



Standard Part

Hex Head Bolts Fine Thread - Miscellaneous - Non-Preferred

STPB740

87319948

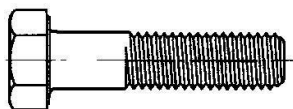
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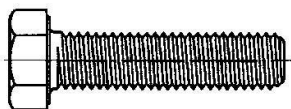
REFERENCE DOCUMENTS

STPA020	Fastener Finishes and Material Specifications
STPB720	Hexagon head bolts – Metric Fine – Class 8.8 ZND
STPB730	Hexagon head bolts – Metric Fine – Class 10.9 PHC and PLN
ISO 8765	Hexagon head bolts – Metric Fine – Product grades A and B
ISO 8676	Hexagon head bolts – Metric Fine – Product grades A and B Full Thread
ISO 888	Bolts screws and studs – Nominal lengths and thread lengths for general purpose bolts
ISO 898-1	Mechanical properties of fasteners made of carbon steel and alloy steel
ISO 6157-3	Fasteners - Surface Discontinuities
Iveco 18-1103	Zinc-Nickel Electrolytic Coating for Ferrous Metal Parts
FIAT 10312	Hexagon Bolts

When a standard is referenced in a drawing or specification, it is understood that the reference is to the latest revision of the standard, unless stated otherwise. For cross reference listing of company part numbers, go to [PARTsolutions](#).



ISO 8765 Bolt with shank



ISO 8676 Bolt fully threaded

SPECIFICATIONS: ISO 8765, 8676

Typical part description for BOM's and CAD drawings.

BOLT, M12X1.5X50 10.9 DAC

BOLT, M12X1.25X45 FULL 8.8 DAC

Bolts and screws shall be free from burrs, seams, laps, loose scale, irregular surfaces and any defects affecting their serviceability (ISO 6157-3).

Tables 1,2,3,4, Fine thread metric hex head bolts per current ISO standards

Table 1 Fine thread metric hex head bolts – General dimensions per Current ISO standards

Table 2 Fine thread metric hex head bolts – ISO material and ISO head dimensions

Table 3 Fine thread metric hex head bolts – Fiat material and ISO head dimensions

Table 4 Fine thread metric hex head bolts – ISO material and special thread length

Tables 5,6,7,8 Fine thread metric hex head bolts per superseded DIN standards

Table 5 Fine thread metric hex head bolts – General dimensions per superseded DIN standards

Table 6 Fine thread metric hex head bolts – ISO material with DIN head dimensions

Table 7 Fine thread metric hex head bolts – Fiat material with DIN head dimensions

Table 8 Fine thread metric hex head bolts – ISO material and special thread length

AUTHOR	APPROVED BY	ECO	PART NUMBER
D RAVI	23SEP26	A KHAN	23SEP26
		35533384	87319948

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Head Size Issues

At the time of the merger, Case was already using ISO standards as a basis for standard hardware parts, while New Holland was generally using DIN standards. CNH standard parts will be specified to ISO standards whenever available.

When we began to combine Case and New Holland standard parts there were systems issues preventing the use of the former Case alpha-numeric part numbers in the New Holland systems. To resolve this problem, it was determined to use the New Holland number as the surviving number whenever one was available. If an all numeric format number was not available, one was created.

Cross references, were based on overall dimensions and performance characteristics. In the case of hex head screws, bolts and nuts, some dimensional mismatches resulted; namely head dimensions as follows:

Bolt size	Across flats dimension	
	Old DIN	CNH, ISO
M10	17	16
M12	19	18
M14	22	21
M22	32	34

Bolts in this standard, which may have formerly been supplied to these old across flats dimensions must now be delivered with the current ISO dimensions, unless explicit engineering deviation to use bolts to the old dimensions has been granted.

It is important that all bolts of a given diameter on a product be to the same head size. Therefore, bolts to the old and current standard should not be mixed.

Hydrogen Assisted Cracking

Certain zinc electroplated and mechanical plated high hardness fasteners have been identified as being highly susceptible to hydrogen assisted cracking (HAC). Use of these fasteners is restricted: they shall not be used in new designs after 01OCT2011.



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Table 1. Hex Head Bolts - Metric Fine Thread – ISO 8765 AND ISO 8676

	Bolt Nominal									
	8X1	10X1.25	12XX1.25	14X1.5	16X1.5	18X1.5	20X1.5	24X2	27X2	30X2
Bolt Nominal Diameter	8	10	12	14	16	18	20	24	27	30
Fine Thread Pitch	1	1.25	1.25	1.5	1.5	1.5	1.5	2	2	2
Non-preferred fine thrd pitch		*	1.5			2				
ISO 8765										
Length of thread for										
Bolt length to 125	22	26	30	34	38	42	46	54	60	66
Bolt length: 126 to 200	28	32	36	40	44	48	52	60	66	72
Bolt length: >200	41	45	49	53	57	61	65	73	79	85
Width across flats nom./ max	13	16	18	21	24	27	30	36	41	46
Width across corners min.	14.38	17.77	20.03	23.36	26.75	30.14	33.53	39.98	45.2	50.85
Head height max.	5.45	6.58	7.68	8.98	10.18	11.85	12.72	15.22	17.35	19.12

Table 2. ISO material and ISO Head

Nom Dia	Pitch	Length	Thread Length	Material	Finish	Part Number
8	1	16	FULL	8.8	DAC	90474308
8	1	20	FULL	8.8	PLN	84041541
8	1	25	FULL	10.9	DAC	10910834
8	1	40		10.9	ZND	1570326
8	1	110		10.9	DAC	10913034
8	1	120		8.8	DAC	10913224
10	1.25	25	FULL	8.8	BLO	84145871
10	1.25	25	FULL	10.9	BLO	84145861
10	1.25	30		8.8	BLO	84145860
10	1.25	30		8.8	DOR	47417161
10	1.25	30	FULL	10.9	ZND	87026053
10	1.25	40		10.9	PLN	51494557
10	1.25	45	FULL	10.9	DAC	92643005
10	1.25	50	FULL	8.8	DAC	90357644
10	1.25	60		8.8	DAC	90357645
10	1.25	65	FULL	8.8	DAC	18701824
10	1.25	75		10.9	ZND	2928612
12	1	20	FULL	8.8	ZND	92090667
12	1	22.5	FULL	8.8	PLN	84100733
12	1.25	25	FULL	8.8	DAC	90405612
12	1.25	35	FULL	8.8	BLO	84145866
12	1.25	35	FULL	10.9	ZND	86642438
12	1.25	40		8.8	BLO	84145864
12	1.25	40	FULL	8.8	DAC	90357626
12	1.25	45		8.8	BLO	84145868
12	1.25	50		8.8	BLO	84145862
12	1.25	110		10.9	ZND	87346248
12	1.25	120		8.8	BLO	84145867
12	1.25	130		8.8	BLO	84145865
12	1.25	150		10.9	ZND	87477166
12	1.5	35	FULL	10.9	DAC	90462828
12	1.5	65		10.9	ZND	47551481

Table 2. ISO material and ISO Head

Nom Dia	Pitch	Length	Thread Length	Material	Finish	Part Number
12	1.5	70		10.9	ZND	87034466
14	1.5	35	FULL	10.9	PHC	47566048
14	1.5	35	FULL	12.9	PHC	92765849
14	1.5	40		10.9	PHC	84265312
14	1.5	45	FULL	10.9	PHC	92189910
14	1.5	55		10.9	ZND	84302522
14	1.5	60		10.9	ZND	51332930
14	1.5	110		10.9	ZND	7122256
16	1	70	30	10.9	ZND	825272
16	1.5	16	FULL	5.8	ZND	15854315
16	1.5	18	FULL	8.8	DAC	15854424
16	1.5	20	FULL	10.9	ZND	15983131
16	1.5	20	FULL	8.8	DAC	15983124
16	1.5	22	FULL	5.8	DAC	15854514
16	1.5	25	FULL	10.9	ZND	15980337
16	1.5	25	FULL	8.8	DAC	15980324
16	1.5	28	FULL	10.9	DAC	10977334
16	1.5	30	FULL	8.8	DAC	15980524
16	1.5	30	FULL	10.9	ZND	15980531
16	1.5	35	FULL	10.9	DAC	11376234
16	1.5	35	FULL	8.8	DAC	11376224
16	1.5	35	FULL	10.9	ZND	11376231
16	1.5	40	FULL	8.8	ZND	11390528
16	1.5	40	FULL	10.9	ZND	11390531
16	1.5	40	FULL	8.8	DAC	11390524
16	1.5	40	FULL	10.9	DAC	11390534
16	1.5	45	FULL	8.8	DAC	11391524
16	1.5	45	FULL	8.8	BLO	11391526
16	1.5	45	FULL	10.9	DAC	11391534
16	1.5	45	FULL	8.8	ZND	11391528
16	1.5	45	FULL	10.9	ZND	11391531

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Table 2. ISO material and ISO Head

Nom Dia	Pitch	Length	Thread Length	Material	Finish	Part Number
16	1.5	45	FULL	10.9	ZN-NI-1	92175279
16	1.5	50	FULL	10.9	DAC	15840534
16	1.5	50	FULL	8.8	DAC	15840524
16	1.5	50	FULL	10.9	ZND	15840531
16	1.5	55		8.8	DAC	15981024
16	1.5	55		8.8	BLO	15981026
16	1.5	55		10.9	PLN	15981030
16	1.5	55		10.9	ZND	15981031
16	1.5	55		10.9	DAC	15981034
16	1.5	55		10.9	Zn-Ni	90509375
16	1.5	60		8.8	DAC	15981124
16	1.5	60		10.9	DAC	15981134
16	1.5	60		10.9	ZND	15981131
16	1.5	65		10.9	DAC	15981234
16	1.5	65		10.9	ZND	15981231
16	1.5	65		8.8	DAC	15981224
16	1.5	70	FULL	8.8	DAC	48091326
16	1.5	70		8.8	DAC	15835224
16	1.5	70		10.9	ZND	15835231
16	1.5	70		10.9	DAC	15835234
16	1.5	70		10.9	Zn-Ni	90509386
16	1.5	75	FULL	8.8	DAC	48091329
16	1.5	75		8.8	DAC	15981324
16	1.5	75		10.9	ZND	15981331
16	1.5	75		10.9	DAC	15981334
16	1.5	75		10.9	ZN-NI-1	92175280
16	1.5	80		8.8	ZND	11254128
16	1.5	80		10.9	ZND	11254131
16	1.5	80	FULL	10.9	BGM	48062751
16	1.5	80	FULL	10.9	ZND	15237831
16	1.5	80	FULL	10.9	DAC	15237834
16	1.5	80		10.9	DAC	11254134
16	1.5	80		8.8	DAC	11254124
16	1.5	85		10.9	ZND	15981431
16	1.5	90		8.8	DAC	15981524
16	1.5	90		10.9	ZND	15981531
16	1.5	90		10.9	DAC	15981534
16	1.5	95		10.9	ZND	15846431
16	1.5	95		10.9	DAC	87333771
16	1.5	100		8.8	BGM	91776279
16	1.5	100		8.8	DAC	15981624
16	1.5	100	FULL	10.9	DAC	15238234
16	1.5	100		10.9	ZND	15981631

Table 2. ISO material and ISO Head

Nom Dia	Pitch	Length	Thread Length	Material	Finish	Part Number
16	1.5	100		10.9	DAC	15981634
16	1.5	105	FULL	8.8	DAC	48091330
16	1.5	105	FULL	10.9	DAC	15238334
16	1.5	110		8.8	DAC	11369624
16	1.5	110		10.9	DAC	11369634
16	1.5	110		10.9	ZND	11369631
16	1.5	110		10.9	Zn-Ni	90509372
16	1.5	115		8.8	DAC	15864224
16	1.5	115		10.9	ZND	15864231
16	1.5	115		10.9	DAC	15864234
16	1.5	120		10.9	ZND	15981831
16	1.5	120		10.9	DAC	15981834
16	1.5	120		10.9	Zn-Ni	90509380
16	1.5	130		10.9	ZND	15864331
16	1.5	130		8.8	DAC	15864324
16	1.5	130		10.9	DAC	15864334
16	1.5	130	FULL	10.9	DAC	92158944
16	1.5	140		8.8	DAC	15982124
16	1.5	140		10.9	ZND	15982131
16	1.5	140		10.9	DAC	15982134
16	1.5	150		10.9	DAC	15982334
16	1.5	150		10.9	ZND	15982331
16	1.5	160		10.9	ZND	15982537
16	1.5	160		8.8	DAC	15982524
16	1.5	160		8.8	PLN	15982520
16	1.5	160	FULL	10.9	DAC	92158945
16	1.5	170		10.9	BLO	11215936
16	1.5	180		8.8	DAC	15982824
16	1.5	180		10.9	ZND	15982831
16	1.5	180		10.9	BLO	15982836
16	1.5	190		8.8	DAC	15982924
16	1.5	190		10.9	ZND	15982931
16	1.5	200		10.9	ZND	15983031
16	1.5	220	FULL	10.9	DAC	92089304
16	1.5	220		10.9	ZND	15983231
16	1.5	230		8.8	DAC	16161824
16	1.5	240		8.8	DAC	15983424
16	1.5	240		10.9	DAC	92692629
18	1.5	20	FULL	8.8	DAC	15854824
18	1.5	30	FULL	8.8	DAC	15983624
18	1.5	35	FULL	10.9	ZND	15983831
18	1.5	35	FULL	8.8	DAC	15983824
18	1.5	40	FULL	8.8	DAC	11408524
18	1.5	40	FULL	10.9	ZND	11408531
18	1.5	40	FULL	10.9	DAC	11408534

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Table 2. ISO material and ISO Head

Nom Dia	Pitch	Length	Thread Length	Material	Finish	Part Number
18	1.5	45	FULL	10.9	DAC	15984134
18	1.5	45	FULL	8.8	DAC	15984124
18	1.5	45	FULL	10.9	ZND	15984131
18	1.5	50	FULL	10.9	DAC	15984334
18	1.5	50	FULL	8.8	DAC	15984324
18	1.5	50	FULL	10.9	ZND	15984331
18	1.5	50	FULL	12.9	DAC	51691767
18	1.5	55	FULL	8.8	DAC	15984424
18	1.5	55	FULL	10.9	ZND	15984431
18	1.5	55	FULL	10.9	DAC	15984434
18	1.5	60		10.9	DAC	11244634
18	1.5	60		10.9	ZND	11244631
18	1.5	60		10.9	BZN	11244637
18	1.5	65		8.8	DAC	15239624
18	1.5	65		10.9	ZND	15984531
18	1.5	65		10.9	DAC	15984534
18	1.5	70		10.9	ZND	15984631
18	1.5	70		10.9	DAC	15984634
18	1.5	70		8.8	DAC	15984624
18	1.5	75		10.9	ZND	15984731
18	1.5	80		10.9	ZND	15984831
18	1.5	80		10.9	DAC	15984834
18	1.5	80		12.9	DAC	15984874
18	1.5	90		8.8	DAC	15985024
18	1.5	90	FULL	10.9	ZND	15240131
18	1.5	90		10.9	ZND	15985031
18	1.5	90		10.9	DAC	15985034
18	1.5	100		10.9	ZND	15985231
18	1.5	100		10.9	DAC	15985234
18	1.5	110		8.8	DAC	15985424
18	1.5	110		10.9	ZND	15985431
18	1.5	120		10.9	ZND	15985637
18	1.5	130		8.8	DAC	15985824
18	1.5	130		10.9	ZND	15985831
18	1.5	130		10.9	DAC	15985834
18	1.5	140		8.8	DAC	15986024
18	1.5	140		10.9	DAC	15986034
18	1.5	150		10.9	DAC	15986234
18	1.5	160		10.9	ZND	15986431
18	1.5	170		10.9	ZND	15986631
18	1.5	170		10.9	DAC	15986634
18	1.5	180		10.9	ZND	15986831
18	1.5	190		10.9	ZND	15987031
18	1.5	200		10.9	DAC	15987134
18	1.5	220		5.8	ZND	15987211

Table 2. ISO material and ISO Head

Nom Dia	Pitch	Length	Thread Length	Material	Finish	Part Number
18	1.5	230		8.8	DAC	15995924
18	1.5	230		10.9	DAC	15995934
18	2	50		10.9	PLN	47650135
18	2	50		10.9	ZND	87384304
18	2	140		10.9	ZND	2900302
20	1.5	20	FULL	8.8	DAC	15855424
20	1.5	25	FULL	8.8	DAC	15855624
20	1.5	40	FULL	10.9	DOR	87344049
20	1.5	40	FULL	10.9	ZND	15987931
20	1.5	40	FULL	8.8	PLN	84015911
20	1.5	40	FULL	8.8	DAC	15987924
20	1.5	45	FULL	8.8	DAC	11408624
20	1.5	45	FULL	10.9	ZND	11408631
20	1.5	45	FULL	12.9	BGM	92645062
20	1.5	50	FULL	8.8	PLN	87733382
20	1.5	50	FULL	10.9	ZND	11383631
20	1.5	50	FULL	10.9	DAC	11383634
20	1.5	55	FULL	10.9	ZND	15988231
20	1.5	55	FULL	12.9	DAC	47813774
20	1.5	60	FULL	8.8	PLN	87316967
20	1.5	60		10.9	DAC	15988334
20	1.5	60	FULL	10.9	ZND	15988331
20	1.5	60	FULL	12.9	DAC	92283517
20	1.5	65		10.9	ZND	15988431
20	1.5	65		10.9	DAC	15988434
20	1.5	70		8.8	DAC	15988524
20	1.5	70	FULL	10.9	ZND	15988531
20	1.5	75		10.9	BZN	15988637
20	1.5	75		10.9	ZND	15988631
20	1.5	80		8.8	DAC	15988724
20	1.5	80		10.9	DAC	15988734
20	1.5	80		10.9	ZND	15988731
20	1.5	90		10.9	ZND	15988931
20	1.5	90	FULL	10.9	ZND	87648726
20	1.5	95		10.9	ZND	10960637
20	1.5	100		10.9	DAC	15989134
20	1.5	100		10.9	ZND	86900898
20	1.5	105		10.9	ZND	10960837
20	1.5	110		8.8	DAC	15989324
20	1.5	110		10.9	ZND	15989331
20	1.5	110		10.9	DAC	15989334
20	1.5	110	FULL	10.9	DAC	15242434
20	1.5	115		10.9	ZND	15989431
20	1.5	120		8.8	DAC	15989524
20	1.5	120		10.9	BGM	92645044

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Table 2. ISO material and ISO Head

Nom Dia	Pitch	Length	Thread Length	Material	Finish	Part Number
20	1.5	120		10.9	ZND	15989537
20	1.5	125		10.9	ZND	15989637
20	1.5	130		10.9	DAC	15989734
20	1.5	130		10.9	ZND	15989731
20	1.5	140		10.9	ZND	15989931
20	1.5	140		12.9	DAC	48108404
20	1.5	150		8.8	DAC	15990124
20	1.5	150		10.9	DOR	87343584
20	1.5	150		10.9	ZND	15990131
20	1.5	150		12.9	DAC	48108405
20	1.5	160		8.8	DAC	15990324
20	1.5	160		10.9	ZND	15990331
20	1.5	160	FULL	10.9	ZND	84353723
20	1.5	170		10.9	ZND	15990531
20	1.5	180		10.9	ZND	15990731
20	1.5	180		10.9	DAC	15990734
20	1.5	190		10.9	ZND	15990931
20	1.5	190		10.9	DAC	90357476
20	1.5	200		10.9	ZND	15991131
20	1.5	200		10.9	DAC	15991134
20	1.5	200		10.9	DOR	87343585
20	1.5	220		10.9	ZND	15991431
20	1.5	240		10.9	ZND	15996037
20	1.5	250		10.9	DAC	76076247
20	2	75		10.9	ZND	4154583
22	1.5	50	FULL	10.9	DOR	87301360
22	1.5	55	FULL	10.9	ZND	87029972
22	1.5	55	FULL	10.9	DOR	87340028
22	1.5	80		10.9	ZND	47949660
22	1.5	90		10.9	DOR	87344491
22	1.5	100		10.9	ZND	2247921
22	1.5	115		10.9	DOR	87329712
22	1.5	130		10.9	DOR	87515082
22	1.5	150		10.9	DOR	84273737
22	1.5	170		10.9	DOR	87652883
22	1.5	180		10.9	DOR	87599602
24	2	45	FULL	5.8	ZND	15996711
24	2	50	FULL	10.9	ZND	15996931
24	2	50	FULL	10.9	DAC	47963717
24	2	55	FULL	10.9	ZND	15997031
24	2	60		10.9	ZND	87020904
24	2	65	FULL	10.9	ZND	15997231
24	2	65		10.9	DAC	15026934
24	2	65	FULL	10.9	DAC	15997234
24	2	70	FULL	10.9	ZND	15997331

Table 2. ISO material and ISO Head

Nom Dia	Pitch	Length	Thread Length	Material	Finish	Part Number
24	2	75		10.9	ZND	11398031
24	2	80		10.9	DAC	11398134
24	2	80		10.9	ZND	11398131
24	2	90		10.9	ZND	15997531
24	2	90		10.9	DAC	15997534
24	2	100		10.9	ZND	11398437
24	2	105	FULL	8.8	DAC	15245724
24	2	110		10.9	ZND	15997731
24	2	110		10.9	DAC	15997734
24	2	120		10.9	DAC	15997934
24	2	120		10.9	ZND	15997931
24	2	130		10.9	ZND	15861731
24	2	140		10.9	DAC	15871934
24	2	140		10.9	ZND	15871931
24	2	150		10.9	ZND	15998331
24	2	160		10.9	ZND	15871431
24	2	160		12.9	DOR	47581985
24	2	170		10.9	BGM	92165438
24	2	170		10.9	ZND	47985963
24	2	170		12.9	DOR	47938592
24	2	180		10.9	ZND	15998731
24	2	180		10.9	DAC	15998734
24	2	190		10.9	ZND	15998931
24	2	200		10.9	ZND	15999131
24	2	210		10.9	ZND	87632738
24	2	210		10.9	DAC	87742363
24	2	220		10.9	ZND	15999431
24	2	235		10.9	ZND	15999531
24	2	240		10.9	ZND	84329837
24	2	260		10.9	DAC	15999334
24	2	260		10.9	ZND	15999331
24	2	305		10.9	ZND	15996531
27	2	55	FULL	10.9	DAC	15869434
27	2	90	FULL	10.9	ZND	15881231
27	2	150		10.9	ZND	830496
27	2	190		10.9	ZND	2168250
27	2	190		12.9	ZND	#84800770
30	2	65	FULL	10.9	DAC	15870634
30	2	70	FULL	10.9	ZND	16164037
30	2	90		10.9	ZND	15882731
30	2	95		8.8	DAC	16164124
30	2	95		10.9	ZND	16164137
30	2	120		10.9	DAC	15883034
30	2	140		10.9	ZND	16163031
30	2	170		10.9	ZND	15883431

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Table 2. ISO material and ISO Head

Nom Dia	Pitch	Length	Thread Length	Material	Finish	Part Number
30	2	200		10.9	ZND	15883731
36	3	190		10.9	ZND	1939366
36	3	200		10.9	ZND	2465434
36	3	220		10.9	ZND	2168009

Do not use on new designs after 01OCT2011

(Hydrogen Assisted Cracking–HAC)

Zn-Ni – Zinc Nickel per Iveco 18-1103 Fe/ZnNi 7 IV

Table 3. Fiat Material ISO Head Dimensions

Nom Dia	Pitch	Length	Thread Length	Material	Finish	Part Number
	Contact engineering standards for part number assignment					



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Table 4. ISO material – Special Thread Length

Nom Dia	Pitch	Length	Thread Length	Material	Finish	Part Number
14	1.25	35	20.5	8.8	PLN	744918
18	1.5	60	FULL	10.9	ZND	47636548
18	1.5	65	FULL	10.9	ZND	87497914
20	1.5	170	120	10.9	ZND	87493301
20	1.5	170	120	10.9	DAC	90357595

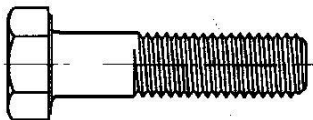
Table 4. ISO material – Special Thread Length

Nom Dia	Pitch	Length	Thread Length	Material	Finish	Part Number
20	1.5	180	130	10.9	ZND	47495623
30	2.5	130	72	10.9	ZND	87034467
30	2.5	150	72	10.9	ZND	87034468

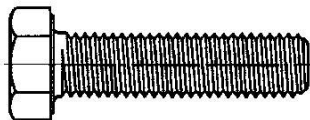
Tables 5,6,7,8 Fine thread metric hex head bolts per superceded DIN standards
–Do not use for new design

DIN 960 has been superceded and is replaced by ISO 8765

DIN 961 has been superceded and is replaced by ISO 8676



DIN 960 Bolt with shank



DIN 961 Bolt fully threaded

General specifications same as “ISO” except for head dimensions.

Table 5. Hex Head Bolts - Metric Fine Thread – Superceded DIN Head Dimensions

	Bolt Nominal Diameter					
	10X1	10X1.25	12X1.25	12X1.5	14X1.5	22X1.5
Bolt Nominal Diameter	10	10	12	12	14	22
Fine Thread Pitch	1	1.25	1.25	1.5	1.5	1.52
Non-preferred fine thrd pitch		*	*			
Length of thread for						
Bolt length to 125	26		30		34	50
Bolt length: 126 to 200	32		36		40	56
Bolt length: >200	45		49		53	69
Width across flats nom./ max	17		19		22	32
Width across corners min.	18.90		21.10		24.49	36.72
Head height max.	6.58		7.68		8.98	14.35

Table 6. ISO Material - DIN Head Dimensions

Nom Dia	Pitch	Length	Thread Length	Material	Finish	Part Number
10	1.25	10	FULL	10.9	ZND	15853131
10	1.25	12	FULL	10.9	ZND	15853231
10	1.25	12	FULL	8.8	DAC	15853224
10	1.25	14	FULL	10.9	ZND	15970131
10	1.25	16	FULL	10.9	ZND	15970331
10	1.25	16	FULL	8.8	DAC	15970324
10	1.25	18	FULL	5.8	DAC	15970414
10	1.25	18	FULL	8.8	DAC	15970424
10	1.25	18	FULL	8.8	BZN	15970429
10	1.25	18	FULL	10.9	ZND	15970431
10	1.25	18	FULL	12.9	DAC	15970474

Table 6. ISO Material - DIN Head Dimensions

Nom Dia	Pitch	Length	Thread Length	Material	Finish	Part Number
10	1.25	20	FULL	10.9	ZND	15970531
10	1.25	20	FULL	8.8	BGM	92174031
10	1.25	20	FULL	8.8	DAC	15970524
10	1.25	20	FULL	10.9	DAC	15970534
10	1.25	22	FULL	5.8	ZND	15970611
10	1.25	22	FULL	10.9	ZND	15970631
10	1.25	22	FULL	8.8	DAC	15970624
10	1.25	22	FULL	10.9	DAC	15970634
10	1.25	25	FULL	8.8	DAC	15970724
10	1.25	25	FULL	10.9	ZND	15970731
10	1.25	25	FULL	10.9	DAC	15970734



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Table 6. ISO Material - DIN Head Dimensions

Nom Dia	Pitch	Length	Thread Length	Material	Finish	Part Number
10	1.25	25	FULL	8.8	PLN	15970720
10	1.25	28	FULL	8.8	DAC	11227924
10	1.25	28	FULL	10.9	ZND	11227931
10	1.25	30	FULL	10.9	ZND	11306931
10	1.25	30	FULL	8.8	DAC	11306924
10	1.25	30	FULL	10.9	DAC	11306934
10	1.25	32	FULL	8.8	DAC	15970824
10	1.25	35		8.8	DAC	15970924
10	1.25	35		10.9	DAC	15970934
10	1.25	35		10.9	ZND	15970931
10	1.25	40		10.9	DAC	11307034
10	1.25	40		10.9	ZND	11307031
10	1.25	40		8.8	DAC	11307024
10	1.25	40	FULL	8.8	DAC	16054724
10	1.25	45		10.9	DAC	11234734
10	1.25	45		10.9	ZND	11234731
10	1.25	45		8.8	DAC	11234724
10	1.25	50		8.8	PLN	11343820
10	1.25	50		10.9	ZND	11343831
10	1.25	50		8.8	DAC	11343824
10	1.25	50	FULL	8.8	DAC	47573538
10	1.25	50	FULL	10.9	ZND	16041631
10	1.25	55		10.9	ZND	15888731
10	1.25	55		8.8	DAC	15888724
10	1.25	55		10.9	PLN	15888730
10	1.25	55		12.9	DAC	15888774
10	1.25	55	FULL	8.8	DAC	90328306
10	1.25	55	FULL	10.9	DAC	90328307
10	1.25	60		8.8	DAC	11288024
10	1.25	60		8.8	ZND	11288028
10	1.25	60	FULL	8.8	DAC	15231624
10	1.25	60		10.9	ZND	11288031
10	1.25	60		10.9	DAC	11288034
10	1.25	60	FULL	10.9	DAC	90328308
10	1.25	65	FULL	8.8	DAC	15231724
10	1.25	65	FULL	10.9	DAC	90328309
10	1.25	65		10.9	DAC	11343734
10	1.25	65		10.9	ZND	11343731
10	1.25	65		8.8	DAC	11343724
10	1.25	65		5.8	ZND	11343711
10	1.25	70		10.9	ZND	15888831
10	1.25	70		8.8	DAC	15888824
10	1.25	70	FULL	8.8	DAC	90328310
10	1.25	70	FULL	10.9	DAC	90328311
10	1.25	75		8.8	DAC	15971324

Table 6. ISO Material - DIN Head Dimensions

Nom Dia	Pitch	Length	Thread Length	Material	Finish	Part Number
10	1.25	75		10.9	ZND	15971331
10	1.25	75		10.9	DAC	15971334
10	1.25	80		10.9	ZND	15971431
10	1.25	80		10.9	DAC	15971434
10	1.25	80		8.8	DAC	15971424
10	1.25	80	FULL	8.8	DAC	15232024
10	1.25	85	FULL	10.9	ZND	15232131
10	1.25	85		8.8	DAC	15971524
10	1.25	85		10.9	ZND	15971531
10	1.25	85		10.9	DAC	15971534
10	1.25	90		8.8	DAC	15971624
10	1.25	90	FULL	8.8	DAC	15232224
10	1.25	90		10.9	ZND	15971631
10	1.25	90		10.9	DAC	15971634
10	1.25	95		10.9	DAC	15971734
10	1.25	95	FULL	10.9	ZND	15232331
10	1.25	95		8.8	DAC	15971724
10	1.25	100		10.9	ZND	15971831
10	1.25	100		8.8	DAC	15971824
10	1.25	100	FULL	8.8	DAC	15232424
10	1.25	105		10.9	ZND	15971931
10	1.25	110		10.9	ZND	15972031
10	1.25	110		8.8	DAC	15972024
10	1.25	110		10.9	DAC	15972034
10	1.25	115		8.8	DAC	15972124
10	1.25	120		10.9	ZND	15972231
10	1.25	130		8.8	DAC	15972424
10	1.25	130		10.9	ZND	15972431
10	1.25	145		8.8	DAC	15972724
10	1.25	150		10.9	DAC	15972834
10	1.25	160		10.9	DAC	15972934
10	1.25	160		8.8	DAC	15972924
10	1.25	160		8.8	ZND	15006021
10	1.25	160		10.9	ZND	15972931
10	1.25	165		10.9	DAC	15975934
10	1.25	170		8.8	DAC	15973024
10	1.25	170		10.9	ZND	15973031
10	1.25	170		10.9	DAC	15973034
10	1.25	180		10.9	ZND	15973131
10	1.25	185		10.9	ZND	15973431
10	1.25	190		8.8	DAC	15973224
10	1.25	200		8.8	DAC	15969924
10	1.25	200		10.9	DAC	15969934
10	1.25	205		10.9	ZND	15966631
12	1.25	14	FULL	8.8	DAC	15853524

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Table 6. ISO Material - DIN Head Dimensions

Nom Dia	Pitch	Length	Thread Length	Material	Finish	Part Number
12	1.25	14	FULL	10.9	ZND	15853531
12	1.25	16	FULL	8.8	DAC	15540024
12	1.25	18	FULL	10.9	ZND	15540131
12	1.25	18	FULL	8.8	DAC	15540124
12	1.25	20	FULL	10.9	ZND	15540231
12	1.25	20	FULL	8.8	DAC	15540224
12	1.25	22	FULL	10.9	ZND	15532531
12	1.25	22	FULL	8.8	DAC	15532524
12	1.25	25	FULL	8.8	BGM	92723102
12	1.25	25	FULL	8.8	DAC	15540324
12	1.25	25	FULL	5.8	DAC	15540314
12	1.25	25	FULL	10.9	DAC	15540334
12	1.25	25	FULL	10.9	ZND	15540331
12	1.25	25	FULL	12.9	DAC	15540374
12	1.25	28	FULL	10.9	DAC	15542734
12	1.25	30	FULL	8.8	DAC	15540424
12	1.25	30	FULL	10.9	ZND	15540431
12	1.25	30	FULL	10.9	DAC	15540434
12	1.25	35		8.8	DAC	15540524
12	1.25	35		8.8	ZND	15540528
12	1.25	35	FULL	10.9	ZND	15540531
12	1.25	35	FULL	10.9	DAC	15540534
12	1.25	40	FULL	5.8	DAC	15540614
12	1.25	40	FULL	10.9	DAC	15540634
12	1.25	40	FULL	8.8	PLN	15540620
12	1.25	40	FULL	8.8	DAC	15540624
12	1.25	40	FULL	10.9	ZND	15540631
12	1.25	45		8.8	ZND	15540721
12	1.25	45		8.8	DAC	15540724
12	1.25	45		10.9	ZND	15540731
12	1.25	45		10.9	DAC	15540734
12	1.25	45	FULL	8.8	DAC	15232724
12	1.25	50		8.8	DAC	15540824
12	1.25	50		10.9	DAC	15540834
12	1.25	50		10.9	ZND	15540831
12	1.25	55		8.8	BGM	91903271
12	1.25	55		8.8	DAC	15540924
12	1.25	55		10.9	ZND	15540931
12	1.25	55		10.9	DAC	15540934
12	1.25	60		8.8	DAC	15541024
12	1.25	60	FULL	10.9	DAC	15233034
12	1.25	60		10.9	ZND	15541031
12	1.25	60		10.9	DAC	15541034
12	1.25	60		12.9	DAC	15541074
12	1.25	65		8.8	DAC	15541124

Table 6. ISO Material - DIN Head Dimensions

Nom Dia	Pitch	Length	Thread Length	Material	Finish	Part Number
12	1.25	65		10.9	ZND	15541131
12	1.25	65		10.9	DAC	15541134
12	1.25	70	FULL	10.9	ZND	15233231
12	1.25	70	FULL	10.9	DAC	15233234
12	1.25	70		8.8	DAC	15541224
12	1.25	70		10.9	ZND	15541231
12	1.25	75		8.8	DAC	15541324
12	1.25	75		10.9	ZND	15541331
12	1.25	75		10.9	DAC	15541334
12	1.25	80		8.8	DAC	15541424
12	1.25	80		10.9	ZND	15541431
12	1.25	80		12.9	DAC	15541474
12	1.25	90		8.8	DAC	15541524
12	1.25	90	FULL	8.8	ZND	47855602
12	1.25	90	FULL	10.9	ZND	15233631
12	1.25	90		10.9	ZND	15541531
12	1.25	90		10.9	DAC	15541534
12	1.25	95		8.8	DAC	90357607
12	1.25	100		8.8	DAC	15541624
12	1.25	100	FULL	10.9	ZND	15233831
12	1.25	100		10.9	ZND	15541631
12	1.25	105		8.8	DAC	5166320
12	1.25	110		8.8	DAC	15541724
12	1.25	110		10.9	ZND	15541731
12	1.25	110		10.9	DAC	15541734
12	1.25	120		8.8	DAC	15541824
12	1.25	120		10.9	ZND	15541831
12	1.25	120		10.9	DAC	15541834
12	1.25	125		10.9	DAC	15543234
12	1.25	130		8.8	DAC	15541924
12	1.25	130		10.9	ZND	15541931
12	1.25	130		10.9	DAC	15541934
12	1.25	135		10.9	ZND	15543331
12	1.25	135		10.9	DAC	51573901
12	1.25	140		10.9	ZND	15542031
12	1.25	140		8.8	DAC	15542024
12	1.25	145		10.9	DAC	15543434
12	1.25	150		10.9	ZND	15542131
12	1.25	150		10.9	DAC	15542134
12	1.25	160		10.9	ZND	15542231
12	1.25	170		10.9	ZND	15542331
12	1.25	170		8.8	DAC	15542324
12	1.25	190		8.8	DAC	15542524
12	1.25	190		10.9	ZND	15542531
12	1.25	190		10.9	DAC	15542534

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Table 6. ISO Material - DIN Head Dimensions

Nom Dia	Pitch	Length	Thread Length	Material	Finish	Part Number
12	1.5	20	FULL	10.9	ZND	15973731
12	1.5	22	FULL	8.8	PLN	15973820
12	1.5	22	FULL	8.8	DAC	15973824
12	1.5	25	FULL	10.9	ZND	15973931
12	1.5	30	FULL	8.8	DAC	11305124
12	1.5	30	FULL	10.9	BGM	48062750
12	1.5	30	FULL	10.9	ZND	11305131
12	1.5	32	FULL	10.9	ZND	10935731
12	1.5	35	FULL	10.9	ZND	11363031
12	1.5	40	FULL	10.9	ZND	11201131
12	1.5	40	FULL	8.8	DAC	11201124
12	1.5	45		10.9	ZND	11307731
12	1.5	45		10.9	DAC	11307734
12	1.5	50		8.8	DAC	11399124
12	1.5	50		10.9	ZND	11399131
12	1.5	50		10.9	DAC	11399134
12	1.5	60		8.8	DAC	11354024
12	1.5	60		10.9	DAC	11354034
12	1.5	95		10.9	DAC	11343934
12	1.5	110		8.8	DAC	15974624
14	1.5	20	FULL	8.8	DAC	15976824
14	1.5	20	FULL	10.9	ZND	15976831
14	1.5	28	FULL	10.9	DAC	15977034
14	1.5	30	FULL	8.8	DAC	11422324
14	1.5	30	FULL	10.9	BGM	48062749
14	1.5	30	FULL	10.9	ZND	11422331
14	1.5	30	FULL	10.9	DAC	11422334
14	1.5	35	FULL	8.8	DAC	11408324
14	1.5	35	FULL	10.9	ZND	11408331
14	1.5	35	FULL	10.9	DAC	11408334
14	1.5	35	FULL	10.9	PHC	47598184
14	1.5	40	FULL	8.8	DAC	11255924
14	1.5	40	FULL	10.9	ZND	11255931
14	1.5	40	FULL	10.9	DAC	11255934
14	1.5	40	FULL	10.9	BGM	48062744
14	1.5	45	FULL	8.8	DAC	11394324
14	1.5	45	FULL	10.9	ZND	11394331
14	1.5	45	FULL	10.9	DAC	11394334
14	1.5	50		8.8	DAC	15860124
14	1.5	50		10.9	ZND	15860131
14	1.5	50		10.9	DAC	15860134
14	1.5	55		8.8	DAC	11422024
14	1.5	55		10.9	DAC	11422034
14	1.5	55		10.9	ZND	11422031
14	1.5	60		8.8	DAC	15977524

Table 6. ISO Material - DIN Head Dimensions

Nom Dia	Pitch	Length	Thread Length	Material	Finish	Part Number
14	1.5	60		10.9	DAC	15977534
14	1.5	60		10.9	ZND	15977531
14	1.5	65		8.8	DAC	11227024
14	1.5	65		10.9	ZND	11227031
14	1.5	65		10.9	DAC1	11227034
14	1.5	70		10.9	ZND	15977631
14	1.5	70		8.8	DAC	15977624
14	1.5	70	FULL	10.9	DAC	90488416
14	1.5	75		8.8	DAC	15977724
14	1.5	80		10.9	ZND	15862131
14	1.5	80		8.8	DAC	15862124
14	1.5	80		10.9	DAC	15862134
14	1.5	85		10.9	DAC	15977834
14	1.5	85		10.9	ZND	15977831
14	1.5	90		10.9	ZND	15977931
14	1.5	90		10.9	DAC	15977934
14	1.5	95		10.9	ZND	15876931
14	1.5	100		10.9	DAC	11360234
14	1.5	100		8.8	DAC	11360224
14	1.5	100		10.9	ZND	11360231
14	1.5	110		8.8	DAC	15877024
14	1.5	110		10.9	DAC	15877034
14	1.5	120		8.8	DAC	15978124
14	1.5	120		10.9	ZND	15978131
14	1.5	125		8.8	DAC	15978224
14	1.5	125		10.9	DAC	15978234
14	1.5	130		8.8	DAC	11422124
14	1.5	140		8.8	DAC	15978324
14	1.5	140		10.9	ZND	15978331
14	1.5	140		10.9	DAC	47830733
14	1.5	150		8.8	DAC	51673929
14	1.5	150		10.9	DAC	15978534
14	1.5	160		8.8	DAC	15978724
14	1.5	170		10.9	ZND	15978931
14	1.5	180		8.8	DAC	15979124
14	1.5	200		10.9	ZND	15979531
14	1.5	220		10.9	ZND	11367831
18	1.5	140		10.9	ZND	15986031
20	1.5	30	FULL	5.8	ZND	15987511
22	1.5	45	FULL	10.9	ZND	15992231
22	1.5	50	FULL	8.8	BZN	47470370
22	1.5	50	FULL	10.9	ZND	15992431
22	1.5	55	FULL	10.9	BZN	15992537
22	1.5	55	FULL	10.9	ZND	15992531
22	1.5	55	FULL	10.9	DAC	15992534

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