

M6 - M12 Hex Flange Bolts to DIN 6921 Available with PPAP 3 certification in a Zinc Clear Trivalent finish.

Earnest Machine's line of 10.9 and 8.8 Metric Hex Flange Bolts are manufactured to DIN 6921 with a level 3 PPAP certification are available in Zinc Clear Trivalent finishes. Earnest Machine stocks Metric Hex Flange Bolts in diameters ranging from M6 to M12 and our line of 10.9 product is baked to prevent hydrogen embrittlement.



PRODUCT ATTRIBUTES

Built-in washer distributes clamping load over wider area
Class 10.9 is baked to prevent hydrogen embrittlement

Level 3 PPAP certification available

Sizes range from M6 to M12

DIN 6921

MARKETS FOR DIN 6921 METRIC HEX FLANGE BOLTS

Heavy Truck

Construction Equipment

Agriculture Equipment

Automotive

THIS PRODUCT IS OFTEN CALLED...

Frame Bolt

Flange Bolt

Hex Washer Head Bolt

ADDITIONAL HEX FLANGE PRODUCT WE SUPPLY

Hex Serrated Flange Screws

Large Flange Hex Serrated Flange Screws

Stainless Steel Hex Serrated Flange Screws

Metric Hex Serrated Flange Screws

Hex Flange Nuts

Metric & JIS Hex Flange Nuts

Metric Stainless Steel Hex Flange Nuts

Hex Serrated Flange Lock Nuts

Large Flange Hex Serrated Flange Lock Nuts

Stainless Steel Hex Serrated Flange Lock Nuts

Metric & JIS Hex Serrated Flange Lock Nuts

All Metal Hex Flange Lock Nuts

Metric All Metal Hex Flange Lock Nuts

Nylon Insert Hex Flange Lock Nuts

Metric Nylon Insert Flange Lock Nuts

AVAILABLE VALUE ADDED SERVICES

Bulk, full, and broken case quantities

Secondary & rework services

Custom packaging, plating, and coating services

Enquire today at **+44 (0) 1902 711041** or visit **EarnestMachine.co.uk**

DIN 6921 METRIC CLASS 10.9 HEX FLANGE BOLTS

Available with a PPAP 3 certification in a Zinc Clear Trivalent Finish and Baked to prevent hydrogen embrittlement.

DIN 6921	Dimensional Requirements
ISO 898-1	Material and Physical Properties
ISO 261	Thread Requirements
ISO 6157-1	Surface Discontinuities
ISO 3269	Inspection and Quality Assurance

THREADS

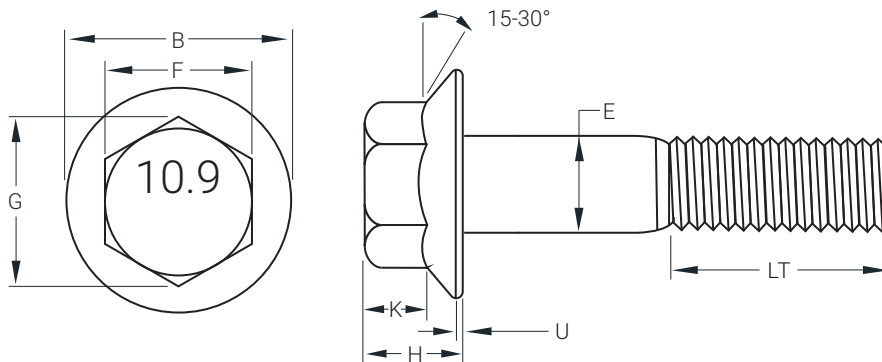
Threads are made to the requirements of ISO 261
ISO 965-2 Class 6g
Thread acceptance per ISO 1502

PLATING

Zinc Clear (RoHS compliant Cr3+) with bake for de-embrittlement. Minimum plating thickness 5 microns.

*The specifications shown on this sheet are not intended to be used in the production of parts. Earnest Machine is not responsible or liable in any manner for any production errors and we certify the information present on this specification sheet is correct to the best of our knowledge. ©2022 Earnest Machine Products

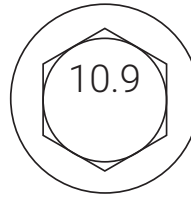
DIMENSIONS FOR DIN 6921 METRIC CLASS 10.9 HEX FLANGE BOLTS



SIZE	WIDTH ACROSS FLATS (F)		WIDTH ACROSS CORNERS (G)	FLANGE DIAMETER (B)	BODY DIAMETER (E)		HEIGHT OF HEAD (H)	FLANGE THICKNESS (U)	WRENCH HEIGHT (K)	"LT" PARTIAL THREAD
	MAX	MIN	MIN	MAX	MAX	MIN	MAX	MIN	MIN	
M5-0.80	8.00	7.78	8.71	11.80	5.00	4.82	5.40	1.00	2.00	16
M6-1.0	10.00	9.78	10.95	14.20	6.00	5.82	6.60	1.10	2.50	18
M8-1.25	13.00	12.73	14.26	18.00	8.00	7.78	8.10	1.20	3.20	22
M10-1.5	15.00	14.73	16.50	22.30	10.00	9.78	9.20	1.50	3.60	26
M12-1.75	16.00	15.73	17.62	26.60	12.00	11.73	11.50	1.80	4.60	30
M14-2.0	18.00	17.73	19.86	30.50	14.00	13.73	12.80	2.10	5.10	34
M16-2.0	21.00	20.67	23.15	35.00	16.00	15.73	14.40	2.40	5.80	38

MATERIAL AND PHYSICAL PROPERTIES

Property Class 10.9



Chemical Composition:

CARBON (C)		PHOSPHORUS (P)	SULFUR (S)	BORON (B)
Max	Min	Max	Max	Max
0.55	0.20	0.035	0.035	0.003

Alloy

PROPERTY CLASS 10.9
Mn, Cr, Mo, Ni, V, B

Hardness Level

PROPERTY CLASS 10.9
HRC 32/39

Tensile Strength

PROPERTY CLASS 10.9
1040 MPa min

DIN 6921 METRIC CLASS 8.8 HEX FLANGE BOLTS

Available with a PPAP 3 certification in a Zinc Clear Trivalent Finish.

DIN 6921	Dimensional Requirements
ISO 898-1	Material and Physical Properties
ISO 261	Thread Requirements
ISO 6157-1	Surface Discontinuities
ISO 3269	Inspection and Quality Assurance

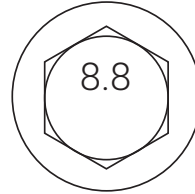
THREADS

Threads are made to the requirements of ISO 261
ISO 965-2 Class 6g
Thread acceptance per ISO 1502

PLATING

Zinc Clear (RoHS compliant Cr3+)
Minimum plating thickness 5 microns.

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MATERIAL AND PHYSICAL PROPERTIES
Property Class 8.8

Chemical Composition:

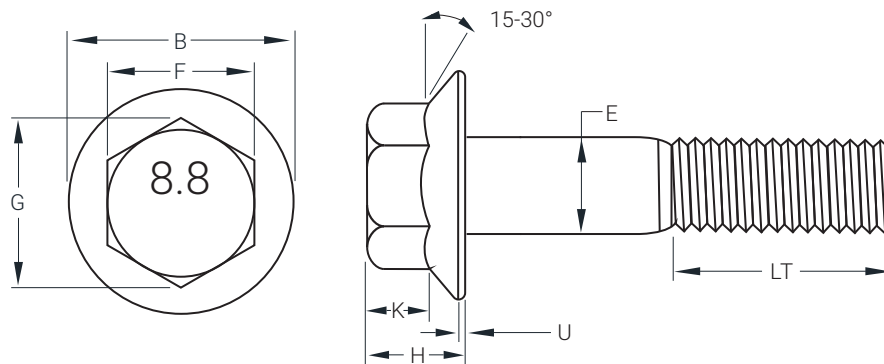
CARBON (C)		PHOSPHORUS (P)	SULFUR (S)	BORON (B)
Max	Min	Max	Max	Max
0.55	0.15	0.035	0.035	0.003

Hardness Level
PROPERTY CLASS 8.8

HRC 22/32

Tensile Strength
PROPERTY CLASS 8.8

800 MPa min

DIMENSIONS FOR DIN 6921 METRIC CLASS 8.8 HEX FLANGE BOLTS


SIZE	WIDTH ACROSS FLATS (F)		WIDTH ACROSS CORNERS (G)	FLANGE DIAMETER (B)	BODY DIAMETER (E)		HEIGHT OF HEAD (H)	FLANGE THICKNESS (U)	WRENCH HEIGHT (K)	"LT" PARTIAL THREAD
	MAX	MIN	MIN	MAX	MAX	MIN	MAX	MIN	MIN	
M5-0.80	8.00	7.78	8.71	11.80	5.00	4.82	5.40	1.00	2.00	16
M6-1.0	10.00	9.78	10.95	14.20	6.00	5.82	6.60	1.10	2.50	18
M8-1.25	13.00	12.73	14.26	18.00	8.00	7.78	8.10	1.20	3.20	22
M10-1.5	15.00	14.73	16.50	22.30	10.00	9.78	9.20	1.50	3.60	26
M12-1.75	16.00	15.73	17.62	26.60	12.00	11.73	11.50	1.80	4.60	30
M14-2.0	18.00	17.73	19.86	30.50	14.00	13.73	12.80	2.10	5.10	34
M16-2.0	21.00	20.67	23.15	35.00	16.00	15.73	14.40	2.40	5.80	38

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DIN 6921 Metric Hex Flange Bolts

Class 10.9

SIZE	CLASS	THREAD	PITCH	FINISH	PART #
M6-1.0x12	ISO 10.9	Full	Coarse	Zinc Clear	427133U
M6-1.0x16	ISO 10.9	Full	Coarse	Zinc Clear	427134U
M6-1.0x20	ISO 10.9	Full	Coarse	Zinc Clear	428003U
M6-1.0x25	ISO 10.9	Partial	Coarse	Zinc Clear	427135U
M6-1.0x30	ISO 10.9	Partial	Coarse	Zinc Clear	427136U
M6-1.0x40	ISO 10.9	Partial	Coarse	Zinc Clear	427137U
M6-1.0x50	ISO 10.9	Partial	Coarse	Zinc Clear	427138U
M6-1.0x60	ISO 10.9	Partial	Coarse	Zinc Clear	427153U

M8-1.25x30	ISO 10.9	Full	Coarse	Zinc Clear	427402U
M8-1.25x40	ISO 10.9	Partial	Coarse	Zinc Clear	427403U
M8-1.25x50	ISO 10.9	Partial	Coarse	Zinc Clear	427404U
M8-1.25x60	ISO 10.9	Partial	Coarse	Zinc Clear	427405U

M10-1.5x25	ISO 10.9	Full	Coarse	Zinc Clear	427582U
M10-1.5x30	ISO 10.9	Full	Coarse	Zinc Clear	427583U
M10-1.5x40	ISO 10.9	Partial	Coarse	Zinc Clear	427584U
M10-1.5x50	ISO 10.9	Partial	Coarse	Zinc Clear	427585U
M10-1.5x60	ISO 10.9	Partial	Coarse	Zinc Clear	427601U
M10-1.5x80	ISO 10.9	Partial	Coarse	Zinc Clear	427602U

M12-1.75x40	ISO 10.9	Full	Coarse	Zinc Clear	427709U
M12-1.75x50	ISO 10.9	Partial	Coarse	Zinc Clear	427733U
M12-1.75x60	ISO 10.9	Partial	Coarse	Zinc Clear	427750U
M12-1.75x80	ISO 10.9	Partial	Coarse	Zinc Clear	427790U

Class 8.8

SIZE	CLASS	THREAD	PITCH	FINISH	PART #
M6-1.0x12	ISO 8.8	Full	Coarse	Zinc Clear	427058U
M6-1.0x16	ISO 8.8	Full	Coarse	Zinc Clear	427059U
M6-1.0x20	ISO 8.8	Full	Coarse	Zinc Clear	427065U
M6-1.0x25	ISO 8.8	Partial	Coarse	Zinc Clear	427093U
M6-1.0x30	ISO 8.8	Partial	Coarse	Zinc Clear	427094U
M6-1.0x40	ISO 8.8	Partial	Coarse	Zinc Clear	427132U
M6-1.0x50	ISO 8.8	Partial	Coarse	Zinc Clear	427125U
M6-1.0x60	ISO 8.8	Partial	Coarse	Zinc Clear	427150U

M8-1.25x30	ISO 8.8	Full	Coarse	Zinc Clear	427381U
M8-1.25x40	ISO 8.8	Partial	Coarse	Zinc Clear	427300U
M8-1.25x50	ISO 8.8	Partial	Coarse	Zinc Clear	427399U
M8-1.25x60	ISO 8.8	Partial	Coarse	Zinc Clear	427401U

M10-1.5x25	ISO 8.8	Full	Coarse	Zinc Clear	427560U
M10-1.5x30	ISO 8.8	Full	Coarse	Zinc Clear	427570U
M10-1.5x40	ISO 8.8	Partial	Coarse	Zinc Clear	427573U
M10-1.5x50	ISO 8.8	Partial	Coarse	Zinc Clear	427574U
M10-1.5x60	ISO 8.8	Partial	Coarse	Zinc Clear	427575U
M10-1.5x80	ISO 8.8	Partial	Coarse	Zinc Clear	427577U

M12-1.75x40	ISO 8.8	Full	Coarse	Zinc Clear	427702U
M12-1.75x50	ISO 8.8	Partial	Coarse	Zinc Clear	427732U
M12-1.75x60	ISO 8.8	Partial	Coarse	Zinc Clear	427741U
M12-1.75x80	ISO 8.8	Partial	Coarse	Zinc Clear	427742U