

The Professional Standard

PRODUCT RANGE



J.A.M. INTERNATIONAL LIMITED
J.A.M. BUILDING PRODUCTS CO., LTD.

www.jambolts.com      



J.A.M. was founded in 1999, A Fastening Brand of Po Wah Metal Co., Ltd. Both have over 30 years of solid experience in fastening and fixing products. J.A.M. is committed to customer oriented service and satisfaction. Our technical workforce serve our client as partners, assist them with valuable advices to select most suitable products and solutions for various fastening applications.

The Professional standard fastening products including Grade10.9 (HSFG) High Strength Friction Grip Pre-loaded bolts, Grade8.8 /A4-80 Hexagonal Bolts, Threaded Rods, Medium-load to High-load Anchors, Channels, Inserts, miscellaneous fixing screws...etc, in order to fulfil different market needs and applications. With sound experience and adequate fastening know-how, J.A.M. develop and own the certificate of registration of design for JAM-W Wedge Anchor, JAM-S/ SH Sleeve Anchor & JAM-J Expansion Plug.

J.A.M. products have been widely used for various trades and structural installation works in many prestigious buildings, railways construction and infrastructure development projects

With well-examined quality control processes, we are confident that our products are Safe, Competitive, and in compliance with International Standard. Over the years, we have successfully obtained job approvals from both public and private sectors such as Hong Kong Housing Authority, Buildings Department, Highways Department, Civil Engineering and Development Department and MTR Corporation.

Sole Agents and Groups:

Tension Control Bolts (UK)

TOB®   **Greenkote**®
Grade10.9 High Strength Friction Grip/Pre-loaded Bolts (Innovative shear Wrench System)

Seng Heng Engineering (Singapore)

 
Over 60 years of experience in manufacturing high quality Stainless Steel A4-80 Products.

MKT (Germany)

MKT® 
...a solid connection Manufacturer specializing in heavy duty anchor systems.

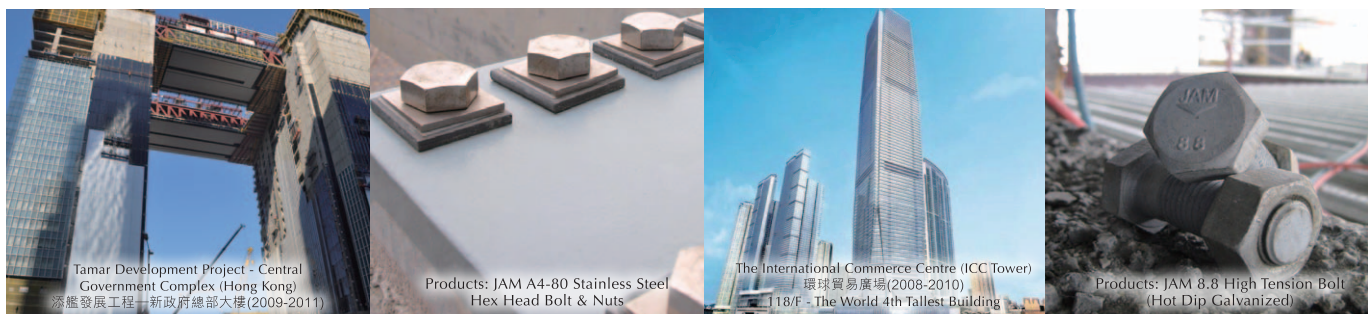
LIEBIG (Germany)

SIMPSON **LIEBIG** 
StrongTie Expert in the anchor field with more than 60 years experience.

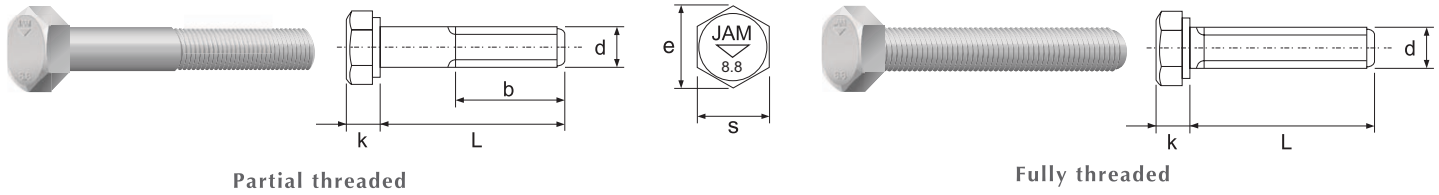
ALLFA (Germany)

allfa 
GERMANY Specialist in plastic anchors.
www.allfa-germany.de

JAM®  
Registration No. 44 100 102006



Hexagon Head Bolt (Available in Hot Dip Galvanized and Zinc Plated) Grade 8.8 High Tensile Steel



Steel

Material Standard: BS EN ISO 898 Part 1:2009

Specification: BS 3692:2001 (compatible with BS 4190 / DIN 931 / DIN 933)

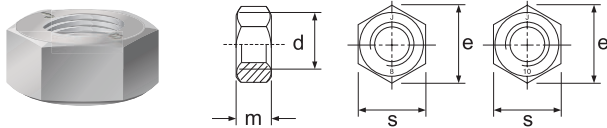
Finishing (Item No.): Hot dip galvanized to ISO 1461:1999 *Partial Threaded* **40306** *Fully Threaded* **40307**

Zinc plated to ISO 4042:1999 *Partial Threaded* **40301** *Fully Threaded* **40302**

Ordering example : hot dip galvanized grade 8.8 M16 x 75mm partial threaded hexagon head bolt (item no.: 4030616075)

d (diameter)	M6	M8	M10	M12	M16	M20	M22	M24	M27	M30	M33	M36	M39	M42*
Thread Pitch / mm	1	1.25	1.5	1.75	2	2.5	2.5	3	3	3.5	3.5	4	4	4.5
b (L≤125) / mm	18	22	26	30	38	46	50	54	60	66	72	78	84	90
b (125<L≤200) / mm	-	-	32	36	44	52	56	60	66	72	78	84	90	96
b (L>200) / mm	-	-	-	-	57	65	69	73	79	85	91	97	103	109
k (max. head height) / mm	4.15	5.65	7.18	8.18	10.18	13.215	14.215	15.215	17.215	19.26	21.26	23.26	25.26	26.26
k (min. head height) / mm	3.85	5.35	6.82	7.82	9.82	12.785	13.785	14.785	16.785	18.74	20.74	22.74	24.74	25.74
s (max. width across flats) / mm	10.0	13.0	17.0	19.0	24.0	30.0	32.0	36.0	41.0	46.0	50.0	55.0	60.0	65.0
s (min. width across flats) / mm	9.78	12.73	16.73	18.67	23.67	29.67	31.61	35.38	40.38	45.38	49.38	54.26	59.26	64.26
e (max. width across corners) / mm	11.5	15.0	19.6	21.9	27.7	34.6	36.9	41.6	47.3	53.1	57.7	63.5	69.3	75.1
e (min. width across corners) / mm	11.05	14.38	18.9	21.10	26.75	33.53	35.72	39.98	45.63	51.28	55.80	61.31	66.96	72.61

Diameter above M42 / other finish coating, standard on request



Hexagon Nut

Steel

Material Standard: BS 3692:2001

Specification: BS 3692:2001 (compatible with BS 4190 / DIN 934)

Finishing (Item No.): Grade 8, hot dip galvanized to ISO 1461:1999 **40420**

Grade 8, zinc plated to ISO 4042:1999 **40405**

Grade 10, hot dip galvanized to ISO 1461:1999 **40408**

Ordering example : hot dip galvanized grade 8 M16 hexagon nut (item no.: 4042016000)

Ordering Code:

Product: BS 3692 Hex. Head Bolt (G.8.8 HDG)

M6 x **75mm**

CODE **40306**

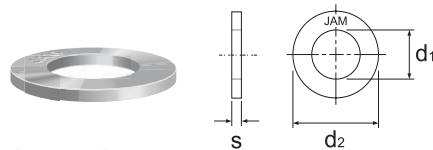
06 **075**

Product Code

Diameter

Length

d (diameter)	M6	M8	M10	M12	M16	M20	M22	M24	M27	M30	M33	M36	M39	M42
Thread Pitch / mm	1	1.25	1.5	1.75	2	2.5	2.5	3	3	3.5	3.5	4	4	4.5
s (max. width across flats) / mm	10.00	13.00	17.00	19.00	24.00	30.00	32.00	36.00	41.00	46.00	50.00	55.00	60.00	65.00
s (min. width across flats) / mm	9.78	12.73	16.73	18.67	23.67	29.67	31.61	35.38	40.38	45.38	49.38	54.26	59.26	64.26
e (max. width across corners) / mm	11.50	15.00	19.60	21.90	27.70	34.60	36.90	41.60	47.30	53.10	57.70	63.50	69.30	75.10
e (min. width across corners) / mm	11.05	14.38	18.90	21.10	26.75	33.53	35.72	39.98	45.63	51.28	55.80	61.31	66.96	72.61
m (max. thickness) / mm	5.00	6.50	8.00	10.00	13.00	16.00	18.00	19.00	22.00	24.00	26.00	29.00	31.00	34.00
m (min. thickness) / mm	4.70	6.14	7.64	9.64	12.57	15.57	17.57	18.48	21.48	23.48	25.48	28.48	30.38	33.38



Flat Washer

Steel

Specification: BS 4320:1968 Form A (compatible with DIN 125A)

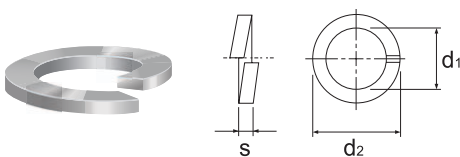
Finishing (Item No.): Hot dip galvanized to ISO 1461:1999 **40503**

Zinc plated to ISO 4042:1999 **40501**

Ordering example : zinc plated M16 flat washer (item no.: 4050116000)

d (diameter inch)	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"
d1 (inside diameter) / mm	8	9.5	11	14.5	17.5	21	29
d2 (outside diameter) / mm	19	22	25	32	38	44.5	57
s (thickness) / mm	1.3	1.8	2	2.5	2.7	3	3

Form A d (diameter)	M5	M6	M8	M10	M12	M16	M20	M22	M24	M27	M30	M33	M36	M39	M42*
d1 (max. inside diameter) / mm	5.5	6.7	8.7	10.9	13.4	17.4	21.5	23.5	25.5	28.5	31.6	34.6	37.6	40.6	43.62
d1 (min. inside diameter) / mm	5.3	6.4	8.4	10.5	13.0	17.0	21	23	25	28	31	34	37	40	43
d2 (max. outside diameter) / mm	10	12.5	17	21	24	30	37	39	44	50	56	60	66	72	78
d2 (min. outside diameter) / mm	9.7	12.1	16.6	20.5	23.5	29.5	36.2	38.2	43.2	49.2	55.0	59.0	65.0	71.0	76.8
s (max. thickness) / mm	1.1	1.8	1.8	2.2	2.7	3.3	3.3	3.3	4.3	4.3	4.3	5.6	5.6	6.6	8
s (min. thickness) / mm	0.9	1.4	1.4	1.8	2.3	2.7	2.7	2.7	3.7	3.7	3.7	4.4	4.4	5.4	6



Spring Washer

Steel

Specification: DIN 127B:1987

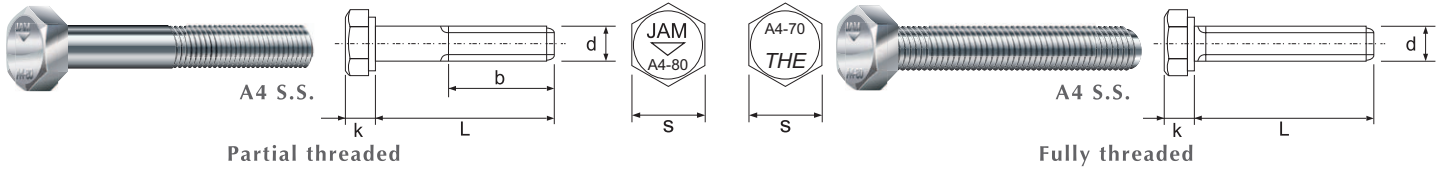
Finishing (Item No.): Hot dip galvanized to ISO 1461:1999 **40541**

Zinc plated to ISO 4042:1999 **40531**

Ordering example : hot dip galvanized M16 spring washer (item no.: 4054116000)

d (diameter)	M3	M4	M5	M6	M8	M10	M12	M16	M20	M24	M27	M30	M33*
d1 (inside diameter) / mm	3.1	4.1	5.1	6.1	8.1	10.2	12.2	16.2	20.2	24.5	27.5	30.5	33.5
d2 (outside diameter) / mm	6.2	7.6	9.2	11.8	14.8	18.1	21.1	27.4	33.6	40	43	48.2	55.2
s (thickness) / mm	0.8	0.9	1.2	1.6	2	2.2	2.5	3.5	4	5	5	6	6

Hexagon Head Bolt (Available in A4-80, A4-70 & A2-70)
Stainless Steel Grade 316 / 304



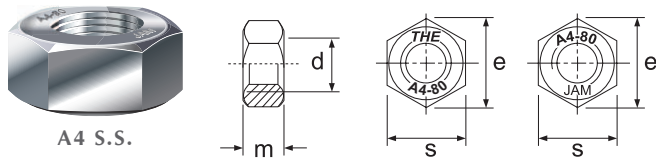
Stainless Steel

Material Standard:	ISO 3506 Part 1:1997	
Specification:	DIN 931 (Partial threaded)	DIN 933 (Fully threaded)
Material (Item No.):	A2-70 (304) 40315	A2-70 (304) 40316
	A4-70 (316) 40325	A4-70 (316) 40326
	A4-80 (316) 40323	A4-80 (316) 40322

Ordering example : A4-70 stainless steel M20 x 80mm partial threaded hexagon head bolt (item no.: 4032520080)

d (diameter)	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27+	M30+	M33+	M36+	M39+
Thread Pitch / mm	0.8	1	1.25	1.5	1.75	2	2	2.5	2.5	2.5	3	3	3.5	3.5	4	4
b (L≤125) / mm	16	18	22	26	30	34	38	42	46	50	54	60	66	72	78	84
b (125<L≤200) / mm	22	24	28	32	36	40	44	48	52	56	60	66	72	78	84	90
b (L>200) / mm	-	-	-	45	49	53	57	61	65	69	73	79	85	91	97	103
k (head height) / mm	3.5	4	5.3	6.4	7.5	8.8	10	11.5	12.5	14	15	17	18.7	21	22.5	25
s (width across flats) / mm	8	10	13	17	19	22	24	27	30	32	36	41	46	50	55	60

Diameter above M39 / other finish coating, standard on request



Hexagon Nut

Stainless Steel	
Material Standard :	ISO 3506 Part 2:1997
Specification:	DIN 934
Material (Item No.):	A2-70 40413
	A4-80 40418

Ordering example : A4-80 stainless steel M20 hexagon nut (item no.: 4041820000)

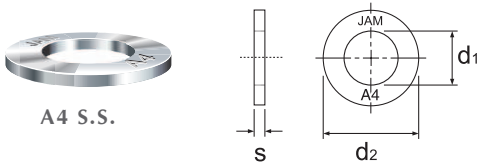
Ordering Code:

Product: A4-80 Stainless Steel Hex. Head Bolt (partial threaded) **M6 x 75mm**

CODE **40323** **06** **075**

Product Code Diameter Length

d (diameter)	M6	M8	M10	M12	M16	M20	M22	M24	M27	M30	M33	M36	M39
Thread Pitch / mm	1	1.25	1.5	1.75	2	2.5	2.5	3	3	3.5	3.5	4	4
s (max. width across flats) / mm	10.00	13.00	17.00	19.00	24.00	30.00	32.00	36.00	41.00	46.00	50.00	55.00	60.00
s (min. width across flats) / mm	9.78	12.73	16.73	18.67	23.67	29.67	31.61	35.38	40.38	45.38	49.38	54.26	59.26
e (min. width across corners) / mm	11.05	14.38	18.90	21.10	26.75	33.53	35.72	39.98	45.63	51.28	55.80	61.31	66.96
m (max. thickness) / mm	5.00	6.50	8.00	10.00	13.00	16.00	18.00	19.00	22.00	24.00	26.00	29.00	31.00
m (min. thickness) / mm	4.70	6.14	7.64	9.64	12.57	15.57	17.57	18.48	21.48	23.48	25.48	28.48	30.38



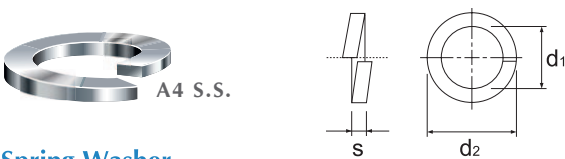
Flat Washer

Stainless Steel	
Specification :	BS 4320:1968
Material (Item No.):	A2 stainless steel, Form A 40511
	A4 stainless steel, Form A 40512
	A4 Stainless steel, Form C 40513

Ordering example : A4 stainless steel M20 flat washer form A (item no.: 4051220000)

Form A d (diameter)	M6	M8	M10	M12	M16	M20	M22	M24	M27	M30	M33	M36	M39
d _i (max. inside diameter) / mm	6.7	8.7	10.9	13.4	17.4	21.5	23.5	25.5	28.5	31.6	34.6	37.6	40.6
d _i (min. inside diameter) / mm	6.4	8.4	10.5	13.0	17.0	21	23	25	28	31	34	37	40
d _o (max. outside diameter) / mm	12.5	17	21	24	30	37	39	44	50	56	60	66	72
d _o (min. outside diameter) / mm	12.1	16.6	20.5	23.5	29.5	36.2	38.2	43.2	49.2	55.0	59.0	65.0	71.0
s (max. thickness) / mm	1.8	1.8	2.2	2.7	3.3	3.3	3.3	4.3	4.3	4.3	5.6	5.6	6.6
s (min. thickness) / mm	1.4	1.4	1.8	2.3	2.7	2.7	2.7	3.7	3.7	3.7	4.4	4.4	5.4

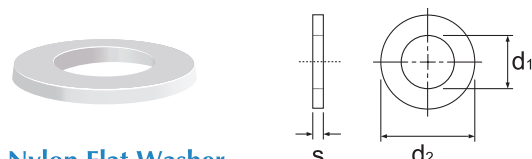
Form C d (diameter)	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30	M33	M36	M39
d _i (max. inside diameter) / mm	6.7	8.7	10.9	13.4	15.4	17.4	19.5	21.5	23.5	25.5	28.5	31.6	34.6	37.6	40.6
d _i (min. inside diameter) / mm	6.4	8.4	10.5	13.0	15	17	19	21	23	25	28	31	34	37	40
d _o (max. outside diameter) / mm	14	21	24	28	30	34	37	39	44	50	56	60	66	72	77
d _o (min. outside diameter) / mm	13.6	20.5	23.5	27.5	29.5	33.2	36.2	38.2	43.2	49.2	55	59	65	71	76
s (max. thickness) / mm	1.8	1.8	2.2	2.7	2.7	3.3	3.3	3.3	4.3	4.3	4.3	4.3	5.6	5.6	6.6
s (min. thickness) / mm	1.4	1.4	1.8	2.3	2.3	2.7	2.7	2.7	3.7	3.7	3.7	3.7	4.4	4.4	5.4



Spring Washer

Stainless Steel	
Specification:	DIN 127B:1987
Material (Item No.):	A2 stainless steel 40532
	A4 stainless steel 40542

Ordering example : A4 stainless steel M10 spring washer (item no.: 4054210000)



Nylon Flat Washer

Nylon	
Material :	Nylon
Specification :	BS 4320:1968
(Item No.):	Form A 40521 Form C 40522

Ordering example : M10 nylon washer form A (item no.: 4052110000)

Fully Threaded Rod Holding down bolt

Grade 8.8 High Tensile Steel / Grade 4.8 Mild Steel (HDG/ZP)
Stainless Steel Grade A4-80 • A4-70 • A2-80 • A2-70 • A2 (304)

Ordering Code:

Product: BS 3692 Threaded Rod (G8.8 HDG)

M20 x **3000mm**

CODE **4 0 2 1 3**
Product Code

2 0
Diameter

3 0 0
Length



Steel

Material Standard: Grade 8.8 to BS EN ISO 898 Part 1:2009
Specification: DIN 975:1986 (compatible with BS 3692 / BS 4190)
Finishing (Item No.): hot dip galvanized to ISO 1461:1999 **40213**
zinc plated to ISO 4042:1999 **40212**

Ordering example : hot dip galvanized grade 8.8 M20 x 3000mm fully threaded rod (item no.: 4021320300)

Steel

Material Standard: Grade 4.8 to ISO 898 Part 1:1999
Specification: DIN 975:1986 (compatible with BS 3692)
Finishing (Item No.): hot dip galvanized to ISO 1461:1999 **40214**
zinc plated to ISO 4042:1999 **40215**

Ordering example : zinc plated grade 4.8 M20 x 3000mm fully threaded rod (item no.: 4021520300)

Stainless Steel

Material Standard: ISO 3506 Part 1:1997
Specification: DIN 975:1986 (compatible with BS 3692 / BS 4190)
Material (Item No.): A2-70 **40110** A2-80 **40019** A2 (304) **40100**
A4-70 **40017** A4-80 **40018**

Ordering example : A4-80 stainless steel M20 x 3000mm fully threaded rod (item no.: 4001820300)

d (diameter)	M6	M8	M10	M12	M16	M20	M22	M24	M27*	M30*	M33*	M36*	M39*	M42*	M45*	M48*	M52*
Thread Pitch / mm	1	1.25	1.5	1.75	2	2.5	2.5	3	3	3.5	3.5	4	4	4.5	4.5	5	5
L (length) / mm																	
3000	06300	08300	10300	12300	16300	20300	22300	24300	27300	30300	33300	36300	39300	42300	45300	48300	52300

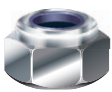
Diameter above M52 / special length / other finish, coating, standard on request

*ISO 898 Part1:1999 applies upto M39

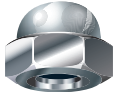
*The mechanical properties above M24 subject to agreement under ISO 3506 Part 1:1997

Special Nut and Washer

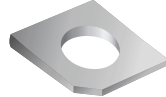
- Mild Steel (ZP, HDG)
- Stainless Steel Grade A2(304) / A4(316)



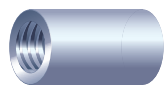
Hex Nylon Lock Nut



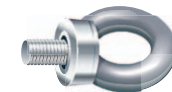
Cap Nut



Taper Washer



Connection Nut



Lifting Eye Bolt



Lifting Eye Nut

Lifting Eye Bolt & Nut

- Mild Steel (ZP, HDG)
- Stainless Steel Grade A2(304) / A4(316)

Route 8 - Stonecutters Bridge
八號幹線 - 昂船洲大橋 2008

Hong Kong-Shenzhen Western Corridor (HK-SWC)
深港西部通道 2009

Kai Tak Development - Southern part of the former runway, Stage1
啟德發展計劃 - 前跑道南面發展項目 - 第1期工程 2011



JAM Grade 8.8 Hot Dip Galvanized Threaded Rod/ Hex Bolt with Nuts and Washers
JAM Stainless Steel A4-70 and A4-80 Hex Bolt with Nuts and Washers

JAM Grade 8.8 Hot Dip Galvanized Hex Bolt with Nuts and Washers:
M33 x 500mm, M33 x 160mm, M24 x 140mm, M20, M12 and M6

JAM Grade 8.8 Hot Dip Galvanized Hex Bolt with Nuts and Washers
M27 x 130mm M24 X 110mm & M24 x 90mm
JAM Grade 4.8 Hot Dip Galvanized Hex Bolt with Nuts and Washers
M27 x 130mm M24 x 110mm M24 x 90mm M16 x 80mm

JAM Beam Clamp

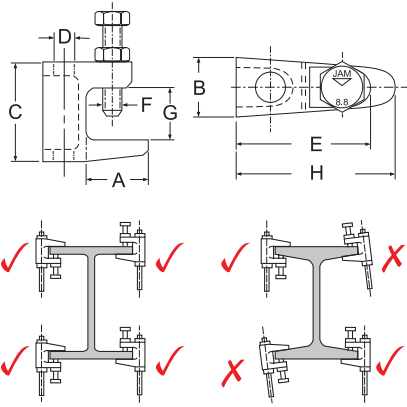
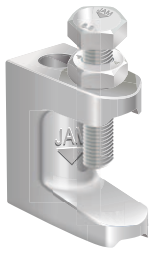
Hot Dip Galvanized (M8, M10, M12)

Item Code: **40435**

JAM Beam Clamp

Zinc Plated (M6)

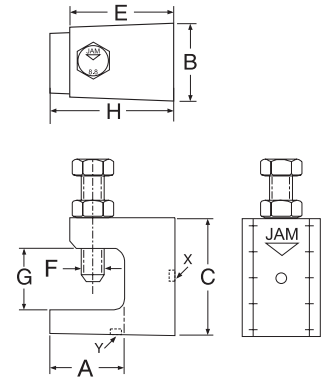
Item Code: **40434**



(Come with JAM Hex Bolt and Nut)



Zinc Plated



Malleable Cast Iron

- Hot Dip Galvanized ISO 1461: 1999
- Hexagon Head Bolt BS3692:2001 8.8
- Hexagon Thin Nut
- for sprinkler system, heating, ventilation and air conditioning, acoustic tubes and sanitary installation machines and steel constructions

Malleable Cast Iron

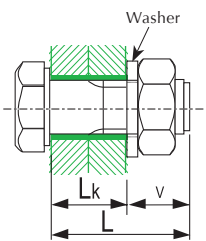
- Zinc Plated ISO 4042: 1999
- Hexagon Head Bolt BS3692:2001 8.8
- Hexagon Thin Nut
- A quick and cost-effective method of light duty suspending building services from steel beams

Item No	Size	A mm approx.	B mm approx.	C mm approx.	E mm approx.	F mm approx.	G mm approx.	H mm approx.	X mm approx.	Y mm approx.
4043406000	M6	21	20.5	35	25	M6	21.5	31	M5	M5

Item Code

Type	A mm approx.	B mm approx.	C mm approx.	D mm approx.	E mm approx.	F mm approx.	G mm approx.	H mm approx.	Ultimate Load (N)
M8 (18)	21	19	35	M8 Ø9	35	M8	18	38	1200
M10 (20)	23	21	42	M10 Ø11	41	M10	20	44	2500
M12 (26)	35	23.5	54	M12 Ø13	48	M10	26	58	3500
M12 (50)	35	23.5	78	M12 Ø13	48	M10	50	58	3500

Projection Length of Bolt



Norminal Length L = Grip Length Lk + Projection Length v

Capacities of Non-Preloaded Hex Head Bolt Grade 8.8 to BS 3692:2001

Diameter	Thread Size	Pitch	Tensile Stress Area	ISO 898 Grade 8.8 / BS 5950-1:2001			BS 3692		BS 4320 (Form A)	Added Length v	
				Ultimate Tensile Load	Design Tensile Capacity*	Design Shear Capacity*	Nuts Thickness (Max)	Nuts Width Across Flats	Washer Thickness (Mean)	Washer Outside Dia.	Thread Projection
d	p	A _s	F _{uN}	p _t	p _s	m		s	d ₂	2 x p	v
M 5	0.80	14.20	11.36	7.95	5.33	5	8	1.5	10	1.6	8.1
M 6	1.00	20.10	16.08	11.26	7.54	5	10	1.5	12.5	2.0	8.5
M 8	1.25	36.60	29.28	20.50	13.73	6.5	13	1.5	17	2.5	10.5
M 10	1.50	58.00	46.40	32.48	21.75	8	17	2	21	3.0	13.0
M 12	1.75	84.30	67.44	47.21	31.61	10	19	2.5	24	3.5	16.0
M 16	2.00	157.00	125.60	87.92	58.88	13	24	3	30	4.0	20.0
M 20	2.50	245.00	196.00	137.20	91.88	16	30	3	37	5.0	24.0
M 22	2.50	303.00	242.40	169.68	113.63	18	32	3	39	5.0	26.0
M 24	3.00	353.00	282.40	197.68	132.38	19	36	4	44	6.0	29.0
M 27	3.00	459.00	367.20	257.04	172.13	22	41	4	50	6.0	32.0
M 30	3.50	561.00	448.80	314.16	210.38	24	46	4	56	7.0	35.0
M 33	3.50	694.00	555.20	388.64	260.25	26	50	5	60	7.0	38.0
M 36	4.00	817.00	653.60	475.52	306.38	29	55	5	66	8.0	42.0
M 39	4.00	976.00	780.80	546.56	366.00	31	60	6	72	8.0	45.0
M 42	4.50	1120.00	896.00	627.20	420.00	34	65	7	78	9.0	50.0
M 45	4.50	1300.00	1040.00	728.00	487.50	36	70	7	85	9.0	52.0
M 48	5.00	1470.00	1176.00	823.20	551.25	38	75	8	92	10.0	56.0

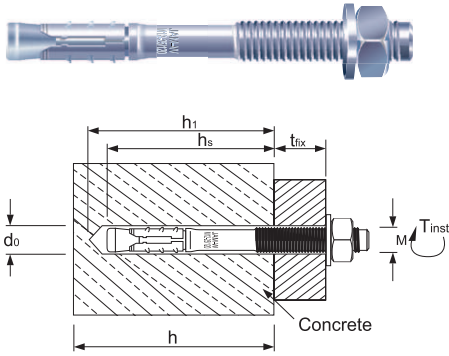
*Reference: Table D4, Annex 4-Variou normally used bolt strengths - "Code of Practice for the Structural Use of Steel 2005" (Buildings Department)

Design Tensile Stress p_t=560N/mm², Design Shear Stress p_s=375N/mm²

JAM-W Steel Wedge Anchor

20001 Zinc Plated

20003 Hot Dip Galvanized

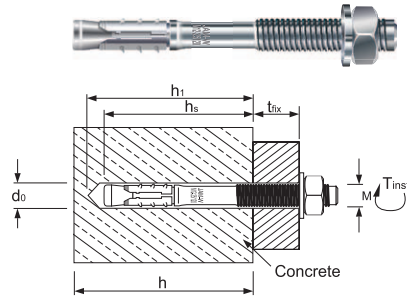


Item No. (Zinc Plated)	Item No. (Hot Dip Galvanized)	Description	Bore x Hole Depth d _s x h _s (mm)	Setting Depth h _s (mm)	Tightening Torque T _{inst} (Nm)	Fixture Thickness t _{fix} (mm)	Base Material Thickness h (mm)	Recommended Load Tensile Load (kN)	Recommended Load Shear Load (kN)
2000106050	-	W M6-5/50	6 x 45	36	8	5	100	1.78	2.54
2000106065	-	W M6-10/65	6 x 55	46	8	10	100	2.90	2.54
2000108060	2000308060	W M8-5/60	8 x 55	45	15	5	100	3.13	5.55
2000108075	2000308075	W M8-10/75	8 x 65	55	15	10	100	4.67	5.55
2000108090	2000308090	W M8-25/90	8 x 65	55	15	25	100	4.67	5.55
2000108110	2000308110	W M8-45/110	8 x 65	55	15	45	100	4.67	5.55
2000110070	2000310070	W M10-10/70	10 x 60	48	30	10	100	4.01	7.86
2000110090	2000310090	W M10-20/90	10 x 70	58	30	20	100	5.86	7.86
2000110100	2000310100	W M10-30/100	10 x 70	58	30	30	100	5.86	7.86
2000110110	2000310110	W M10-40/110	10 x 70	58	30	40	100	5.86	7.86
2000110120	2000310120	W M10-50/120	10 x 70	58	30	50	100	5.86	7.86
2000112075	2000312075	W M12-5/75	12 x 65	55	50	5	100	4.68	11.00
2000112090	2000312090	W M12-5/90	12 x 80	70	50	5	120	7.58	11.00
2000112105	2000312105	W M12-10/105	12 x 90	80	50	10	150	9.90	11.00
2000112120	2000312120	W M12-25/120	12 x 90	80	50	25	150	9.90	11.00
2000112170	2000312170	W M12-75/170	12 x 90	80	50	75	150	9.90	11.00
2000116100	2000316100	W M16-5/100	16 x 90	75	100	5	150	9.40	19.00
2000116120	2000316120	W M16-5/120	16 x 110	95	100	5	150	15.11	19.00
2000116140	2000316140	W M16-25/140	16 x 110	95	100	25	180	15.11	19.00
2000116215	2000316215	W M16-100/215	16 x 110	95	100	100	180	15.11	19.00
2000120170	2000320170	W M20-30/170	20 x 130	115	200	30	220	19.50	19.99

*Factor of Safety=3(Tension); 2.52(Shear)

JAM-W A4 Wedge Anchor

20002 Stainless Steel A4 (316)



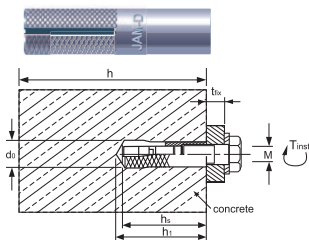
Item No.	Description	Bore x Hole Depth d _s x h _s (mm)	Setting Depth h _s (mm)	Tightening Torque T _{inst} (Nm)	Fixture Thickness t _{fix} (mm)	Base Material Thickness h (mm)	Recommended Load Tensile Load (kN)	Recommended Load Shear Load (kN)
2000206065	W M6-10/65 A4	6 x 55	46	8	10	100	2.90	2.54
2000208075	W M8-10/75 A4	8 x 65	55	15	10	100	4.67	5.55
2000208090	W M8-25/90 A4	8 x 65	55	15	25	100	4.67	5.55
2000210070	W M10-10/70 A4	10 x 60	48	30	10	100	4.01	7.86
2000210090	W M10-20/90 A4	10 x 70	58	30	20	100	5.86	7.86
2000210110	W M10-40/110 A4	10 x 70	58	30	40	100	5.86	7.86
2000212090	W M12-5/90 A4	12 x 80	70	50	5	120	7.58	11.00
2000212105	W M12-10/105 A4	12 x 90	80	50	10	150	9.90	11.00
2000212120	W M12-25/120 A4	12 x 90	80	50	25	150	9.90	11.00
2000216100	W M16-5/100 A4	16 x 90	75	100	5	150	9.40	19.00
2000216140	W M16-25/140 A4	16 x 110	95	100	25	180	15.11	19.00

*Factor of Safety=3(Tension); 2.52(Shear)

JAM-D Steel Drop In Anchor

20111 Zinc Plated

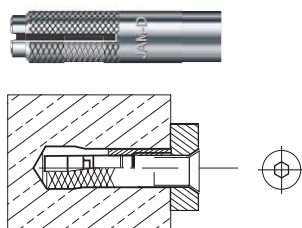
20112 Hot Dip Galvanized



Item No. (Zinc Plated)	Item No. (Hot Dip Galvanized)	Description	Bore x Hole Depth d _s x h _s (mm)	Setting Depth h _s (mm)	Tightening Torque T _{inst} (Nm)	Base Material Thickness h (mm)	Thread Ø x Length (mm)	Recommended Load Tensile Load (kN)	Recommended Load Shear Load (kN)
2011106025	2011206025	D M6 x 25	8 x 28	25	5	100	M6 x 10	1.80	2.00
2011108030	2011208030	D M8 x 30	10 x 33	30	10	100	M8 x 13	3.60	3.00
2011110040	2011210040	D M10 x 40	12 x 44	40	20	100	M10 x 15	4.80	4.60
2011112050	2011212050	D M12 x 50	16 x 54	50	40	150	M12 x 18	7.80	8.00
2011116065	2011216065	D M16 x 65	20 x 71	65	70	200	M16 x 23	11.00	12.50
2011120080	2011220080	D M20 x 80	25 x 86	80	150	200	M20 x 34	12.00	18.00

JAM-D A4 Drop In Anchor

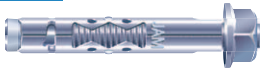
20114 Stainless Steel A4 (316)



Item No.	Description	Bore x Hole Depth d _s x h _s (mm)	Setting Depth h _s (mm)	Tightening Torque T _{inst} (Nm)	Base Material Thickness h (mm)	Thread Ø x Length (mm)	Recommended Load Tensile Load (kN)	Recommended Load Shear Load (kN)
2011406025	D M6 x 25 A4	8 x 28	25	5	100	M6 x 10	1.80	2.00
2011408030	D M8 x 30 A4	10 x 33	30	10	100	M8 x 13	3.60	3.00
2011410040	D M10 x 40 A4	12 x 44	40	20	100	M10 x 15	4.80	4.60
2011412050	D M12 x 50 A4	16 x 54	50	40	150	M12 x 18	7.80	8.00
2011416065	D M16 x 65 A4	20 x 71	65	70	200	M16 x 23	11.00	12.50
2011420080	D M20 x 80 A4	25 x 86	80	150	200	M20 x 34	12.00	18.00

JAM-S Steel Sleeve Anchor

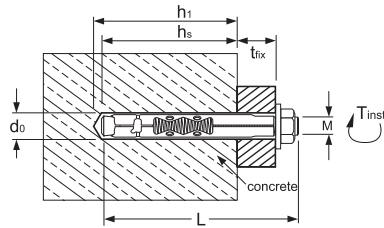
20101 Zinc Plated



Item No.	Description	Hole Diameter d_h (mm)	Thread Size x L (mm)	Min. Setting Depth h_s (mm)	Tightening Torque T_{use} (Nm)	Fixture Thickness t_b (mm)	Base Material Thickness (mm)	Recommended Load Tensile Load (kN)	Recommended Load Shear Load (kN)
2010106040	S 8 x 40	8	M6 x 47	32	8	8	80	1.9	3.0
2010108050	S 10 x 50	10	M8 x 60	40	25	10	100	3.8	4.4
2010110060	S 12 x 60	12	M10 x 69	48	40	12	120	5.5	7.2
2010110075	S 12 x 75	12	M10 x 84	48	40	27	150	5.5	7.2

JAM-S A2 Sleeve Anchor

20106 Stainless Steel A2 (304)

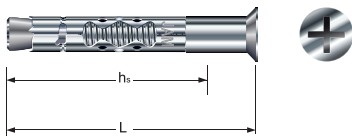


Item No.	Description	Hole Diameter d_h (mm)	Thread Size x L (mm)	Min. Setting Depth h_s (mm)	Tightening Torque T_{use} (Nm)	Fixture Thickness t_b (mm)	Base Material Thickness (mm)	Recommended Load Tensile Load (kN)	Recommended Load Shear Load (kN)
2010606040	S 8 x 40 A2	8	M6 x 47	28	8	12	80	1.9	2.5
2010608050	S 10 x 50 A2	10	M8 x 60	32	25	18	100	3.0	5.0
2010610060	S 12 x 60 A2	12	M10 x 69	38	40	22	120	3.4	6.0

*A4 stainless steel on request

JAM-SF A2 Countersunk Head Sleeve Anchor

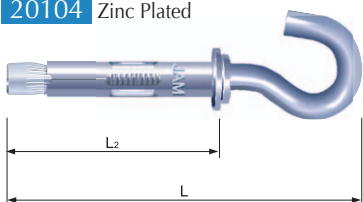
20011 Stainless Steel A2 (304)



Item No.	Description	Hole Diameter d_h (mm)	Thread Size x L (mm)	Min. Setting Depth h_s (mm)	Tightening Torque T_{use} (Nm)	Fixture Thickness t_b (mm)	Base Material Thickness (mm)	Recommended Load Tensile Load (kN)	Recommended Load Shear Load (kN)
2001106045	SF 8 x 45	8	M6 x 45	32	8	13	80	1.3	2.3
2001106060	SF 8 x 60	8	M6 x 60	32	8	28	80	1.3	2.3
2001108060	SF 10 x 60	10	M8 x 60	45	25	15	100	2.3	3.1
2001108085	SF 10 x 85	10	M8 x 85	45	25	40	100	2.3	3.1
2001108110	SF 10 x 110	10	M8 x 110	45	25	65	100	2.3	3.1

JAM-SC Steel Sleeve Anchor

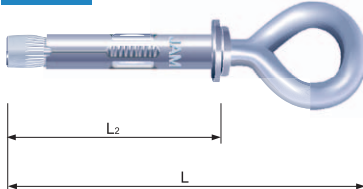
20104 Zinc Plated



Item No.	Description	Bore x Hole Depth d_b x h_b (mm)	Thread Size x L (L_1) (mm)	Setting Depth h_s (mm)	Tightening Torque T_{use} (Nm)	Fixture Thickness t_b (mm)	Base Material Thickness (mm)	Safe Working Load (kN)
2010406040	SC 8 x 48	8 x 55	M6 x 78 (48)	40	10	0	80	0.20
2010408050	SC 10 x 60	10 x 65	M8 x 100 (60)	50	25	0	100	0.40

JAM-SE Steel Sleeve Anchor

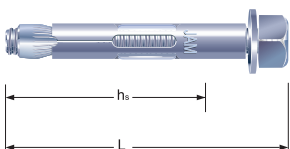
20105 Zinc Plated



Item No.	Description	Bore x Hole Depth d_b x h_b (mm)	Thread Size x L (L_1) (mm)	Setting Depth h_s (mm)	Tightening Torque T_{use} (Nm)	Fixture Thickness t_b (mm)	Base Material Thickness (mm)	Safe Working Load (kN)
2010506040	SE 8 x 48	8 x 55	M6 x 78 (48)	40	10	0	80	1.6
2010506070	SE 8 x 70	8 x 75	M6 x 100(70)	40	10	0	80	1.6
2010508050	SE 10 x 60	10 x 65	M8 x 100 (60)	48	25	0	100	2.0
2010508080	SE 10 x 80	10 x 85	M8 x 117 (80)	48	25	0	100	2.0

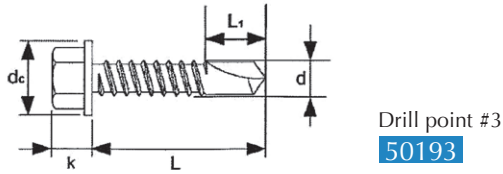
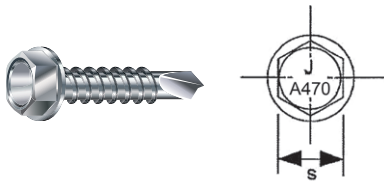
JAM-SH Steel Sleeve Anchor

20102 Zinc Plated

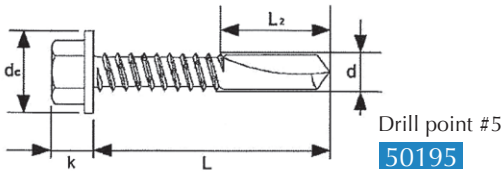


Item No.	Description	Hole Diameter d_h (mm)	Thread Size x L (mm)	Min. Setting Depth h_s (mm)	Tightening Torque T_{use} (Nm)	Fixture Thickness t_b (mm)	Base Material Thickness (mm)	Recommended Load Tensile Load (kN)	Recommended Load Shear Load (kN)
2010206045	SH 8 x 45	8	M6 x 50	38	10	7	100	2.1	3.5
2010206060	SH 8 x 60	8	M6 x 64	44	10	14	100	2.8	3.5
2010208060	SH 10 x 60	10	M8 x 66	48	20	10	100	4.0	4.8
2010208085	SH 10 x 85	10	M8 x 91	48	20	35	100	4.0	4.8
2010208110	SH 10 x 110	10	M8 x 110	48	20	60	100	4.0	4.8
2010210065	SH 12 x 65	12	M10 x 71	61	35	9	120	5.9	7.8
2010210080	SH 12 x 80	12	M10 x 86	61	35	24	120	5.9	7.8
2010210110	SH 12 x 110	12	M10 x 116	61	35	54	120	5.9	7.8
2010212110	SH 16 x 110	16	M12 x 116	76	50	55	150	8.3	9.5

316 Stainless Steel Bi-Metal Hex Washer Head



Drill point #3
50193



Drill point #5
50195

Bi-Metal

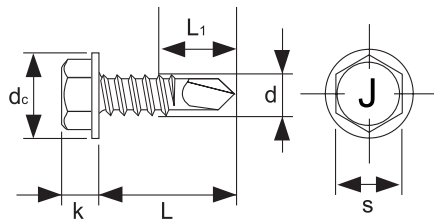
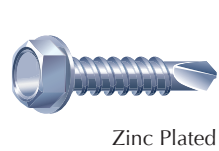
Material: Bi-Metal (316 Stainless Steel Body + Carbon Steel Drill Point)
Specification: DIN 7504K (A4-50 / A4-70)
(Item No.): Drill point #3 **50193**
Drill point #5 **50195**

Ordering example : 316 stainless steel bi-metal #5 hex washer head self-drilling screw #6.3 x 38mm

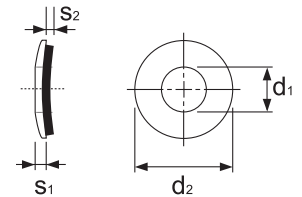
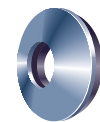
Ordering Code: 5 0 1 9 5 1 4 0 3 8

	M5.5	M6.3	M5.5	M6.3
d (diameter)	M5.5		M6.3	
Thread Pitch / mm	1.8		1.8	
d _c (outer head width) / mm	10 - 11		12.2 - 13.2	
k (max. head height) / mm	5.15 - 5.45		6.15 - 6.45	
s (inner head width) / mm	7.78 - 8		9.78 - 10	
L ₁ / mm	8 - 9		8 - 9	
L ₂ / mm	15 - 16		15 - 16	
Nr. acc. to ISO	#12		#14	
	Drill Point #3		Drill Point #5	
	M5.5	M6.3	M5.5	M6.3
Max. Screw Driver Speed / r.p.m.	2500	1800	1800	1800
Max. Drilling Capacity / mm	6	6	12.5	12.5

Hex Washer Head - Steel



Steel EPDM Sealing Washer

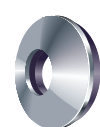
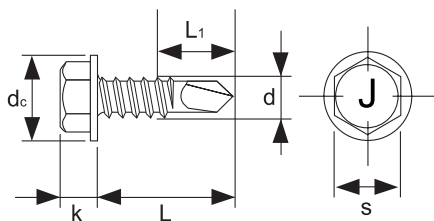
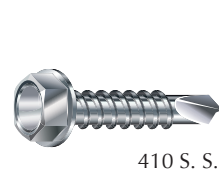


Steel

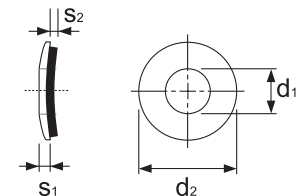
Material: C1022 Steel
Specification: DIN 7504K
Finishing (Item No.): zinc plated **50010**
Ordering example :
zinc plated M5.5 x 25mm hex washer head self-drilling screw
(item no.: 5001012025)

	M4.2	M4.8	M5.5	M6.3
d (diameter)	M4.2	M4.8	M5.5	M6.3
Thread Pitch / mm	1.4	1.6	1.8	1.8
d _c (outer head width) / mm	8.8	10.5	11	13.2
k (max. head height) / mm	4.25	4.45	5.45	6.45
s (inner head width) / mm	7	8	8	10
L ₁ / mm	7	8	10	11
Nr. acc. to ISO	#8	#10	#12	#14

Hex Washer Head - 410 Stainless Steel



304 S. S.
40544

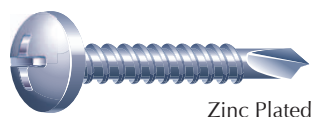


Stainless Steel

Material: 410 Stainless Steel
Specification: DIN 7504K
(Item No.): **50000**
Ordering example :
410 stainless steel #12 x 25mm hex washer head self-drilling screw
(item no.: 5000012025)

	M4.8	M5.5	M6.3
d (diameter)	M4.8	M5.5	M6.3
Thread Pitch / mm	1.6	1.8	1.8
d _c (outer head width) / mm	10.5	11	13.2
k (max. head height) / mm	4.45	5.45	6.45
s (inner head width) / mm	8	8	10
L ₁ / mm	8	10	11
Nr. acc. to ISO	#10	#12	#14

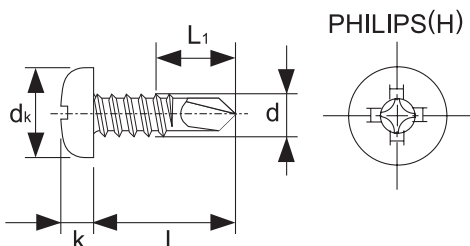
Philips Pan Head Self Drilling Screw - Steel / Machine Screw 410 Stainless Steel / 316 (A4-50) Stainless Steel Bi-metal



Steel	
Material:	C1022 Steel
Specification:	DIN 7504N
Finishing (Item No.):	zinc plated 50210

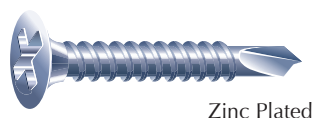


Stainless Steel	
Material:	410 Stainless Steel / 316 Stainless Steel Bi-metal
Specification:	DIN 7504N
(Item No.):	410 52400 316 (Bi-metal) 52490

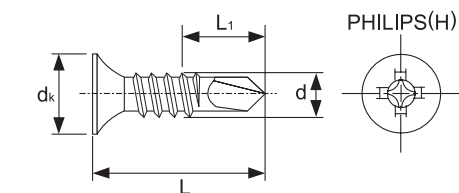


d (diameter)	M4.2	M4.8	M5.5
Thread Pitch / mm	1.4	1.6	1.8
dk (outer head width) / mm	8.2	9.5	10.8
k (max. head height) / mm	3.05	3.55	3.95
L ₁ / mm	7	8	10
Nr. acc. to ISO	#8	#10	#12
Nr. Philips (H) recess	2	2	3

Philips Bugle Head Self Drilling Screw - Steel

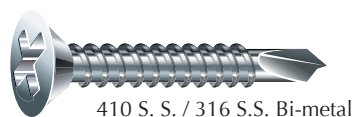


Steel	
Material:	C1022 Steel
Finishing (Item No.):	zinc plated 50310
Ordering example :	zinc plated M4.2 x 25mm philips bugle head self-drilling screw (item no.: 5031008025)

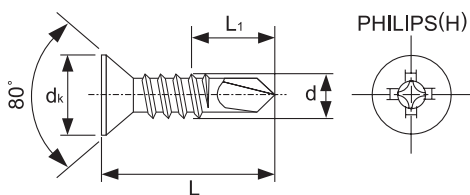


d (diameter)	M3.5	M4.2	M4.8	M5.5
Thread Pitch / mm	1.3	1.4	1.6	1.8
dk (outer head width) / mm	8.3	8.3	9.4	10.6
L ₁ / mm	5	7	8	10
Nr. acc. to ISO	#6	#8	#10	#12
Nr. Philips (H) recess	2	2	2	3

Philips Flat Head Self Drilling Screw - 410 Stainless Steel / 316 S.S. Bi-metal



Stainless Steel	
Material:	410 Stainless Steel / 316 Stainless Steel Bi-metal
Specification:	DIN 7504P
(Item No.):	410 52300 / 316 (Bi-metal) 52390
Ordering example :	410 stainless steel M4.8 x 25mm philips flat head self-drilling screw (item no.: 5230010025)

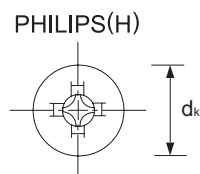
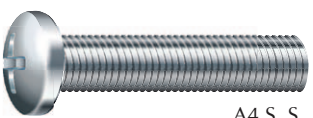


d (diameter)	M4.2	M4.8	M5.5
Thread Pitch / mm	1.4	1.6	1.8
dk (head width) / mm	8.1	9.5	10.8
L ₁ / mm	7	8	10
Nr. acc. to ISO	#8	#10	#12
Nr. Philips (H) recess	2	2	3

Philips Pan Head Machine Screw - Steel / Stainless Steel

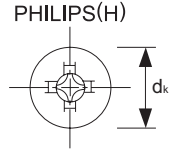
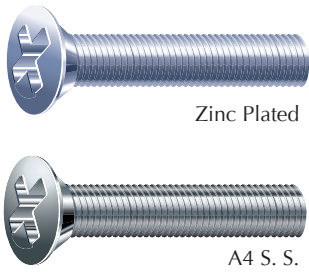


Steel		Stainless Steel	
Material:	Carbon Steel, Stainless Steel Grade A2(304) and Grade A4(316)		
Specification:	GB / BS / JIS / DIN		
Material (Item No.):	zinc plated 52412	A4-50 52492	
	A4-70 52462	A2-50 52482	
Ordering example :	A2-50 stainless steel M6 x 20mm philips pan head machine screw (item no.: 5248206020)		



d (diameter)	M4	M5	M6	M8
Thread Pitch / mm	0.7	0.8	1	1.25
dk (head width) / mm	8	10	12	16

Philips Countersunk Head Machine Screw - Steel / Stainless Steel

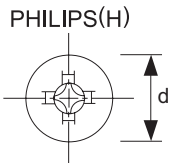
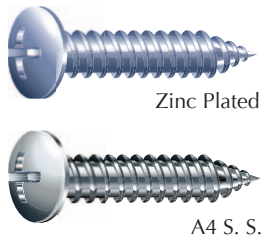


Steel		Stainless Steel	
Material:	Carbon Steel, Stainless Steel Grade A2(304) and Grade A4(316)		
Specification:	GB / BS / JIS / DIN		
Material (Item No.):	zinc plated	52112	A4-70 52192
	A4-50	52191	A2-50 52182

Ordering example : A2-50 stainless steel M6 x 20mm philips countersunk head machine screw (item no.: 5218206020)

d (diameter)	M3	M4	M5	M6	M8	M10
Thread Pitch / mm	0.5	0.7	0.8	1	1.25	1.5
dk (head width) / mm	5.6	7.5	9.2	11	15	18

Philips Pan Head Self Tapping Screw - Steel / Stainless Steel

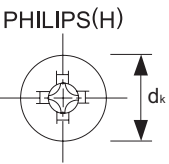
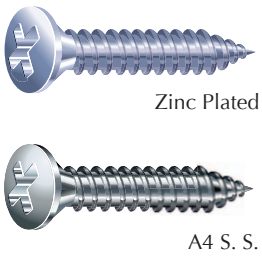


Steel		Stainless Steel	
Material:	Carbon Steel, Stainless Steel Grade A2(304) and Grade A4(316)		
Specification:	GB / BS / JIS / DIN		
Material (Item No.):	zinc plated	52411	A4-50 52491
	A2-50	52461	A2-50 52481

Ordering example : A2-50 stainless steel M5 x 20mm philips pan head self-tapping screw (item no.: 5248105020)

d (diameter)	M3.5/°6	M4.2/°8	M4.8/°10	M5.5/°12	M6.3/°14
Thread Pitch / mm	1.3	1.4	1.6	1.8	1.8
dk (head width) / mm	6.9	8.2	9.5	10.8	12.5

Philips Countersunk Head Self Tapping Screw - Steel / Stainless Steel

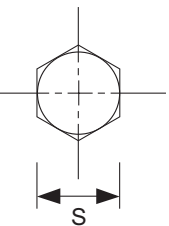
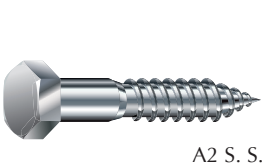


Steel		Stainless Steel	
Material:	Carbon Steel, Stainless Steel Grade A2(304) and Grade A4(316)		
Specification:	GB / BS / JIS / DIN		
Material (Item No.):	zinc plated	52111	A4-50 52191
			A2-50 52181

Ordering example : A4-50 stainless steel M5 x 30mm philips countersunk head self-tapping screw (item no.: 5219105030)

d (diameter)	M3.5/°6	M4.2/°8	M4.8/°10	M5.5/°12	M6.3/°14
Thread Pitch / mm	1.3	1.4	1.6	1.8	1.8
dk (head width) / mm	6.8	8.1	9.5	10.8	12.4

Hex Head Wood Screw - Steel / Stainless Steel

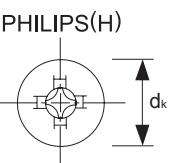
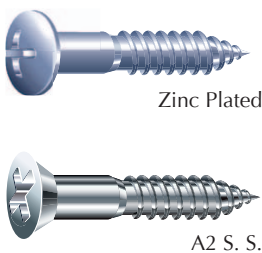


Steel		Stainless Steel	
Material:	Carbon Steel, Stainless Steel Grade A2(304)		
Specification:	DIN571		
Material (Item No.):	zinc plated	50014	A2-50 50064

Ordering example : A2-50 stainless steel M8 x 40mm hex head wood screw (item no.: 5006408040)

d (diameter)	M6	M8	M10	M12	M16
Head Height / mm	4	5.5	7	8	10
S (width across flat) / mm	10	13	17	19	24

Philips Pan / Countersunk Head Wood Screw - Steel / Stainless Steel



Steel		Stainless Steel	
Material:	Carbon Steel, Stainless Steel Grade A2(304)		
Material (Item No.):	Pan Head	zinc plated 52414	A2-50 52484
	Countersunk Head	zinc plated 52314	A2-50 52384

Ordering example : A2 stainless steel M4.2 x 32mm philips countersunk head wood screw (item no.: 5238442032)

d (diameter) / mm	M3.5	M3.9	M4.2	M4.8	M5.5	M6.5
dk (head width) / mm	6.8	7.5	8.1	9.5	10.8	12.4

Concrete Inserts

Steel

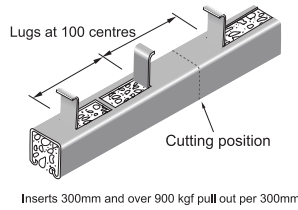
Finishing:

hot dip galvanized to ISO 1461:1999

DR41C1

Item No.

4001500000

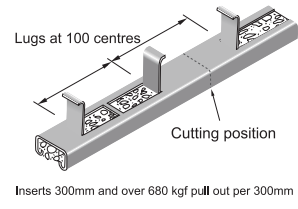


Inserts 300mm and over 900 kgf pull out per 300mm

DR21C1

Item No.

4001600000



Inserts 300mm and over 680 kgf pull out per 300mm

(Manufactured to order)

Grade 304 & 316 stainless steel and special length available on request

Channel Spring Nut



hot dip galvanized

Steel

Stainless Steel

Finishing (Item No.): hot dip galvanized to ISO 1461:1999 40419
zinc plated to ISO 4042:1999 40425
316 stainless steel 40422

Ordering example: hot dip galvanized M10 channel spring nut (item no.: 4041910000)

size	M5	M6	M8	M10	M12	M16
Item No.	05000	06000	08000	10000	12000	16000

Hot dip galvanized finishing from M6

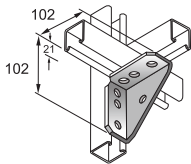
Channel Bracket

ø14mm Hole, Thickness: 5mm

Angle Bracket with Plate (A05)

Item No.

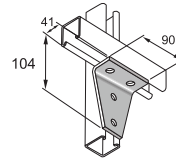
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Wide Tee (A06) Angle Bracket

Item No.

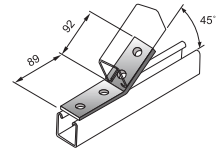
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45 degree (A07) Angle Bracket

Item No.

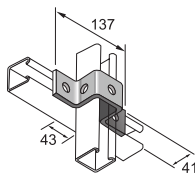
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Off Set Tee (A08) Bracket

Item No.

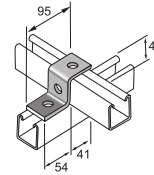
4054510017



Single Cross (A09) Over Bracket

Item No.

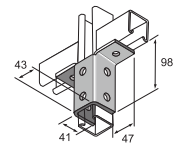
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Transverse (A12) Support Bracket

Item No.

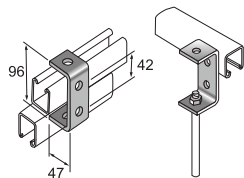
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C Bracket (A10)

Item No.

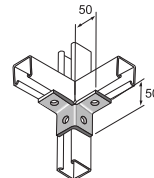
4054510019



Transverse (A11) Corner Bracket

Item No.

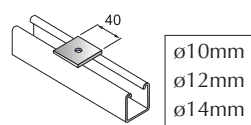
4054510020



Square Washer (F03)

Item No.

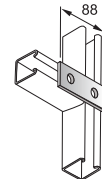
4054510000



Rectangular Plate (2 holes) (F04)

Item No.

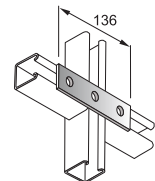
4054510001



Rectangular Plate (3 holes) (F05)

Item No.

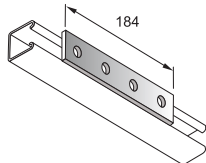
4054510002



Rectangular Plate (4 holes) (F06)

Item No.

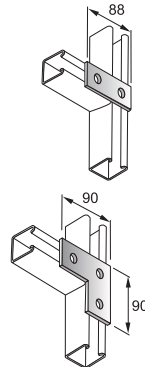
4054510003



Flat Angle Bracket (F07)

Item No.

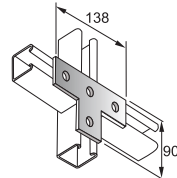
4054510004



Tee Bracket (4 holes) (F08)

Item No.

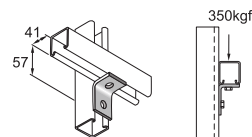
4054510005



Angle Bracket (A01) (41x57 / 2 holes)

Item No.

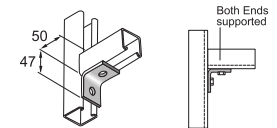
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Angle Bracket (A02)

Item No.

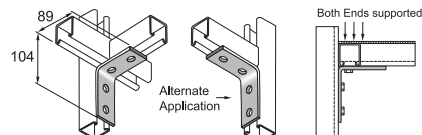
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Angle Bracket (A04) (89x104 / 4 holes)

Item No.

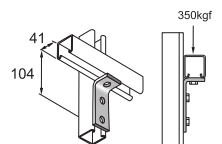
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Angle Bracket (3 holes) (A03)

Item No.

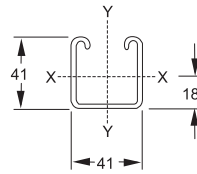
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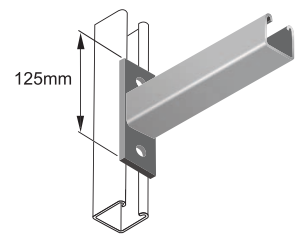
Channel 41x41

Item No.

4004041413 (3 meters long)
4004041416 (6 meters long)
(Standard Thickness: 2.5mm)



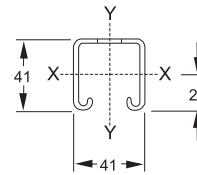
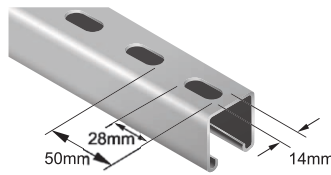
No. CA01



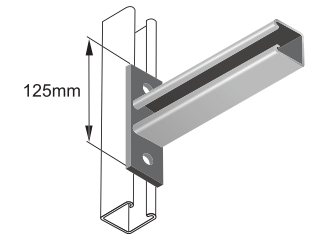
Slotted Channel 41x41

Item No.

4002041413 (3 meters long)
4002041416 (6 meters long)



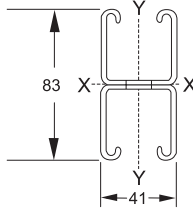
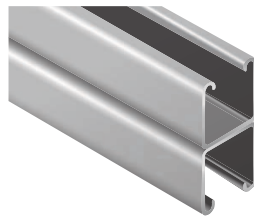
No. CA02



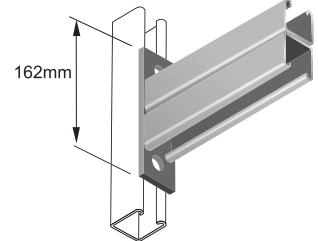
Combination Channel 41x41

Item No.

4009041413 (3 meters long)
4009041416 (6 meters long)



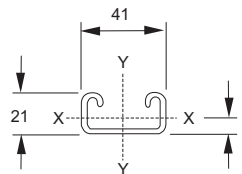
No. CA03



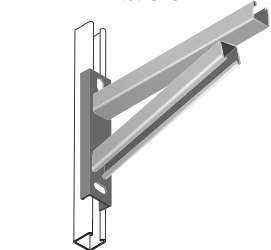
Plain Channel 21x41

Item No.

4005041213 (3 meters long)
4005041216 (6 meters long)



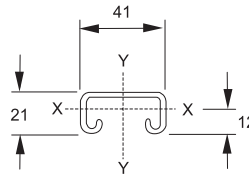
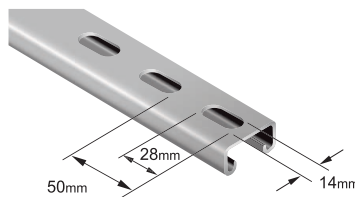
No. CA04



Slotted Channel 21x41

Item No.

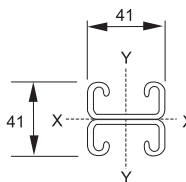
4003041213 (3 meters long)
4003041216 (6 meters long)



Combination Channel 21x41

Item No.

4008041213 (3 meters long)
4008041216 (6 meters long)



Floor Bracket

Steel

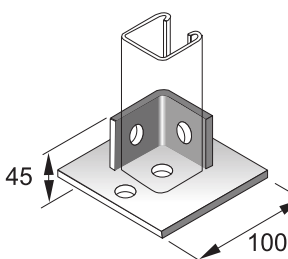
Finishing:

hot dip galvanized to ISO 1461:1999

41x41 Single Base Plate (Light Duty) (No. B01)

Item No.

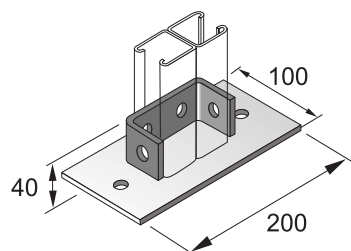
4054510010



41x41 Double Base Plate (Light Duty) (No. B02)

Item No.

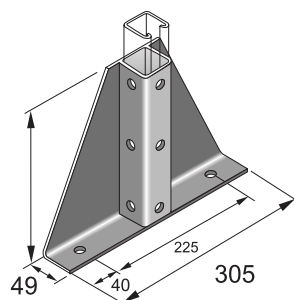
4054510011



41x41 Single Base Plate (Heavy Duty) (No. B03)

Item No.

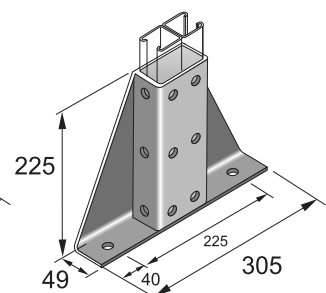
4054510012



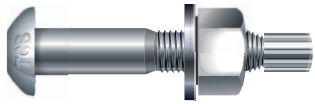
41x41 Double Base Plate (Heavy Duty) (No. B04)

Item No.

4054510013



HIGH STRENGTH TENSION CONTROL BOLTS (TCB) (BS EN 14399-10)



Tension Control Bolts - (Grade 10.9 HRC) 40651

The lowest cost method of properly installing high strength friction grip / preloaded bolts with Greenkote® environmentally friendly coating

Tension Control Bolts Ltd operates a quality management system in accordance with EN ISO 9001:2000 certificates no. GB2925, having upgrade from ISO 9002:1994.

It is the lowest cost method for properly installed High Strength Friction Grip Bolts. They are quick, safe and easy to install using no impacting electric shear wrenches with varying shapes and sizes available. One man installation and no torque wrenches are required. Guaranteed consistent tension together with visual inspection removes the like hood of operator error and ensures engineers that connections are tightened in accordance with specifications. It also reduces operator fatigue, tool maintenance and on-site noise levels.

Tension Control Bolt Type & Size	Project	Contractor	Date
HIGH STRENGTH TENSION CONTROL BOLT C/W 2H HEX. NUT & HARDENED FLAT WASHER M36 x 190mm M36 x 170mm M30 x 130mm	MTR West Island Line - 703 Sheung Wan to Sai Ying Pun Tunnel Construction	Dragages - Maeda - BSG Joint Venture	2011 Dec
HIGH STRENGTH TENSION CONTROL BOLT C/W 2H HEX. NUT & HARDENED FLAT WASHER M24 x 140mm	MTR South Island Line (E) - 901 Admiralty Integrated Station and SCL Enabling Works	Kier Laing O'Rourke Kaden Joint Venture	2011 Sept
HIGH STRENGTH TENSION CONTROL BOLT C/W 2H HEX. NUT & HARDENED FLAT WASHER M30 x 120mm, M30 x 130mm, M30 x 140mm, M30 x 150mm, M30 x 190mm	Installation of Structural Steel work for No. 500 Hennessy Road Redevelopment (S13262)	Gammon Construction Ltd. Meinhardt (C & S) Ltd. Gearup Investments Ltd	2011 Mar
HIGH STRENGTH TENSION CONTROL BOLT C/W 2H HRD NUT & HARDENED FLAT WASHER M30 x 90mm, M30 x 100mm, M30 x 110mm	Steel work for Tamar Development Project (S15201)	Gammon - Hip Hing Joint Venture Meinhardt (C & S) Ltd. ASD	2011 Mar

MKT ANCHOR BOLT

Manufacturer specializing in heavy duty anchor systems from Germany

MKT Wedge Anchor B
...a solid connection Also available in Steel, Zinc plated / Hot Dip galvanized



Stainless Steel A4

20201

Zinc Plated

20202

Hot Dip Galvanized

20205

MKT Wedge Anchor BZ plus
...a solid connection Also available in Steel, zinc plated



Stainless Steel A4

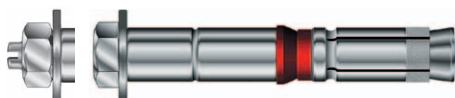
20215

Zinc Plated

20207

Wedge Anchor BZ plus

MKT Highload Anchor SL A4
...a solid connection



Stainless Steel A4

20210

MKT Wedge Anchor B-IG
...a solid connection Also available in Steel, zinc plated / Stainless steel A4/316



Stainless Steel A4

20209

MKT Wedge Anchor BZ-IG A4
...a solid connection Stainless steel A4/316



Wedge Anchor BZ-IG A4 Pre-Installation

20216



Wedge Anchor BZ-IG A4 Through-Fastening

20217



G 4030004
M6 - M16



Fire Resistance



Software available

Express Rail Link (XRL)- HK Section of 'Guangzhou-Shenzhen-Hong Kong' 高鐵路 - 廣深港高速鐵路(香港段)

Project:	Main Contractor	Product Type	Date
Express Rail Link (XRL)			
XRL 810B West Kowloon Terminus Station South	LaingO' Rourke - Hsin Chong - Paul Y. Joint Venture	JAM Grade 8.8 Threaded Rod(Hot Dip Galvanized) c/w Class 8 Nut M20 x 3000mm JAM Grade 8.8 Hex Bolt (Hot Dip Galvanized) with Nuts and Washers: M30, M27, M24, M20, M16 and M12 JAM Grade 8.8 Steel Hex Bolt (Zinc Plated) with Nuts and Washers : M24, M20, M16, M12	2011 May
XRL 811B West Kowloon Teminus Approach Tunnel (South)	Gammon - Leighton Joint Venture	JAM Grade 8.8 Threaded Rod (Hot Dip Galvanized) M30 x 1000mm c/w Class 8 Nut M24 x 1000mm c/w Class 10 Nut & Flat Washer JAM Grade 8.8 Hex. Bolt (Zinc Plated) c/w Nut M16 (Hot Dip Galvanized) M16 c/w Class 8 Nut & Flat Washer	2011 June
XRL 820 Mei Lai Road to Hoi Ting Road Tunnels	Dragages - Bouygues Joint Venture	Grade 8.8 Hex Bolt (Black Steel) c/w Nut & Flat Washer M27, M20	2011 Aug

MTR, Hong Kong 香港地鐵

Project:	Main Contractor	Product Type	Date
MTR South Island Line (E) - 901 Admiralty Integrated Station and SCL	Kier Laing O'Rourke Kaden Joint Venture	TCB- HIGH STRENGTH TENSION CONTROL BOLT (Greenkote) c/w 2H HEX. NUT & HARDENED FLAT WASHER M24 x 140mm	2011 Sept
MTR South Island Line (E) - 904 Lei Tung Station, South Horizons Station and Tunnels	Leighton-John Holland Joint Venture	JAM Grade 8.8 Threaded Rod (Hot Dip Galvanized) M16 x 3000mm c/w Class 8 Nut M30 x 600mm c/w Class 8 Nut JAM-W (Zinc Plated) Anchor M12 x 120mm, M12 x 90mm	2011 Sept
MTR West Island Line-703, Sheung Wan-to-Sai Ying Pun Tunnel Construction	Dragages-Maeda-BSG Joint Venture	M5.5 (#12) x 25mm yellow Zinc Plated hex. self-drilling screw with washer JAM Grade 8.8 M48 x 1500mm Threaded Rod (Hot Dip Galvanized) c/w Class 10 Nut & Washer M42 x 3M (HDG) c/w class 8 Nut & Washer M24 x 650mm (HDG) c/w class 8 Nut & Washer JAM Grade 8.8 Hex. Bolt (Hot Dip Galvanized) M12 c/w class 8 Nut, Flat Washer & Spring Washer M16 c/w class 8 Nut & Flat Washer M24 c/w class 8 Nut & Flat Washer	2010 Sept 2012 Jan



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