.41	2.60-2.70	2.80
#7-3.9	7.24	7.62	2.51	2.76	1.85	2.31	4.22	2	3.74	3.94	2.41	1.59	2.80-2.90	3.80
#8-4.2	7.93	8.33	2.72	2.99	2.26	2.72	4.60	2	4.09	4.29	2.77	1.69	3.20-3.30	4.20
#10-4.8	9.27	9.75	3.17	3.45	2.64	3.10	4.98	2	4.73	4.93	3.15	1.95	3.65-3.75	6.20
#12-5.5	10.62	11.18	3.61	3.91	2.72	3.18	6.35	3	5.38	5.64	3.61	2.21	4.20-4.30	9.40
#14-6.3	11.99	12.60	4.04	4.34	3.00	3.45	6.60	3	6.17	6.45	4.19	2.54	4.95-5.05	10.80

Notes:
1. Material:C1022A ,Stainless Steel
2. Case Hardness: 470-720 HV0.3
3. Core Hardness: 300-420 HV0.3
4. Case Depth:#4-#6:0.05-0.18mm
#8-#12:0.10-0.23mm
#14:0.13-0.28mm

Thread length LT(±1 pitch):
up to 1-1/4"=fully
1-1/2" to 1-3/4"=30
2" to 2-1/4"=37
2-1/2" to 3"=50
3-1/2"=67
Over 4"=70

Nominal Length L:
01-10mm incl.+0/-0.75
11-30mm incl.+0/-0.90
31-50mm incl.+0/-1.10
51-80mm incl.+0/-1.50
81-120mm incl.+0/-1.75
121-200mm incl.+0/-2.00

Wood Screw,Twinfast Thread Double leads

Pozi Drive Round Head Wood Screw,Twifast Thread Double leads

Size	A		H		Q		M	Drive	D		d	P	ds	Trosion
	Min	Max	Ref.	Max	Min	Max			Min	Min				
#4-2.9	5.21	5.49	1.85	2.05	1.27	1.72	2.90	1	2.72	2.72	1.65	1.10	2.15-2.25	1.50
#5-3.2	5.89	6.20	2.08	2.28	1.42	1.82	3.70	2	3.05	3.05	1.88	1.27	2.35-2.40	1.50
#6-3.5	6.55	6.91	2.28	2.54	1.47	1.93	3.91	2	3.38	3.38	2.16	1.41	2.60-2.70	2.80
#7-3.9	7.24	7.62	2.51	2.76	1.70	2.16	4.11	2	3.74	3.74	2.41	1.59	2.80-2.90	3.80
#8-4.2	7.93	8.33	2.72	2.99	1.85	2.31	4.26	2	4.09	4.09	2.77	1.69	3.20-3.30	4.20
#10-4.8	9.27	9.75	3.17	3.45	2.26	2.72	4.67	2	4.73	4.73	3.15	1.95	3.65-3.75	6.20
#12-5.5	10.62	11.18	3.61	3.91	2.41	2.87	6.14	3	5.38	5.38	3.61	2.21	4.20-4.30	9.40
#14-6.3	11.99	12.60	4.04	4.34	3.05	3.50	6.75	3	6.17	6.17	4.19	2.54	4.95-5.05	10.80

Notes:
1. Material: C1022A ,Stainless Steel
2. Case Hardness: 470-720 HV0.3
3. Core Hardness: 300-420 HV0.3
4. Case Depth:#4-#6:0.05-0.18mm
#8-#12:0.10-0.23mm
#14:0.13-0.28mm

Thread length LT(±1 pitch):
up to 1-1/4"=fully
1-1/2" to 1-3/4"=30
2" to 2-1/4"=37
2-1/2" to 3"=50
3-1/2"=67
Over 4"=70

Nominal Length L:
01-10mm incl.+0/-0.75
11-30mm incl.+0/-0.90
31-50mm incl.+0/-1.10
51-80mm incl.+0/-1.50
81-120mm incl.+0/-1.75
121-200mm incl.+0/-2.00

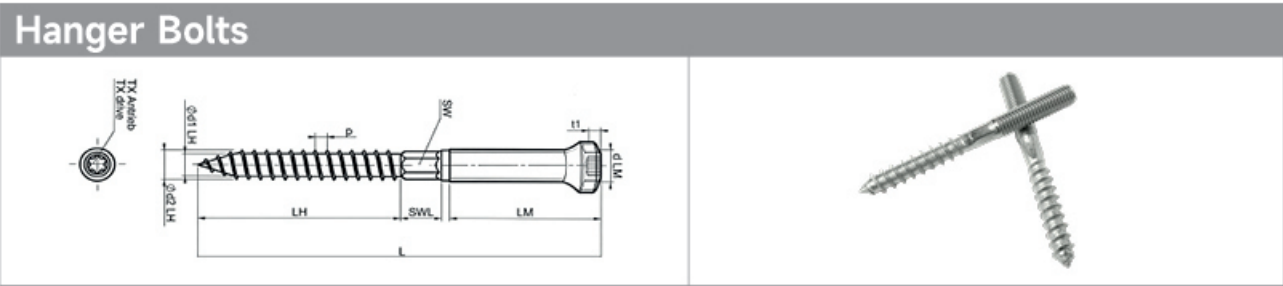
Deck Screw,Star Drive Flat Head W/5 Nibs T-17

SIZE	DK	H	K	Q	TORX	DO	D	P	L	LT	Torque
#8x1-1/4"	7.6-8.2	3.2-4.1	0.8-1	1.5-1.8	T-20	3.2	4.35-4.7	9	30.5-33	14.75-16.75	4.6
#8x1-5/8"	7.6-8.2	3.2-4.1	0.8-1	1.5-1.8	T-20	3.2	4.35-4.7	9	40.05-42.55	20.28-22.28	4.6
#8x2"	7.6-8.2	3.2-4.1	0.8-1	1.5-1.8	T-20	3.2	4.35-4.7	9	49.3-52.3	27.8-29.8	4.6
#9x2-1/2"	8.2-8.8	3.4-4.3	0.8-1	1.9-2.2	T-25	3.5	4.6-5	9	62-65	34.5-36.5	5.6
#9x3"	8.2-8.8	3.4-4.3	0.8-1	1.9-2.2	T-25	3.5	4.6-5	9	74.7-77.7	35.2-37.2	5.6
#10x3-1/2"	8.8-9.4	3.65-4.55	0.8-1	1.9-2.2	T-25	3.8	4.9-5.3	8	87.15-90.65	47.4-50.4	6.6

Deck Screw,Star Drive Double Flat Head W/6 Nibs Auger Threads T-17

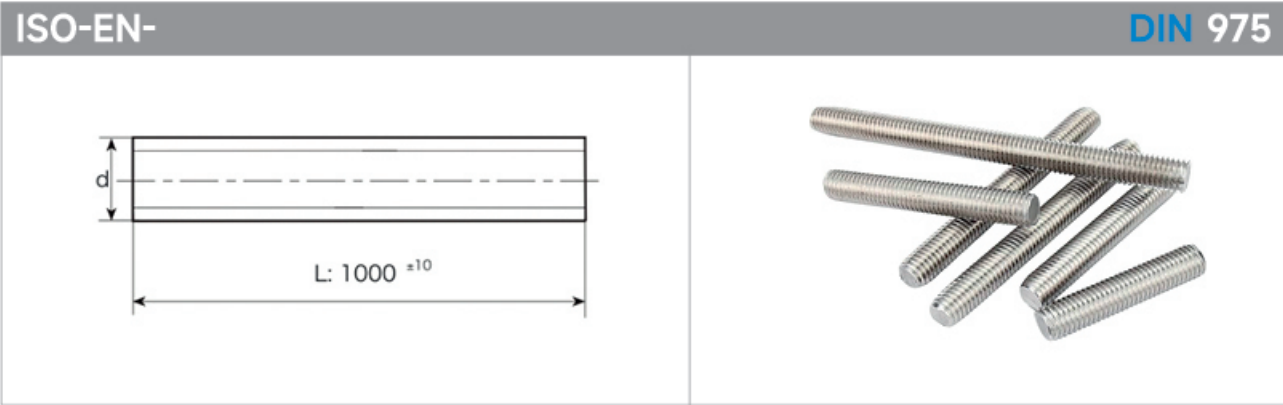
SIZE	DK	H	K	Q	TORX	DO	D	P	L	LT	Torque
#8x1-1/4"	7.87-8.38	4.5-6	0.51-0.79	≥ 1.27	3.02-3.12	4-4.45	≥ 2.69	8	31.75-33	21.17-22	14.3-15.55
#8x1-5/8"	7.87-8.38	4.5-6	0.51-0.79	≥ 1.27	3.02-3.12	4-4.45	≥ 2.69	8	41.28-42.55	27.52-28.37	14.3-15.55
#8x2"	7.87-8.38	4.5-6	0.51-0.79	≥ 1.27	3.02-3.12	4-4.45	≥ 2.69	8	50.8-52.3	33.86-34.86	19-20.25
#10x2-1/2"	8.76-9.27	4.5-6	0.51-0.79	≥ 1.27	3.63-3.76	5-5.16	≥ 3.4	9	63.5-65	42.33-43.33	19-20.25
#10x3"	8.76-9.27	4.5-6	0.51-0.79	≥ 1.27	3.63-3.76	5-5.16	≥ 3.4	9	76.2-77.7	50.8-51.8	19-20.25
#10x3-1/2"	8.76-9.27	4.5-6	0.51-0.79	≥ 1.27	3.63-3.76	5-5.16	≥ 3.4	9	88.9-90.65	59.27-60.43	19-20.25
#10x4"	8.76-9.27	4.5-6	0.51-0.79	≥ 1.27	3.63-3.76	5-5.16	≥ 3.4	9	101.6-103.35	68-70	19-20.25

HANGER BOLTS



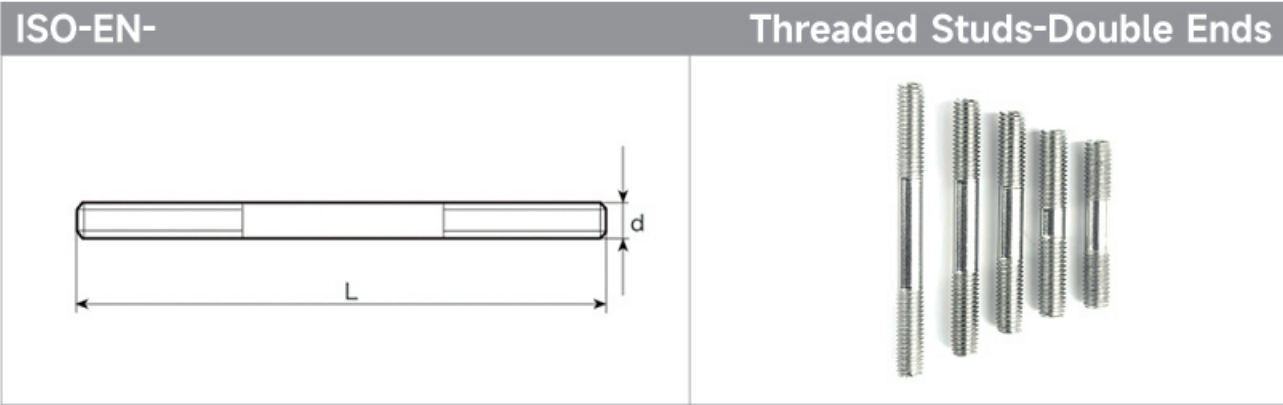
HANGER BOLT											
DIA	Length	metric/L	wood/L	wood outer	wood core	wood pitch	SW	SW/L	TORX		
M4	20	+/- 2.0	10	+/-1.5	10	+/- 1.5	4.2+/- 0.15	3.45	1.8+/- 0.3	w/o	w/o
M4	25	+/-2.0	10	+/-1.5	10	+/- 1.5	4.2+/- 0.15	3.45	1.8+/- 0.3	w/o	w/o
M4	30	+/-2.0	10	+/-1.5	15	+/- 1.5	4.2+/- 0.15	3.45	1.8+/- 0.3	w/o	w/o
M4	35	+/-2.0	15	+/-1.5	15	+/- 1.5	4.2+/- 0.15	3.45	1.8+/- 0.3	w/o	w/o
M4	40	+/-2.0	17	+/-1.5	20	+/- 1.5	4.2+/- 0.15	3.45	1.8+/- 0.3	w/o	w/o
M5	25	+/-2.0	10	+/-1.5	15	+/- 1.5	5.35+/- 0.15	4.35	2.2+/- 0.3	w/o	w/o
M5	40	+/-2.0	15	+/-1.5	20	+/- 1.5	5.35+/- 0.15	4.35	2.2+/- 0.3	w/o	w/o
M5	50	+/-2.0	20	+/-1.5	20	+/- 1.5	5.35+/- 0.15	4.35	2.2+/- 0.3	w/o	w/o
M6	40	+/-2.0	17	+/-1.5	23	+/- 1.5	6+/- 0.15	4.7	2.6+/- 0.3	w/o	T15 2+/- 0.15
M6	50	+/-2.0	20	+/-1.5	30	+/- 1.5	6+/- 0.15	4.7	2.6+/- 0.3	w/o	T15 2+/- 0.15
M6	60	+/-2.0	20	+/-1.5	30	+/- 1.5	6+/- 0.15	4.7	2.6+/- 0.3	w/o	T15 2+/- 0.15
M6	70	+/-2.0	30	+/-1.5	30	+/- 1.5	6+/- 0.15	4.7	2.6+/- 0.3	w/o	T15 2+/- 0.15
M6	80	+/-2.0	30	+/-1.5	30	+/- 1.5	6+/- 0.15	4.7	2.6+/- 0.3	w/o	T15 2+/- 0.15
M6	90	+/-2.0	30	+/-1.5	30	+/- 1.5	6+/- 0.15	4.7	2.6+/- 0.3	w/o	T15 2+/- 0.15
M6	120	+/-2.0	30	+/-1.5	30	+/- 1.5	6+/- 0.15	4.7	2.6+/- 0.3	w/o	T15 2+/- 0.15
M6	150	+/-2.0	30	+/-1.5	30	+/- 1.5	6+/- 0.15	4.7	2.6+/- 0.3	w/o	T15 2+/- 0.15
M8	50	+/-1.25	15	+/-2.0	30	+/- 1.5	7.3+/- 0.15	5.4+/- 0.15	3.0+/- 0.3	w/o	T25 3.0+/- 0.3
M8	60	+/-1.5	20	+/-2.0	30	+/- 1.25	7.3+/- 0.15	5.4+/- 0.15	3.0+/- 0.3	6-0.15	8+/- 2 T25 3.0+/- 0.3
M8	70	+/-1.5	25	+/-2.0	30	+/- 1.25	7.3+/- 0.15	5.4+/- 0.15	3.0+/- 0.3	6-0.15	10+/- 2 T25 3.0+/- 0.3
M8	80	+/-1.5	30	+/-2.0	40	+/- 1.25	7.3+/- 0.15	5.4+/- 0.15	3.0+/- 0.3	6-0.15	10+/- 2 T25 3.0+/- 0.3
M8	90	+/-1.75	30	+/-2.0	40	+/- 1.25	7.3+/- 0.15	5.4+/- 0.15	3.0+/- 0.3	6-0.15	10+/- 2 T25 3.0+/- 0.3
M8	100	+/-1.75	40	+/-2.0	40	+/- 1.25	7.3+/- 0.15	5.4+/- 0.15	3.0+/- 0.3	6-0.15	10+/- 2 T25 3.0+/- 0.3
M8	110	+/-1.75	40	+/-2.0	50	+/- 1.25	7.3+/- 0.15	5.4+/- 0.15	3.0+/- 0.3	6-0.15	10+/- 2 T25 3.0+/- 0.3
M8	120	+/-1.75	50	+/-2.0	50	+/- 1.25	7.3+/- 0.15	5.4+/- 0.15	3.0+/- 0.3	6-0.15	10+/- 2 T25 3.0+/- 0.3
M8	130	+/-2.0	50	+/-2.0	50	+/- 1.25	7.3+/- 0.15	5.4+/- 0.15	3.0+/- 0.3	6-0.15	10+/- 2 T25 3.0+/- 0.3
M8	140	+/-2.0	50	+/-2.0	50	+/- 1.25	7.3+/- 0.15	5.4+/- 0.15	3.0+/- 0.3	6-0.15	10+/- 2 T25 3.0+0.1/- 0.5
M8	150	+/-2.0	50	+/-2.0	50	+/- 1.25	7.3+/- 0.15	5.4+/- 0.15	3.0+/- 0.3	6-0.15	10+/- 2 T25 3.0+0.1/- 0.5
M8	160	+/-2.0	50	+/-2.0	50	+/- 1.5	7.3+/- 0.15	5.4+/- 0.15	3.0+/- 0.3	6-0.15	10+/- 2 T25 3.0+0.1/- 0.5
M8	180	+/-2.0	50	+/-2.0	50	+/- 1.5	7.3+/- 0.15	5.4+/- 0.15	3.0+/- 0.3	6-0.15	10+/- 2 T25 3.0+0.1/- 0.5
M8	200	+/-2.0	50	+/-2.0	50	+/- 1.5	7.3+/- 0.15	5.4+/- 0.15	3.0+/- 0.3	6-0.15	10+/- 2 T25 3.0+0.1/- 0.5
M8	220	+/-2.0	50	+/-2.0	50	+/- 1.5	7.3+/- 0.15	5.4+/- 0.15	3.0+/- 0.3	6-0.15	10+/- 2 T25 3.0+0.1/- 0.5
M10	60	+/-1.5	18	+/-3.0	30	+/-1.25	8.9+/-0.15	7+/-0.15	3.0+/-0.3	8-0.15	8+/-2 T25 3.0+/-0.3
M10	70	+/-1.5	28	+/-3.0	30	+/-1.25	8.9+/-0.15	7+/-0.15	3.0+/-0.3	8-0.16	8+/-2 T25 3.0+/-0.4
M10	80	+/-1.5	30	+/-3.0	40	+/-1.25	8.9+/-0.15	7+/-0.15	3.0+/-0.3	8-0.15	10+/-2 T25 3.0+/-0.5
M10	90	+/-1.75	30	+/-3.0	50	+/-1.5	8.9+/-0.15	7+/-0.15	3.0+/-0.3	8-0.15	10+/-2 T25 3.0+/-0.6
M10	100	+/-1.75	30	+/-3.0	50	+/-1.5	8.9+/-0.15	7+/-0.15	3.0+/-0.3	8-0.15	10+/-2 T25 3.0+/-0.7
M10	110	+/-1.75	40	+/-3.0	60	+/-1.5	8.9+/-0.15	7+/-0.15	3.0+/-0.3	8-0.15	10+/-2 T25 3.0+/-0.8
M10	120	+/-1.75	50	+/-3.0	60	+/-1.5	8.9+/-0.15	7+/-0.15	3.0+/-0.3	8-0.15	10+/-2 T25 3.0+/-0.9
M10	130	+/-2.0	50	+/-3.0	60	+/-1.5	8.9+/-0.15	7+/-0.15	3.0+/-0.3	8-0.15	10+/-2 T25 3.0+0.1/-0.5
M10	140	+/-2.0	50	+/-3.0	60	+/-1.5	8.9+/-0.15	7+/-0.15	3.0+/-0.3	8-0.15	10+/-2 T25 3.0+0.1/-0.6
M10	150	+/-2.0	50	+/-3.0	60	+/-1.5	8.9+/-0.15	7+/-0.15	3.0+/-0.3	8-0.15	10+/-2 T25 3.0+0.1/-0.7
M10	160	+/-2.0	50	+/-3.0	60	+/-1.5	8.9+/-0.15	7+/-0.15	3.0+/-0.3	8-0.15	10+/-2 T25 3.0+0.1/-0.8
M10	180	+/-2.0	50	+/-3.0	60	+/-1.5	8.9+/-0.15	7+/-0.15	3.0+/-0.3	8-0.15	10+/-2 T25 3.0+0.1/-0.9
M10	200	+/-2.3	50	+/-3.0	60	+/-1.5	8.9+/-0.15	7+/-0.15	3.0+/-0.3	8-0.15	10+/-2 T25 3.0+0.1/-1.0
M10	220	+/-2.3	50	+/-3.0	60	+/-1.5	8.9+/-0.15	7+/-0.15	3.0+/-0.3	8-0.15	10+/-2 T25 3.0+0.1/-1.0
M12	100	+/-1.75	30	+/-3.0	60	+/-1.5	11+/-0.15	8.7+/-0.15	4.2+/-0.3	10-0.15	10+/-2 T30 3.0+/-0.3
M12	120	+/-1.75	40	+/-3.0	60	+/-1.5	11+/-0.15	8.7+/-0.15	4.2+/-0.3	10-0.15	10+/-2 T30 3.0+/-0.3
M12	140	+/-2.0	60	+/-3.0	60	+/-1.5	11+/-0.15	8.7+/-0.15	4.2+/-0.3	10-0.15	10+/-2 T30 3.0+0.1/-0.5
M12	160	+/-2.0	60	+/-3.0	60	+/-1.5	11+/-0.15	8.7+/-0.15	4.2+/-0.3	10-0.15	10+/-2 T30 3.0+0.1/-0.5
M12	180	+/-2.0	60	+/-3.0	60	+/-1.5	11+/-0.15	8.7+/-0.15	4.2+/-0.3	10-0.15	10+/-2 T30 3.0+0.1/-0.5
M12	200	+/-2.3	60	+/-3.0	60	+/-1.5	11+/-0.15	8.7+/-0.15	4.2+/-0.3	10-0.15	10+/-2 T30 3.0+0.1/-0.5
M12	250	+/-3.0	100	+/-3.0	80	+/-1.5	11+/-0.15	8.7+/-0.15	4.2+/-0.3	10-0.15	10+/-2 T30 3.0+0.1/-0.5
M12	300	+/-4.0	100	+/-3.0	100	+/-1.5	11+/-0.15	8.7+/-0.15	4.2+/-0.3	10-0.15	10+/-2 T30 3.0+0.1/-0.5

THREADED RODS & ANCHOR BOLTS



Threaded rods-Length 1 meter

d	M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20
P	0,5	0,7	0,8	1	1,25	1,5	1,75	2	2	2,5	2,5
d	M22	M24	M27	M30	M33	M36	M39	M42	M45	M48	M52
P	2,5	3	3	3,5	3,5	4	4	4,5	4,5	5	5



Threaded rods-Length 1 meter

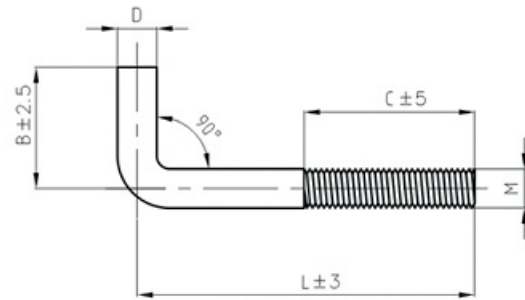
d	M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20
P	0,5	0,7	0,8	1	1,25	1,5	1,75	2	2	2,5	2,5
d	M22	M24	M27	M30	M33	M36	M39	M42	M45	M48	M52
P	2,5	3	3	3,5	3,5	4	4	4,5	4,5	5	5

L BOLTS & U BOLTS

NUTS

Anchor Bolts,"L" Type

ISO- EN-

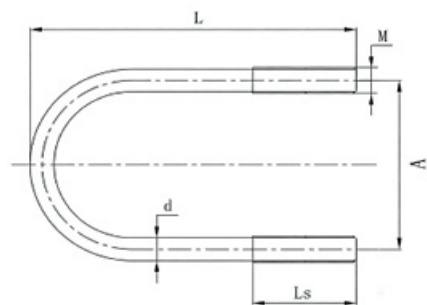


L-Bolts

SIZE	L			B			C			D		
M12X300X50	300	±	3	50	±	2.5	150	+	5	10.65	±	0.1
M12X300X100	300	±	3	100	±	2.5	150	+	5	10.65	±	0.1
M16X400X50	400	±	3	50	±	2.5	150	+	5	14.4	±	0.1
M16X400X100	400	±	3	100	±	2.5	150	+	5	14.4	±	0.1
M20X500X50	500	±	3	50	±	2.5	150	+	5	18.1	±	0.1
M20X500X100	500	±	3	100	±	2.5	150	+	5	18.1	±	0.1
M24X600X50	600	±	3	50	±	2.5	150	+	5	21.7	±	0.1
M24X600X100	600	±	3	100	±	2.5	150	+	5	21.7	±	0.1
M27X700X50	700	±	3	50	±	2.5	150	+	5	24.7	±	0.1
M27X700X100	700	±	3	100	±	2.5	150	+	5	24.7	±	0.1
M30X700X50	700	±	3	50	±	2.5	150	+	5	27.4	±	0.1
M30X700X100	700	±	3	100	±	2.5	150	+	5	27.4	±	0.1
M33X800X50	800	±	3	50	±	2.5	150	+	5	30.4	±	0.1
M33X800X100	800	±	3	100	±	2.5	150	+	5	30.4	±	0.1

"U" Bolts ISO-EN-

ISO- EN-

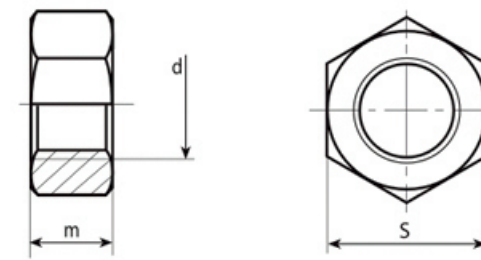


U-Bolts

SIZE	a			L			Ls			d (min)		
	mm			mm			mm			mm		
M16X400	100	±	1	400	±	2	150	+	3	14.4	±	0.1
M20X350	100	±	1	350	±	2	150	+	3	18.1	±	0.1
M20X500	100	±	1	500	±	2	150	+	3	18.1	±	0.1
M24X350	150	±	1	350	±	2	150	+	3	21.7	±	0.1

ISO 4032 EN 24032

DIN 934

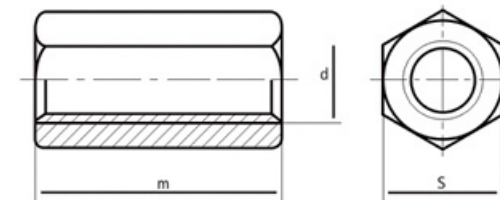


Hexagon nuts

d	M3	M4	M5	M6	M7	M8	M10	M12	M14
P	0,5	0,7	0,8	1	1	1,25	1,5	1,75	2
m	2,4	3,2	4	5	5,5	6,5	8	10	11
s	5,5	7	8	10	11	13	17/16*	19/18*	22/21*
d	M16	M18	M20	M22	M24	M27	M30	M33	M36
P	2	2,5	2,5	2,5	3	3	3,5	3,5	4
m	13	15	16	18	19	22	24	26	29
s	24	27	30	32/34*	36	41	46	50	55
d	M39	M42	M45	M48	M52	M56	M60	M64	M68
P	4	4,5	4,5	5	5	5,5	5,5	6	6
m	31	34	36	38	42	45	48	51	54
s	60	65	70	75	80	85	90	95	100
d	M72	M76	M80	M90	M100	M110			
P	6	6	6	6	6	6			
m	58	61	64	72	80	88			
s	105	110	115	130	145	155			

ISO-EN -

DIN 6334



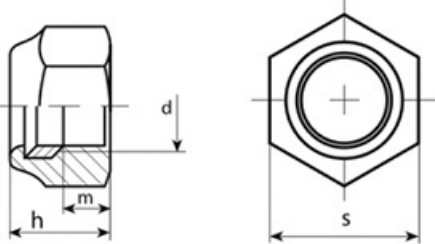
Hexagon connection nuts-Height 3 x d

d	M5	M 6	M 8	M10	M12	M14	M16	M20	M24	M27	M30
P	0,8	1	1,25	1,5	1,75	2	2	2,5	3	3	3,5
m	15	18	24	30	36	42	48	60	72	81	90
S	8	10	13	17	19	22	24	30	36	41	46

NUTS

ISO -EN -

DIN 985

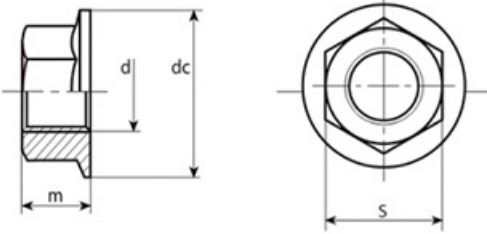


Prevailing torque type hexagon nuts with nylon insert

d	M3	M 4	M 5	M 6	M 7	M 8	M10	M12	M14	M16	M18
p	0,5	0,7	0,8	1	1	1,25	1,5	1,75	2	2	2,5
s	5,5	7	8	10	1	13	17/16*	19/18*	22/21*	24	27
h	4	5	5	6	7,5	8	10	12	14	16	18,5
d	M20	M22	M24	M27	M30	M33	M36	M39	M42	M45	M48
p	2,5	2,5	3	3	3,5	3,5	4	4	4,5	4,5	5
s	30	32/34*	36	41	46	50	55	60	65	70	75

ISO 4161 EN -

DIN 6923



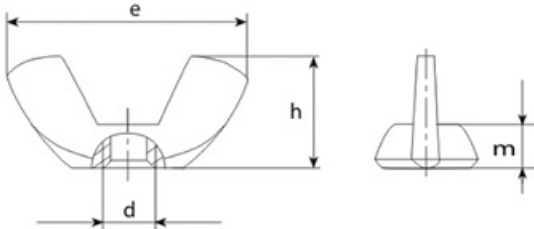
Hexagon flange nuts

d	M5	M 6	M 8	M10	M12	M14	M16	M20
p	0,8	1	1,25	1,5	1,75	2	2	2,5
m	5	6	8	10	12	14	16	20
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

NUTS

ISO -EN -

DIN 315

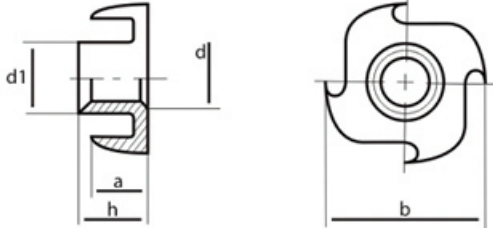


Wing nuts-Rounded wings

d	M4	M5	M6	M8	M10	M12	M14	M16	M20	M24
p	0,7	0,8	1	1,25	1,5	1,75	2	2	2,5	3
m (min)	3,2	4	5	6,5	8	10	11,2	13	16	20
e (max)	20	26	33	39	51	65	65	73	90	110
h (max)	10,5	13	17	20	25	33,5	33,5	37,5	46,5	56,5

ISO -EN -

DIN 1624



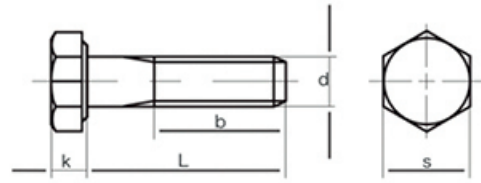
Tee nuts

d	M3	M 4	M 5	M 6	M 8	M10
p	0,5	0,7	0,8	1	1,25	1,5
d1	4,3	5	6,3	7,3	9,7	11,9
h	5	6	8	9	11	12
a	3,5	4,5	5,5	7	7,5	9
b	13	15	17	19	22	25

METRIC BOLTS

ISO4014 EN24014

DIN 931

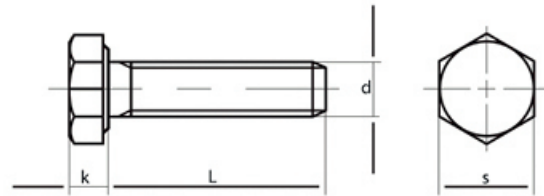


Hexagon head bolts, partial threaded

d	M4	M5	M6	M7	M8	M10	M12	M14
P	0,7	0,8	1	1	1,25	1,5	1,75	2
b(1)	14	16	18	20	22	26	30	34
(2)	-	22	24	26	28	32	36	40
(3)	-	-	-	-	-	45	49	53
k	2,8	3,5	4	4,8	5,3	6,4	7,5	8,8
s	7	8	10	11	13	17/16*	19/18*	22/21*

ISO4017 EN24017

DIN 933

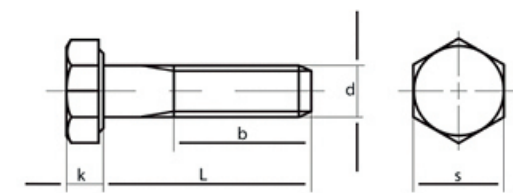


Hexagon head bolts, fully threaded

d	M33	M36	M39	M42	M45	M48	M52
P	3,5	4	4	4,5	4,5	5	5
k	21	22,5	25	26	28	30	33
s	50	55	60	65	70	75	80

ISO8765 EN28765

DIN 960



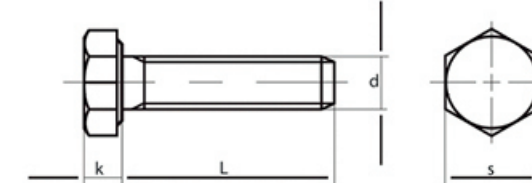
Hexagon head bolts-Metric fine pitch thread, partial threaded

dxP	M8x1	M10x1 M10x1,25	M12x1,25 M12x1,5	M14x1,5	M16x1,5	M18x1,5 M18x2	M20x1,5 M20x2	M22x1,5 M22x2	M24x1,5 M24x2
b1	22	26	30	34	38	42	46	50	54
2	28	32	36	40	44	48	52	56	60
k	5,3	6,4	7,5	8,8	10	11,5	12,5	14	15
s	13	17/16*	19/18*	22/21*	24	27	30	32/34*	36

METRIC BOLTS

ISO 8676 EN 28676

DIN 961

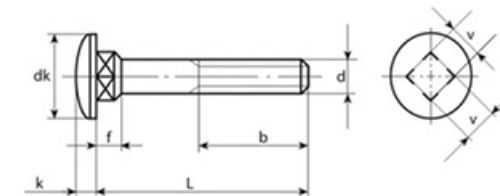


Hexagon head bolts-Metric fine pitch thread, full threaded

dxP	M8x1	M10x1 M10x1,25	M12x1,25 M12x1,5	M14x1,5	M16x1,5	M18x1,5 M18x2	M20x1,5 M20x2
k	5,3	6,4	7,5	8,8	10	11,5	12,5
s	13	17/16*	19/18*	22/21*	24	27	30

ISO 8677 EN

DIN 603

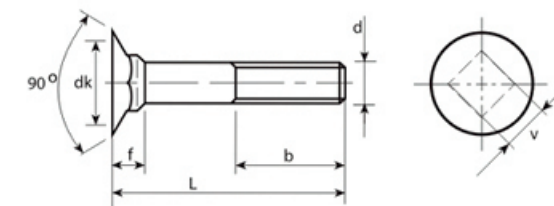


Mushroom head square neck bolts (cup square neck bolts)

d	M5	M 6	M 8	M10	M12	M16	M20
P	0,8	1	1,25	1,5	1,75	2	2,5
(1)	16	18	22	26	30	38	46
b(1)	22	24	28	32	36	44	52
(3)	-	-	41	45	49	57	65
dk (max)	13,55	16,55	20,65	24,65	30,65	38,8	46,8
f (max)	4,1	4,6	5,6	6,6	8,75	12,9	15,9
k (max)	3,3	3,88	4,88	5,38	6,95	8,95	11,05
v (max)	5,48	6,48	8,58	10,58	12,7	16,7	20,84

ISO -EN -

DIN 608



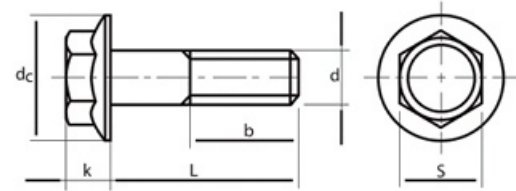
Flat countersunk square neck bolts

d	M10	M12
P	1,5	1,75
b	26	30
dk (max)	19,65	24,65
f (max)	8,45	11,05
v (max)	10,58	12,7

METRIC BOLTS

ISO 8100 EN -

DIN 6921

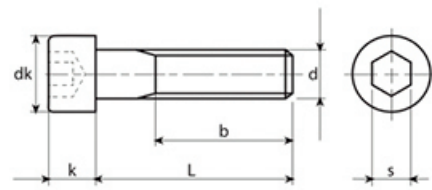


hexagon flange bolts

d	M5	M 6	M 8	M10	M12	M14	M16	M20
P	0,8	1	1,25	1,5	1,75	2	2	2,5
b	16	18	22	26	30	34	38	46
k	5,40	6,6	8,1	9,2	11,5	12,8	14,4	17,1
s	8	10	13	15	16	18	21	27
dc	11,8	14,2	18	22,3	26,6	30,5	35	43

ISO 4762EN-

DIN 912

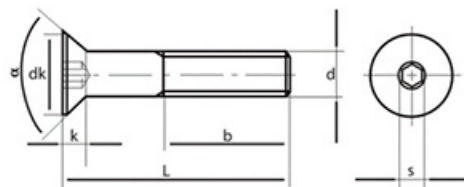


hexagon socket head cap screws

d	M3	M 4	M 5	M 6	M 8	M10	M12	M14	M16	M18
P	0,5	0,7	0,8	1	1,25	1,5	1,75	2	2	2,5
b*	18	20	22	24	28	32	36	40	44	48
dk (max)	5,5	7	8,5	10	13	16	18	21	24	27
k (max)	3	4	5	6	8	10	12	14	16	18
s	2,5	3	4	5	6	8	10	12	14	14

ISO -EN -

DIN 7991



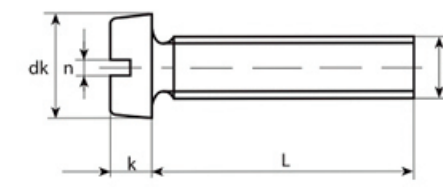
Hexagon socket countersunk head screwss

d	M3	M 4	M 5	M 6	M 8	M10	M12	M16	M20
P	0,5	0,7	0,8	1	1,25	1,5	1,75	2	2,5
b*	12	14	16	18	22	26	30	38	46
dk	6	8	10	12	16	20	24	30	36
k (max)	1,7	2,3	2,8	3,3	4,4	5,5	6,5	7,5	8,5
!	90	90	90	90	90	90	90	90	90
s	2	2,5	3	4	5	6	8	10	12

MACHINE SCREWS

ISO 1207 EN-

DIN 84

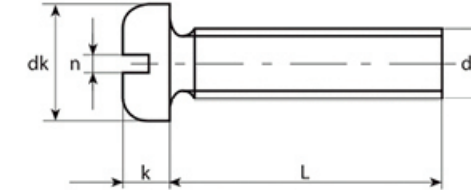


Slotted cheese head screws

d	M3	M 4	M 5	M 6	M 8
P	0,5	0,7	0,8	1	1,25
dk	5,5	7	8,5	10	13
k	2	2,6	3,3	3,9	5
n	0,8	1,2	1,2	1,6	2

ISO 1580 EN -

DIN 85

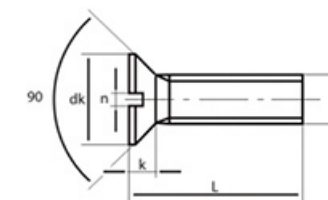


Slotted pan head screws

d	M3	M 4	M 5	M 6	M 8
P	0,5	0,7	0,8	1	1,25
dk	6	8	10	12	16
k	1,8	2,4	3	3,6	4,8
n	0,8	1,2	1,2	1,6	2

ISO 2009 EN -

DIN 963



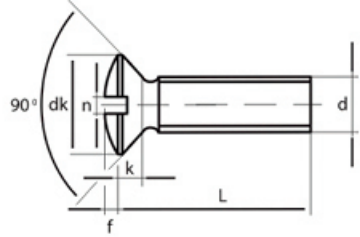
Slotted pan head screws

d	M3	M 4	M 5	M 6	M 8	M10
P	0,5	0,7	0,8	1	1,25	1,5
dk	5,6	7,5	9,2	1	14,5	18
k (max)	1,65	2,2	2,5	3	4	5
n	0,8	1	1,2	1,6	2	2,5

MACHINE SCREWS

ISO 2010 EN-

DIN 964

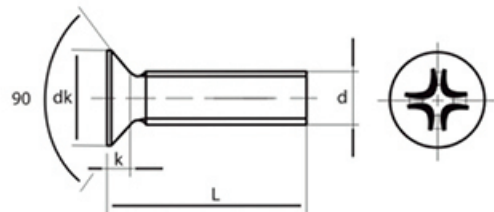


Slotted raised countersunk head screws

d	M3	M 4	M 5	M 6	M 8
P	0,5	0,7	0,8	1	1,25
dk	5,6	7,5	9,2	11	14,5
k (max)	1,65	2,2	2,5	3	4
f	0,75	1	1,25	1,5	2
n	0,8	1	1,2	1,6	2

ISO 7046 EN -

DIN 965

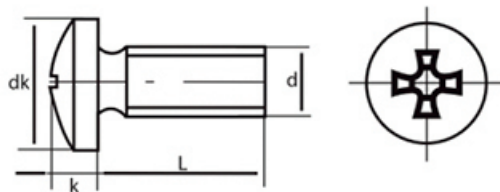


Cross recessed countersunk head screws

d	M3	M 4	M 5	M 6	M 8
P	0,5	0,7	0,8	1	1,25
dk	5,6	7,5	9,2	11	14,5
k (max)	1,65	2,2	2,5	3	4
Nr. Phillips (H)	1	2	2	3	4

ISO 7045 EN -

DIN 7985

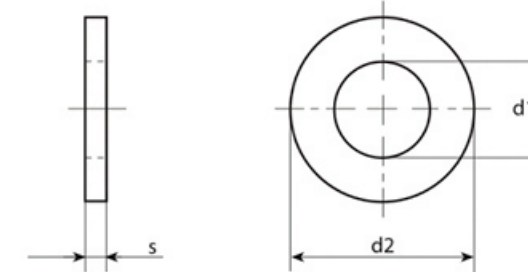


Cross recessed raised cheese head screws

d	M3	M 4	M 5	M 6	M 8
P	0,5	0,7	0,8	1	1,25
dk	6	8	10	12	16
k	2,4	3,1	3,8	4,6	6
Nr. Phillips (H)	1	2	2	3	4

WASHERS

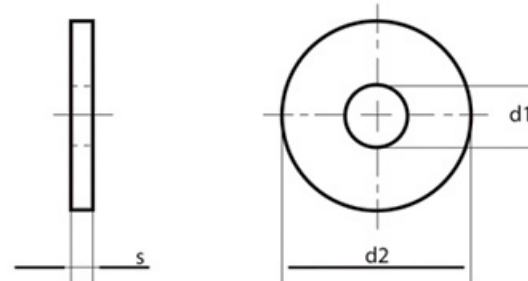
DIN 125A



Plain washers without chamfer

d nom.	M3	M4	M5	M6	M7	M8	M10	M12	M14
d1	3,2	4,3	5,3	6,4	7,4	8,4	10,5	13	15
d2	7	9	10	12	14	16	20	24	28
s	0,5	0,8	1	1,6	1,6	1,6	2	2,5	2,5
d nom.	M16	M18	M20	M22	M24	M27	M30	M33	M36
d1	17	19	21	23	25	28	31	34	37
d2	30	34	37	39	44	50	56	60	66
d nom.	M39	M42	M45	M48	M52	M56	M60	M64	
d1	40	43	46	50	54	58	62	66	
d2	72	78	85	92	98	105	110	115	

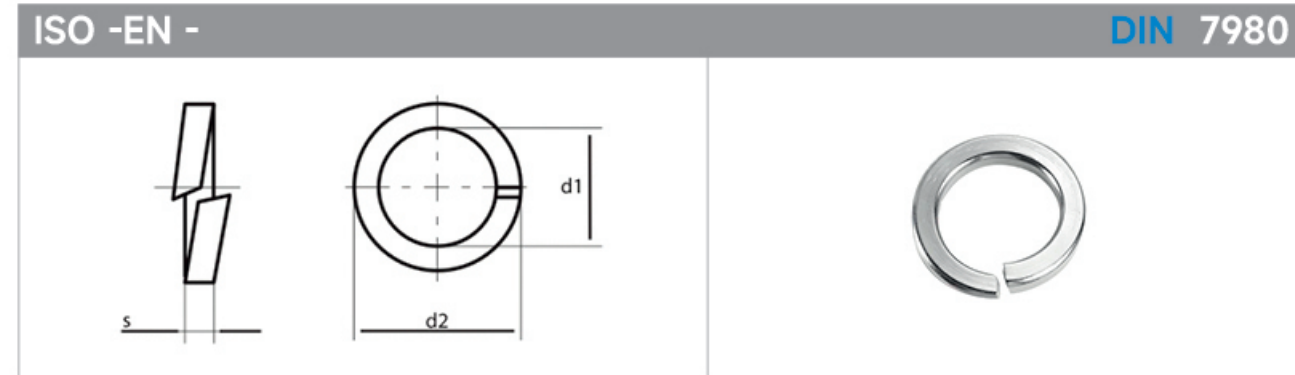
DIN 9021



Plain washers d2 ≈ 3xd1

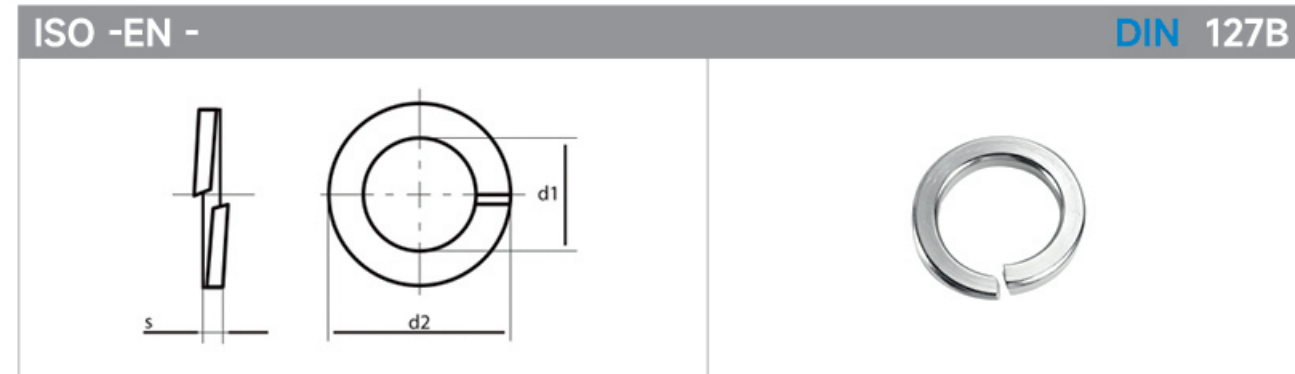
d nom.	M3	M4	M5	M6	M7
d1 (min)	3,2	4,3	5,3	6,4	7,4
d2 (max)	9	12	15	18	22
s	0,8	1	1,2	1,6	2
d nom.	M8	M10	M12	M14	M16
d1 (min)	8,4	10,5	13	15	17
d2 (max)	24	30	37	44	50
s	2	2,5	3	3	3
d nom.	M18	M20	M24		
d1 (min)	20	22	26		
d2 (max)	56	60	72		
s	4	4	5		

WASHERS



Spring lock washers

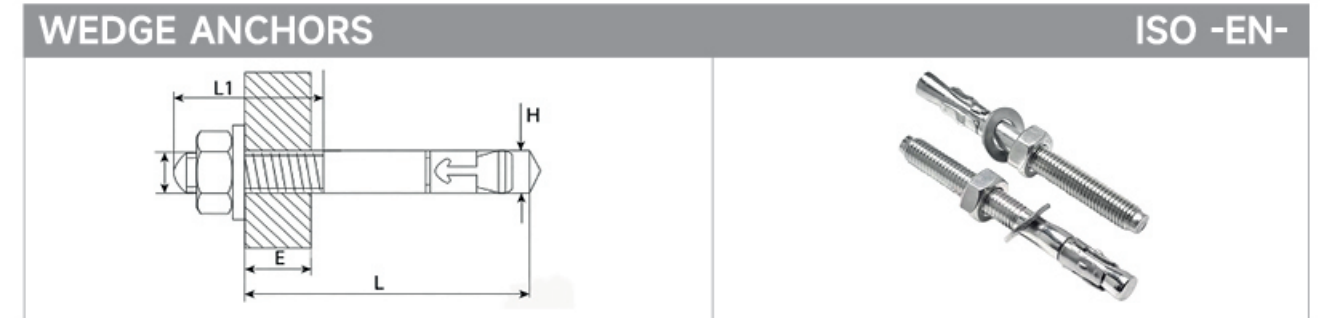
d nom.	M3	M4	M5	M6	M8	M10	M12
d1 (min)	3,1	4,1	5,1	6,1	8,1	10,2	12,2
d2 (max)	5,6	7	8,8	9,9	12,7	16	18
s	1	1,2	1,6	1,6	2	2,5	2,5
d nom.	M14	M16	M20	M22	M24	M27	M30
d1 (min)	14,2	16,2	20,2	22,5	24,5	27,5	30,5
d2 (max)	21,1	24,4	30,6	32,9	35,9	38,9	44,1
s	3	3,5	4,5	4,5	5	5	6



Spring lock washers

d nom.	M3	M4	M5	M6	M7	M8	M10	M12
d1 (min)	3,1	4,1	5,1	6,1	7,1	8,1	10,2	12,2
d2 (max)	6,2	7,6	9,2	11,8	12,8	14,8	18,1	21,1
s	0,8	0,9	1,2	1,6	1,6	2	2,2	2,5
d nom.	M14	M16	M18	M20	M22	M24	M27	M30
d1 (min)	14,2	16,2	18,2	20,2	22,5	24,5	27,5	30,5
d2 (max)	24,1	27,4	29,4	33,6	35,9	40	43	48,2
d nom.	M36	M39	M42	M45	M48	M52		
d1 (min)	36,5	39,5	42,5	45,5	49	53		
d2 (max)	58,2	61,2	68,2	71,2	75	83		

ANCHORS



Wedge anchors (through Bolts)

dxL	M12x160	M12x180	M12x220	M12x250	M14x80	M14x100	M14x120	M14x145
H=drillø	12	12	12	12	14	14	14	14
L= drill depth	85	85	85	85	65	85	100	100
E= grip range	80	100	140	170	2	10	30	55
G= torque	7-8	7-8	7-8	7-8	11-13	11-13	11-13	11-13
L1= thread length	45	45	45	45	30	45	45	45
pull out-force:								
200 Kg concrete:	4.000	4.000	4.000	4.000	4.800	4.800	4.800	4.800
300 Kg concrete:	4.700	4.700	4.700	4.700	5.500	5.500	5.500	5.500
shear tension:								
200 Kg concrete:	3.800	3.800	3.800	3.800	4.500	4.500	4.500	4.500
300 Kg concrete:	3.800	3.800	3.800	3.800	4.500	4.500	4.500	4.500

dxL	M14x170	M14x220	M14x250	M16x90	M16x125	M16x145	M16x170	M16x220
H=drill ø	14	14	14	16	16	16	16	16
L= drill depth	100	100	100	75	110	110	110	110
E= grip range	80	130	160	2	10	30	55	115
G= torque	11-13	11-13	11-13	14-16	14-16	14-16	14-16	14-16
L1= thread length	45	45	45	30	45	45	45	45
pull out-force:								
200 Kg concrete:	4.800	4.800	4.800	5.500	5.500	5.500	5.500	5.500
300 Kg concrete:	5.500	5.500	5.500	6.750	6.750	6.750	6.750	6.750
shear tension:								
200 Kg concrete:	4.500	4.500	4.500	6.600	6.600	6.600	6.600	6.600
300 Kg concrete:	4.500	4.500	4.500	6.600	6.600	6.600	6.600	6.600



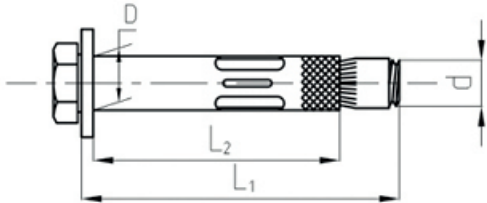
Drop-in anchors

d1	5	6	8	10	12	16	20
L	25	30	40	40	50	60	80
d2	8	8	10	12	15	20	25
a=thread length	11	11	13	15	18	23	34
torque	0,3	0,5	1,2	2,4	4,2	10	17
pull out force							
250kg concrete	200	300	540	650	810	1.030	1.620
shear tension							
250kg concrete	100	175	250	380	550	1.020	1.590

ANCHORS

SLEEVE ANCHOR HEX BOLT TYPE

ISO -EN-



Sleeve Anchor Hex Bolt Type

Size	d(+0mm;-0.4mm)	D(+0.2mm;-0.5mm)	L1±2mm	L2±2mm
8X40	M6	8	40	30.00
8X45	M6	8	45	34.50
8X60	M6	8	60	50.00
8X75	M6	8	75	65.00
8X80	M6	8	80	70.00
8X85	M6	8	85	75.00
8X90	M6	8	90	80.30
8X100	M6	8	100	90.30
10X50	M8	10	50	36.00
10X55	M8	10	55	41.00
10X60	M8	10	60	46.00
10X75	M8	10	75	61.00
10X80	M8	10	80	66.00
10X85	M8	10	85	71.00
10X90	M8	10	90	81.00
10x100	M8	10	100	86.00
10x110	M8	10	110	96.00
10XI 15	M8	10	115	101.00
10X120	M8	10	120	106.00
10XI25	M8	10	125	111.00
10X130	M8	10	130	116.00
10X140	M8	10	140	124.90
12X65	M10	12	65	48.00
12X70	M10	12	70	52.00
12X80	M10	12	80	62.00
12X100	M10	12	100	82.00
12X110	M10	12	110	92.00
12X120	M10	12	120	102.00
12X140	M10	12	140	122.00
12X150	M10	12	150	132.00
16X80	M12	16	80	61.00
16X110	M12	16	110	91.00
16X130	M12	16	130	111.00
16X150	M12	16	150	131.00
16X160	M12	16	160	141.00
20X110	M16	20	110	81.00

HEAD TYPES

HEX CAP

HEX HEAD

FLAT COUNTERSUNK

HEX SOCKET SET

HEX SOCKET CAP

RAISED COUNTERSUNK

HEX FLANGE

TRUSS

PAN

CHEESE

PAN

MUSHROOM HEAD
SQUARE NECK

HEX FLANGE WITH
NEOPRENE WASHER

BUGLE

HEX WASHER HEAD

FLAT COUNTERSUNK

TRUSS

HEX WASHER HEAD
WITH BONDED WASHER

HEX WASHER HEAD

ROUND HEAD

FLAT HEAD

PAN FRAMING

OVAL

H.W.H

H.W.F

PAN CAKE

TRUSS

HINGE

C.S.K

LARGE WAFER

WAFER

PHILLIPS

HEX SERRATION

SPLINE

LIFTING EYE

CUSTOM SCREWS



Chain for furniture



Chicago screw



Countersunk screw with tail cut



Customized bolt



Customized screw



Flange head self tapping screw with flat tail



Hex hollow bolt



Hex socket bolt with R



Hex socket screw half threaded



Internal thread screw



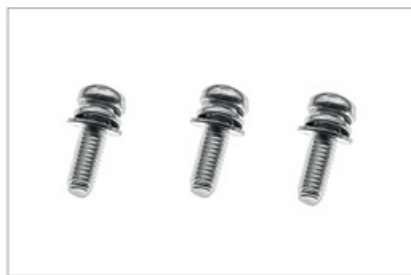
ISO7380 with washer



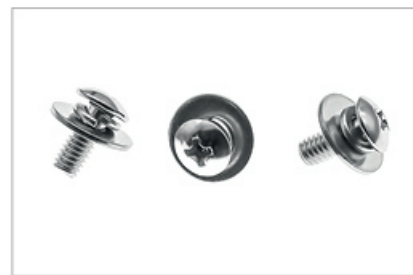
Large flat head machine screw



Locking screw



Phillips pan head assembly screw



Phillips truss head screw assembly

CUSTOM SCREWS



Phillips truss head screw with flat tail



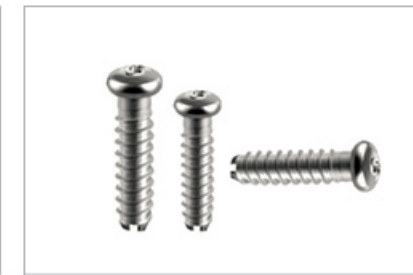
Phillips truss head screw with tail cut



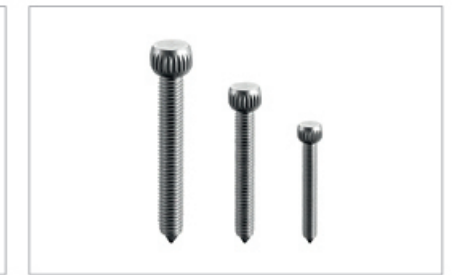
Phillips pan head screw with tail cut



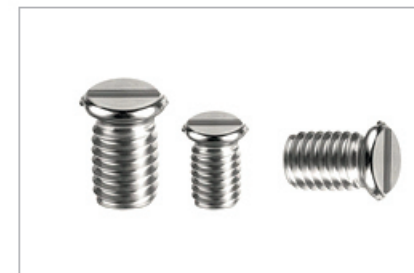
Screw for cup



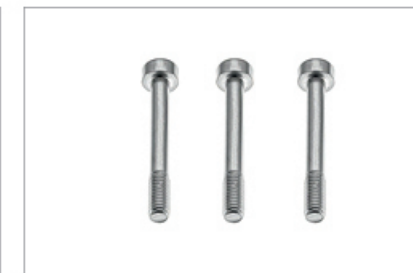
Screw for livestock (2)



Screw for livestock



Small machine screw with slot



Socket head machine screw half threaded



Socket head machine screw



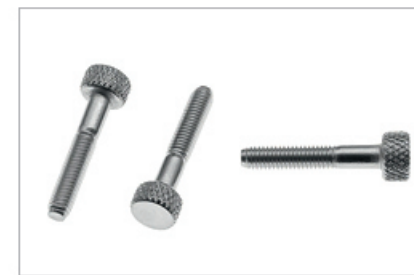
Socket head screw with sharp tail



Square bolt



Thumb screw with slot



Thumb screw



Truss head screw with tail cut



Weld screw