



# Standard Part

## Hexagon Head Bolts - Metric Coarse Thread Miscellaneous - Non-Preferred

STPB690

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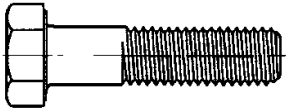
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### REFERENCE DOCUMENTS

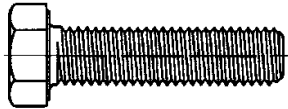
CNH STPA020	Fastener Finishes and Material Specifications
ISO 4014	Hexagon head bolts – Product grades A and B
ISO 4017	Hexagon head bolts – Product grades A and B Full Thread
ISO 888	Bolts screws and studs – Nominal lengths and thread lengths for general purpose bolts
ISO 898-1	Mechanical properties of fasteners made of carbon steel and alloy steel
ISO 6157-3	Limits of Surface Discontinuities
ISO 3506-1	Mechanical properties of corrosion-resistant stainless steel fasteners – Part 1
Iveco 18-1103	Zinc-Nickel Electrolytic Coating for Ferrous Metal Parts

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 4014 Bolt with shank



ISO 4017 Bolt fully threaded

General Specifications: ISO 4014, 4017  
 Finish and Material Specifications: CNH STPA020  
 Stainless Steel Material A4-80 per ISO 3506-1

Typical part description for BOM's and CAD drawings

BOLT, M12X50 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 - 3. Bolts with Heads per Current ISO Standards

- Table 1. Coarse Thread Metric Hexagon Head Bolts – General Specifications
- Table 2. Bolts Fully Threaded or have Special Thread Length.
- Table 3. Bolts with Unthreaded Shanks.

Tables 4 - 6. Bolts with Heads per Obsolete DIN Standards

- Table 4. General Specifications same as “ISO” except for Head Dimensions
- Table 5. Bolts with Heads per DIN 933 – Fully Threaded
- Table 6. Bolts with Heads per DIN 931 – Unthreaded Shanks

AUTHOR	APPROVED BY	ECO NO.	CNH INDUSTRIAL NUMBER
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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.

Part numbers that retain the DIN head sizes are shown in Tables 4, 5 and 6.

### 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. Coarse Thread Metric Hexagon Head Bolts – General Specifications**

Bolt Nominal Diameter	<b>4</b>	<b>5</b>	<b>6</b>	<b>8</b>	<b>10</b>	<b>12</b>	<b>14</b>	<b>16</b>
Coarse Thread Pitch	<b>0.7</b>	<b>0.8</b>	<b>1</b>	<b>1.25</b>	<b>1.5</b>	<b>1.75</b>	<b>2</b>	<b>2</b>
Length of thread for								
Bolt length to 125	14	16	18	22	26	30	34	38
Bolt length 126 to 200	20	22	24	28	32	36	40	44
Bolt length: >200	33	35	37	41	45	49	53	57
Width across flats nom./ max	7	8	10	13	16	18	21	24
Width across corners min.	7.66	8.79	11.05	14.38	17.77	20.03	23.36	26.75
Head height max.	2.93	3.85	4.16	5.45	6.58	7.68	8.98	10.18

Bolt Nominal Diameter	<b>18</b>	<b>20</b>	<b>22</b>	<b>24</b>	<b>27</b>	<b>30</b>	<b>36</b>	<b>42</b>
Coarse Thread Pitch	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>3</b>	<b>3</b>	<b>3.5</b>	<b>4</b>	<b>4.5</b>
Length of thread for								
Bolt length to 125	42	46	50	54	60	66	78	90
Bolt length 126 to 200	48	52	56	60	66	72	84	96
Bolt length: >200	61	65	69	73	79	85	97	109
Width across flats nom./ max	27	30	34	36	41	46	55	65
Width across corners min.	30.14	32.95	37.72	39.55	45.2	50.85	60.79	71.3
Head height max.	11.85	12.72	14.35	15.22	17.35	19.12	22.92	27.05



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Table 2. Bolts Fully Threaded or Special Thread Length

Table 2. Fully Threaded or Special					
Nom Dia	Length	Thread Length	Material	Finish	Part Number
4	10	FULL	A4-80	PLN	51487105
4	10	FULL	5.8	ZND	10444511
4	10	FULL	5.8	DAC	10444514
4	12	FULL	5.8	DAC	10444614
4	12	FULL	8.8	DAC	90358566
4	14	FULL	5.8	ZND	10444711
4	14	FULL	10.9	DAC	10444734
4	16	FULL	5.8	DAC	10444814
4	20	FULL	8.8	BZN	10445027
4	35	FULL	8.8	DAC	15210624
4	40	FULL	8.8	DAC	47435322
4	40	10	8.8	BZN	412572
5	8	FULL	10.9	DAC	10856834
5	10	FULL	5.8	DAC	10977514
5	10	FULL	8.8	DAC	10977524
5	10	FULL	10.9	DAC	10977534
5	10	FULL	SST	PLN	47562757
5	12	FULL	8.8	DAC	10977624
5	14	FULL	5.8	DAC	10977714
5	14	FULL	8.8	DAC	10977724
5	16	FULL	8.8	BZN	10977827
5	16	FULL	8.8	DAC	90358243
5	16	FULL	10.9	DAC	10977834
5	16	FULL	A2	PLN	47490768
5	18	FULL	8.8	DAC	10977924
5	20	FULL	8.8	PLN	10978020
5	20	FULL	8.8	DAC	10978024
5	22	FULL	5.8	DAC	10978114
5	25	FULL	5.8	ZND	10978211
5	25	FULL	A2-70	PLN	10978280
5	25	FULL	8.8	DAC	90358569
5	25	FULL	10.9	DAC	10978234
5	28	FULL	5.8	ZND	10978311
5	30	FULL	SST	PLN	87270794
5	30	FULL	SST	BLO	90358582
5	40	FULL	8.8	DAC	15211824
6	10	FULL	BRS	PLN	10979440
6	10	FULL	5.8	DAC	10979414
6	10	FULL	8.8	DAC	10979424
6	10	FULL	8.8	PLN	10979420
6	10	FULL	10.9	DAC	10979434
6	12	FULL	SST	PLN	87391924
6	12	FULL	A4-80	PLN	51473414

Table 2. Fully Threaded or Special					
Nom Dia	Length	Thread Length	Material	Finish	Part Number
6	12	FULL	5.8	DAC	10902014
6	12	FULL	8.8	DAC	10902024
6	12	FULL	10.9	DAC	90358280
6	12	FULL	10.9	PLN	10902030
6	14	FULL	A4-80	PLN	51473780
6	14	FULL	5.8	DAC	10902114
6	14	FULL	8.8	DAC	10902124
6	14	FULL	10.9	DAC	10902134
6	14	FULL	10.9	PLN	10902130
6	14	FULL	SST	PLN	84600279
6	16	FULL	5.8	ZND	10902211
6	16	FULL	A2-70	PLN	10902280
6	16	FULL	A4-80	PLN	51473788
6	16	FULL	8.8	BGM	90347424
6	16	FULL	8.8	BZN	87020138
6	16	FULL	8.8	DAC	10902224
6	16	FULL	8.8	PHC	87552807
6	16	FULL	8.8	PLN	412114
6	16	FULL	10.9	PLN	10902230
6	16	FULL	10.9	DAC	10902234
6	18	FULL	5.8	PLN	10902310
6	18	FULL	5.8	ZND	10902311
6	18	FULL	8.8	DAC	10902324
6	18	FULL	8.8	BZN	10902329
6	18	FULL	10.9	DAC	10902334
6	20	FULL	5.8	ZND	10902411
6	20	FULL	8.8	PLN	10902420
6	20	FULL	8.8	DAC	10902424
6	20	FULL	8.8	BGM	90382046
6	20	FULL	8.8	BLO	47470376
6	20	FULL	10.9	DAC	10902434
6	20	FULL	12.9	DAC	10902474
6	20	FULL	A2-70	PLN	51427417
6	20	FULL	A4-80	PLN	51473794
6	22	FULL	8.8	DAC	10902524
6	22	FULL	10.9	DAC	10902534
6	25	FULL	4.8	ZND	51330015
6	25	FULL	5.8	ZND	10902611
6	25	FULL	5.8	DAC	10902614
6	25	FULL	8.8	PLN	10902620
6	25	FULL	A2-70	PLN	10902680
6	25	FULL	A4-80	PLN	51473796
6	25	FULL	8.8	BGM	90358860

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**Table 2. Fully Threaded or Special**

Nom Dia	Length	Thread Length	Material	Finish	Part Number
6	25	FULL	8.8	BZN	84405130
6	25	FULL	8.8	DAC	10902624
6	25	FULL	10.9	DAC	10902634
6	25	FULL	12.9	DAC	10902674
6	28	FULL	8.8	BGM	92145873
6	28	FULL	8.8	DAC	10902724
6	28	FULL	10.9	DAC	10902734
6	30	FULL	8.8	BGM	92087985
6	30	FULL	8.8	DAC	16050624
6	30	FULL	8.8	DOR	87342145
6	30	FULL	A2-70	PLN	51448940
6	35	FULL	8.8	BZN	87698769
6	37	15	8.8	ZND	9815707
6	40	FULL	5.8	ZND	15212711
6	40	FULL	8.8	DAC	15212724
6	40	FULL	8.8	BZN	87698747
6	40	FULL	A2-70	PLN	47810232
6	45	FULL	8.8	DAC	15212824
6	60	FULL	8.8	DOR	87342146
6	85	FULL	12.9	DAC	47889976
6	100	FULL	8.8	DAC	90358571
6	150	85	8.8	PLN	120260
8	8	FULL	8.8	DAC	15857624
8	10	FULL	8.8	DAC	16042924
8	12	FULL	8.8	PHC	87015759
8	12	FULL	5.8	DAC	16043014
8	12	FULL	8.8	DAC	16043024
8	14	FULL	SST	PLN	16043180
8	14	FULL	5.8	DAC	16043114
8	14	FULL	8.8	DAC	16043124
8	14	FULL	10.9	DAC	16043134
8	15	FULL	8.8	PLN	84989139
8	16	FULL	5.8	ZND	16043211
8	16	FULL	5.8	DAC	16043214
8	16	FULL	8.8	PLN	412116
8	16	FULL	8.8	DAC	16043224
8	16	FULL	8.8	BGM	5182280
8	16	FULL	A2-70	PLN	16043280
8	16	FULL	A4-80	PLN	51473821
8	16	FULL	8.8	PHC	87015760
8	16	FULL	8.8	BZN	412555
8	16	FULL	10.9	PLN	9515559
8	16	FULL	10.9	DAC	16043234
8	16	FULL	12R	DAC	16043274

**Table 2. Fully Threaded or Special**

Nom Dia	Length	Thread Length	Material	Finish	Part Number
8	18	FULL	5.8	ZND	16043311
8	18	FULL	5.8	DAC	16043314
8	18	FULL	8.8	DAC	16043324
8	18	FULL	10.9	DAC	16043334
8	18.6	13	8.8	ZND	336154
8	20	FULL	5.8	ZND	16043411
8	20	FULL	5.8	DAC	16043414
8	20	FULL	8.8	BZN	87015745
8	20	FULL	8.8	BGM	48063698
8	20	FULL	8.8	PLN	16043420
8	20	FULL	A2-70	PLN	16043480
8	20	FULL	A4-80	PLN	51473851
8	20	FULL	8.8	PHC	87015761
8	20	FULL	8.8	POL	87646159
8	20	FULL	8.8	DAC	16043424
8	20	FULL	10.9	DAC	16043434
8	20	FULL	10.9	PLN	16043430
8	20	FULL	12R	DAC	16043474
8	20	FULL	A2-70	BLO	16043487
8	22	FULL	5.8	DAC	16043514
8	22	FULL	8.8	PLN	120160
8	22	FULL	8.8	DAC	16043524
8	22	FULL	8.8	BGM	5183645
8	22	FULL	8.8	BLO	47470379
8	22	FULL	10.9	DAC	16043534
8	25	FULL	5.8	ZND	16043611
8	25	FULL	8.8	BGM	90509396
8	25	FULL	8.8	BZN	87015747
8	25	FULL	8.8	DAC	16043624
8	25	FULL	8.8	ZND	16043628
8	25	FULL	8.8	PLN	412247
8	25	FULL	8.8	PHC	87023131
8	25	FULL	10.9	BGM	90347420
8	25	FULL	10.9	DAC	16043634
8	25	FULL	10.9	BZN	16043637
8	25	FULL	12R	DAC	16043674
8	25	FULL	A2-70	PLN	16043680
8	25	FULL	A4-80	PLN	51473855
8	25	FULL	12.9	PLN	440418
8	27.5	17	8.8	ZND	336153
8	28	FULL	8.8	DAC	16043724
8	30	FULL	5.8	DAC	16043814
8	30	FULL	8.8	DAC	16043824
8	30	FULL	8.8	PLN	87040734



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**Table 2. Fully Threaded or Special**

Nom Dia	Length	Thread Length	Material	Finish	Part Number
8	30	FULL	8.8	BZN	86637961
8	30	FULL	10.9	BGM	90350921
8	30	FULL	10.9	BZN	47450284
8	30	FULL	10.9	DAC	16043834
8	30	FULL	A2-70	PLN	16043880
8	30	FULL	A4-80	PLN	51473859
8	30	FULL	10.9	PLN	16043830
8	30	FULL	12.9	ZNM	#412153
8	30	FULL	12.9	DAC	47609984
8	32	FULL	8.8	DAC	16042724
8	35	FULL	5.8	ZND	16043917
8	35	FULL	8.8	BZN	87015748
8	35	FULL	8.8	DAC	16043924
8	35	FULL	10.9	DAC	16043934
8	35	FULL	10.9	PLN	16043930
8	35	FULL	10.9	ZND	16043931
8	35	FULL	12.9	DAC	16043974
8	35	15	10.9	ZND	385772
8	35	FULL	A4-80	PLN	51473864
8	36	8	8.8	ZND	564335
8	40	FULL	4.8	ZND	51333892
8	40	FULL	4.8	DAC	90391649
8	45	24	8.8	PLN	396161
8	45	FULL	8.8	DOR	51684207
8	45	FULL	A2-70	PLN	15213580
8	50	FULL	4.8	ZND	51334441
8	50	FULL	8.8	BZN	87020139
8	50	FULL	SST	PLN	939327
8	50	FULL	10.9	DAC	16040734
8	55	18	8.8	PLN	84191680
8	55	29	8.8	ZND	9515541
8	60	FULL	8.8	PLN	84440528
8	60	FULL	8.8	DAC	15213724
8	60	16	8.8	ZND	84005607
8	65	FULL	8.8	PLN	86639026
8	65	FULL	A2-70	PLN	15213880
8	70	FULL	SST	PLN	955804
8	70	49	8.8	BGM	91741744
8	70	49	8.8	ZND	920420
8	80	FULL	A2-70	PLN	47968687
8	80	FULL	8.8	PLN	51449789
8	90	FULL	8.8	PLN	87560254
8	90	FULL	8.8	DAC	15214324
8	90	FULL	A2-70	PLN	15214380
8	120		8.8	ZND	336377

**Table 2. Fully Threaded or Special**

Nom Dia	Length	Thread Length	Material	Finish	Part Number
8	130	FULL	A2	PLN	47490766
10	16	FULL	8.8	PLN	412293
10	16	FULL	8.8	PHC	87032781
10	16	FULL	10.9	PLN	86624976
10	20	FULL	8.8	BGM	90347417
10	20	FULL	8.8	ZN	84593996
10	20	FULL	8.8	BZN	412576
10	20	10	10.9	PHC	84214043
10	20	FULL	SST	PLN	51414653
10	20	FULL	A4-80	PLN	51473906
10	22	FULL	8.8	PLN	87520953
10	25	FULL	8.8	ZN	84593995
10	25	FULL	SST	PLN	412463
10	25	FULL	A4-80	PLN	51473907
10	25	FULL	8.8	PHC	87778873
10	25	FULL	8.8	PLN	87015750
10	25	FULL	8.8	BGM	90347414
10	25	FULL	8.8	BZN	87015749
10	25	FULL	10.9	PLN	382364
10	28	20	8.8	ZND	486248
10	30	FULL	8.8	BGM	90354466
10	30	FULL	8.8	PHC	87032782
10	30	FULL	8.8	PLN	86050233
10	30	FULL	10.9	PLN	73175480
10	30	FULL	A4-80	PLN	51473910
10	35	FULL	8.8	PLN	87015751
10	35	FULL	8.8	PHC	87032783
10	35	FULL	8.8	BZN	87015746
10	35	FULL	8.8	BGM	47455770
10	35	FULL	8.8	POL	87012915
10	35	FULL	12.9	ZNM	#84078461
10	35	FULL	SST	PLN	47461459
10	35	FULL	A4-80	PLN	51473911
10	35	11	8.8	ZND	9513808
10	40	FULL	8.8	PLN	87015564
10	40	FULL	10.9	DAC	90358282
10	40	FULL	12.9	PHC	84404452
10	40	FULL	A4-80	PLN	51473912
10	45	FULL	10.9	PLN	92316782
10	50	FULL	8.8	PLN	412295
10	50	FULL	8.8	BZN	51641046
10	50	FULL	SST	PLN	84480442
10	55	15	8.8	PLN	120188
10	60	FULL	8.8	PLN	84018483

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**Table 2. Fully Threaded or Special**

Nom Dia	Length	Thread Length	Material	Finish	Part Number
10	60	FULL	8.8	DOR	87342143
10	64	23.5	8.8	ZND	4433663
10	70	FULL	8.8	DOR	87535071
10	70	FULL	10.9	DOR	87556948
10	70	FULL	SST	PLN	84346909
10	80	FULL	SST	PLN	48116711
10	80	FULL	8.8	BGM	92138735
10	80	FULL	10.9	PLN	9515557
10	80	35	8.8	PLN	555701
10	90	75	8.8	ZND	522504
10	130	26	8.8	ZND	84580734
10	130	26	10.9	ZND	84577051
10	160	FULL	5.6	PLN	539868
10	230	80	8.8	ZND	412579
10	254	55	8.8	PLN	378714
10	260	80	8.8	ZND	412702
12	20	FULL	8.8	PHC	87015757
12	20	FULL	10.9	PLN	9503840
12	20	FULL	12.9	PLN	440410
12	25	FULL	8.8	PLN	87015752
12	25	FULL	10.9	DAC	47418292
12	25	FULL	A4-80	PLN	51474796
12	30	FULL	8.8	BGM	90347421
12	30	FULL	8.8	BZN	90333221
12	30	FULL	8.8	PHC	87032784
12	30	FULL	8.8	PLN	412700
12	30	FULL	12.9	ZNM	#412677
12	30	FULL	12.9	PHC	47639597
12	30	FULL	A4-70	PLN	48096941
12	30	FULL	A4-80	PLN	51474805
12	35	FULL	8.8	PHC	87015758
12	35	FULL	10.9	DAC	90358288
12	35	FULL	10.9	PLN	379753
12	35	FULL	12.9	ZND	#87672198
12	35	FULL	12.9	PHC	47639602
12	35	FULL	A4-80	PLN	51474813
12	38	FULL	8.8	PLN	321716
12	40	FULL	8.8	BGM	90347425
12	40	FULL	8.8	BZN	412554
12	40	FULL	8.8	DAC	90395297
12	40	FULL	8.8	PLN	87015753
12	40	27	8.8	ZND	9831367
12	40	FULL	10.9	PLN	84238737
12	40	FULL	12.9	ZNM	#87376047

**Table 2. Fully Threaded or Special**

Nom Dia	Length	Thread Length	Material	Finish	Part Number
12	40	FULL	A4-80	PLN	51474814
12	44	25	8.8	PLN	419177
12	45	FULL	8.8	DAC	90358216
12	45	FULL	8.8	PLN	84015507
12	45	FULL	10.9	BGM	51451696
12	45	FULL	10.9	DAC	90358292
12	45	FULL	A4-80	PLN	51474816
12	47	21	8.8	PLN	260049
12	48	22	8.8	ZND	372975
12	48.5	22	8.8	ZND	397539
12	50	20.5	8.8	ZND	412392
12	50	FULL	8.8	DOR	87342144
12	50	FULL	10.9	DOR	90479201
12	55	FULL	8.8	BLO	47481689
12	55	19	8.8	ZND	333976
12	65	FULL	8.8	PLN	412498
12	65	25	8.8	ZND	382263
12	70	30	12.9	DAC	84144655
12	70	FULL	10.9	ZNM	84025877
12	70	FULL	10.9	DOR	91764103
12	90	FULL	8.8	PHC	87022689
12	90	FULL	10.9	BZN	51513665
12	100	30	12.9	DAC	84144656
12	180	115	10.9	ZND	412676
12	180	FULL	12.9	ZND	#84515565
12	200	85	12.9	ZNM	#84074911
12	200	170	10.9	ZND	9839346
12	230	130	8.8	ZND	9837782
12	240	73	8.8	ZND	84439922
12	360	125	10.9	ZND	84012195
12	41	21	8.8	ZND	321488
14	60	FULL	10.9	PLN	4154686
14	65	FULL	10.9	PLN	440421
14	70	FULL	10.9	DAC	87333836
14	70	FULL	10.9	PLN	440422
16	25	FULL	8R	DAC	15013424
16	25	FULL	A4-80	PLN	51474932
16	28	FULL	10.9	DAC	11127334
16	30	FULL	10.9	PLN	11127430
16	30	FULL	A4-80	PLN	51474936
16	32	FULL	10.9	DAC	15219634
16	35	FULL	8.8	ZND	16249821
16	35	FULL	8.8	DAC	16249824
16	35	FULL	10.9	PLN	11127530



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**Table 2. Fully Threaded or Special**

Nom Dia	Length	Thread Length	Material	Finish	Part Number
16	35	FULL	10.9	BZN	11127537
16	35	FULL	10.9	DAC	90445002
16	35	FULL	A4-80	PLN	51474941
16	35	22	8.8	PLN	80727814
16	40	FULL	8.8	DAC	90358559
16	40	FULL	8.8	PLN	87015754
16	40	FULL	10.9	DAC	90358535
16	40	FULL	10.9	DOR	87342036
16	40	FULL	10.9	PLN	9515558
16	40	FULL	12.9	PLN	9516481
16	40	FULL	A4-80	PLN	51474944
16	40	24.5	8.8	ZND	412091
16	45	FULL	5.8	ZND	11118711
16	45	FULL	8.8	DAC	90358227
16	45	FULL	8.8	PLN	87015755
16	45	FULL	10.9	DAC	11118734
16	45	28	10.9	ZNM	84056523
16	45	FULL	12.9	DAC	11118774
16	45	FULL	A4-80	PLN	51474951
16	50	FULL	BRS	PLN	782864
16	50	FULL	10.9	PLN	99803
16	50	FULL	10.9	DOR	87342037
16	50	FULL	10.9	DAC	11118934
%16	50	FULL	10.9	ZND	47635477
16	50	28	8.8	PLN	80161948
16	50	FULL	A4-80	PLN	51474954
16	55	FULL	SST	PLN	421217
16	55	FULL	10.9	BGM	51451700
16	55	FULL	10.9	DAC	16041234
16	55	FULL	10.9	PLN	727734
16	55	FULL	12.9	PLN	11119070
16	55	FULL	A4-80	PLN	51474958
16	60	FULL	8.8	PLN	87015569
16	60	FULL	8.8	DAC	15219824
16	60	FULL	10.9	DAC	15219834
16	60	FULL	10.9	BGM	51452914
16	60	FULL	A4-80	PLN	51474961
16	60	FULL	12.9	DAC	91785097
16	68	33	8.8	PLN	331831
16	70	FULL	10.9	DOR	90479202
16	70	FULL	12.9	DAC	92136229
16	71	29.85	8.8	PLN	84032133
16	80	FULL	SST	PLN	301618
16	80	FULL	10.9	PLN	9515555

**Table 2. Fully Threaded or Special**

Nom Dia	Length	Thread Length	Material	Finish	Part Number
16	90	FULL	12.9	ZNM	#9818268
16	100	FULL	8.8	BGM	91776276
16	100	FULL	10.9	PLN	84345501
16	100	FULL	A4-80	PLN	90329579
16	110	FULL	10.9	DAC	15220734
16	132	FULL	8.8	PLN	332953
16	160	FULL	8.8	BGM	92087984
16	160	FULL	8.8	PLN	84000894
16	180	105	8.8	ZND	84435244
16	180	FULL	12.9	DAC	92136228
16	190	118	8.8	ZND	84431211
16	220	100	8.8	ZND	84437496
16	340	100	8.8	PLN	84441878
16	450	FULL	10.9	ZND	47864531
18	30	FULL	8.8	DAC	15221424
18	45	FULL	10.9	DAC	16162434
18	45	FULL	10.9	BZN	16162437
18	50	FULL	8.8	PLN	412715
18	50	FULL	10.9	DAC	16047034
18	50	FULL	12.9	ZNM	#16047071
18	65	FULL	8.8	DAC	15222124
18	70	FULL	8.8	DAC	15222224
18	70	FULL	10.9	DAC	15222234
18	80	FULL	8.8	DAC	15222424
18	110	FULL	8.8	DAC	15223024
18	125	FULL	10.9	DAC	15223334
18	130	FULL	10.9	DAC	15223434
18	140	FULL	10.9	DAC	15223534
20	50	FULL	10.9	DAC	11124734
20	50	FULL	12.9	ZNM	#87301412
20	10	FULL	8.8	PLN	2426835
20	20	FULL	SST	PLN	156983
20	25	FULL	SST	PLN	650177
20	28	FULL	8.8	DAC	15861224
20	30	FULL	8.8	DAC	47460505
20	30	FULL	10.9	DAC	15861334
20	35	FULL	8.8	BGM	91776675
20	35	FULL	10.9	DAC	11121334
20	35	FULL	10.9	DOR	87635862
20	40	FULL	8.8	DAC	90358232
20	40	FULL	10.9	BGM	92138736
20	40	FULL	10.9	DAC	90358613
20	40	FULL	10.9	DOR	87342055
20	40	FULL	10.9	PLN	87015762



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**Table 2. Fully Threaded or Special**

Nom Dia	Length	Thread Length	Material	Finish	Part Number
20	45	FULL	SST	PLN	152729
20	45	FULL	8.8	DAC	11124524
20	45	FULL	10.9	PLN	11124530
20	50	FULL	8.8	DAC	90358233
20	50	FULL	10.9	BGM	92055439
20	50	FULL	10.9	PLN	11124730
20	55	FULL	10.9	DOR	87342045
20	55	FULL	12.9	DAC	11124874
20	55	FULL	10.9	DAC	11124834
20	60	FULL	8.8	DAC	90358604
20	60	FULL	10.9	BGM	92073532
20	60	FULL	10.9	BLO	92757635
20	60	FULL	10.9	BZN	11124937
20	60	FULL	10.9	DAC	11124934
20	60	FULL	10.9	DOR	87342039
20	60	FULL	10.9	PLN	48067940
20	60	FULL	10.9	ZND	87646162*
20	60	FULL	12.9	ZND	#84139329
20	65		10.9	PLN	11125030
20	65		10.9	BZN	11125037
20	65	FULL	10.9	DAC	15224034
20	70	FULL	10.9	DAC	92089302
20	70		12.9	DAC	11125174
20	80	FULL	10.9	BGM	92138737
20	80		12.9	DAC	11125374
20	85	60	10.9	ZND	47862186

**Table 2. Fully Threaded or Special**

Nom Dia	Length	Thread Length	Material	Finish	Part Number
20	85	FULL	12.9	ZNM	#87301411
20	130	95	10.9	ZND	87439071
20	160	35	8.8	ZND	84053832
20	260	60	8.8	ZND	84037083
24	50	FULL	10.9	DAC	91730569
24	55	FULL	10.9	DAC	16039834
24	70	FULL	10.9	DAC	91701182
24	70	FULL	SST	PLN	301621
24	75	FULL	SST	PLN	301622
24	80	FULL	10.9	PLN	152614
24	80	32	8.8	PLN	84022080
24	160	FULL	10.9	ZND	87610711
24	200	FULL	SST	PLN	986789
24	200	140	8.8	ZND	9837787
24	300	FULL	10.9	ZND	90405534
24	350	135	10.9	ZND	47604116
24	355	95	10.9	ZND	87015578
27	55	FULL	10.9	DAC	15869434
27	90	FULL	10.9	DAC	91867577
30	235	60	10.9	ZND	91759711

% Left Hand Thread

\* Use Loctite #204 thread lock starts at end of thread and covers a length of 35mm

# Do not use on new designs after 01OCT2011 (Hydrogen Assisted Cracking-HAC)

**Table 2a. Bolts Fully Threaded or Special Thread Length**

Nom Dia	Length	Thread Length	Material	Finish	Part Number
6	8	FULL	8.8	Zn-Ni	90506877
6	18	FULL	8.8	ZN-NI-6	92030892
20	100	FULL	8.8	ZN-NI-1	92272322
20	110	FULL	8.8	Zn-Ni	90509414
20	120	FULL	8.8	ZN-NI-1	92272323

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

ZN-NI-6 – Per STPA020

ZN-NI-1 – Per STPA020



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Table 3. Bolts with Shanks

Table 3. Bolts with Shanks					
Nom Dia	Length	Thread Length	Material	Finish	Part Number
4	40		8.8	DAC	90358239
5	30		8.8	DAC	10978424
5	35		8.8	BGM	91776673
5	40		8.8	PLN	87622770
5	40		10.9	PLN	10978630
5	50		5.8	ZND	10978811
5	55	16	5.8	ZND	15201011
5	70	16	8.8	DAC	15201224
6	25		8.8	BZN	84405129
6	30		5.8	ZND	10902811
6	30		8.8	PLN	10902820
6	30		A4-80	PLN	51473802
6	30		8.8	DAC	10902824
6	30		12.9	DAC	10902874
6	32		8.8	DAC	10902924
6	35		5.8	ZND	10903011
6	35		8.8	DAC	10903024
6	35		10.9	PLN	10903030
6	35		10.9	DAC	10903034
6	35		A2-70	PLN	48057050
6	35		A4-80	PLN	51473813
6	40		8.8	DAC	10903224
6	40		10.9	DAC	10903234
6	45		5.8	ZND	91813732
6	45		8.8	DAC	10903424
6	45		10.9	DAC	10903434
6	50		8.8	DAC	10903624
6	50		A2-70	PLN	10903680
6	55		8.8	DAC	10903724
6	60		A4-80	PLN	51652973
6	60		8.8	DAC	90358199
6	60		10.9	PLN	10903830
6	64		8.8	ZND	51334956
6	70		8.8	DAC	90358244
6	70		8.8	PLN	48032860
6	75		A4-80	PLN	51652978
6	75		8.8	DAC	90358245
6	80		BRS	PLN	11030340
6	80		8.8	BZN	87015562
6	80		8.8	DAC	90358246
6	80		10.9	DAC	11030334
6	80		SST	PLN	47562747
6	90		8.8	DAC	11032324

Table 3. Bolts with Shanks					
Nom Dia	Length	Thread Length	Material	Finish	Part Number
6	100		8.8	DAC	90358258
6	100		BRS	PLN	16038540
6	110		8.8	DAC	90358259
8	35		A2-70	PLN	16043980
8	40		A2-70	PLN	16044080
8	40		A4-80	PLN	51473877
8	40		8.8	BGM	90408403
8	40		8.8	PLN	412234
8	40		8.8	DAC	16044024
8	40		10.9	BZN	16044037
8	40		10.9	DAC	90358281
8	40		10.9	PLN	16044030
8	45		10.9	PLN	16044130
8	45		8.8	DAC	16044124
8	45		10.9	DAC	16044134
8	45		A4-80	PLN	51473880
8	50		A2-70	PLN	16044280
8	50		A4-80	PLN	51473881
8	50		R10	DAC	16044234
8	50		8.8	PLN	412486
8	50		8.8	BGM	92112827
8	50		8.8	BZN	84431556
8	50		8.8	DAC	16044224
8	55		8.8	PLN	528801860
8	55		8.8	DAC	16044324
8	55		10.9	DAC	16044334
8	60		A2-70	PLN	16044480
8	60		5.8	DAC	16044414
8	60		8.8	DAC	16044424
8	60		8.8	BZN	87015563
8	60		10.9	PLN	16044430
8	60		12.9	PHC	48097557
8	65		A2-70	PLN	16044580
8	65		8.8	DAC	16044524
8	65		10.9	DAC	16044534
8	65		10.9	PLN	16044530
8	70		8.8	DAC	16044624
8	70		10.9	DAC	16044634
8	75		8.8	DAC	16044724
8	75		10.9	DAC	16044734
8	75		10.9	PLN	16044730
8	75		A4-80	PLN	51611696
8	80		5.8	DAC	16044814



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**Table 3. Bolts with Shanks**

Nom Dia	Length	Thread Length	Material	Finish	Part Number
8	80		8.8	DAC	16044824
8	80		10.9	PLN	16044830
8	80		10.9	DAC	16044834
8	85		8.8	DAC	16044924
8	85		SST	PLN	87375600
8	85		A4-80	PLN	51599989
8	90		8.8	DAC	16045024
8	90		10.9	DAC	16045034
8	95		8.8	DAC	16045124
8	100		8.8	DAC	16046124
8	100		10.9	DAC	16046134
8	100		A4-80	PLN	51699675
8	110		8.8	DAC	16045424
8	110		10.9	DAC	90358589
8	115		8.8	PLN	336375
8	120		5.8	DAC	16045614
8	120		8.8	DAC	16045624
8	120		10.9	PLN	16045630
8	130		8.8	DAC	16045824
8	130		SST	PLN	84333570
8	140		8.8	DAC	16046024
8	140		10.9	DAC	16046034
8	150		8.8	DAC	16046224
8	150		10.9	PLN	16046230
8	155		8.8	PLN	120066
8	170		10.9	DAC	16046534
8	180		A4-80	PLN	51601595
10	45		8.8	DAC	87639790
10	45		10.9	DAC	90358284
10	45		12.9	DAC	47615962
10	45		A4-80	PLN	51473913
10	50		8.8	PLN	87015565
10	50		A4-80	PLN	51473914
10	55		A4-80	PLN	51473919
10	55		8.8	BZN	90323821
10	55		8.8	DAC	90358548
10	60		A4-80	PLN	51473920
10	60		8.8	BZN	51692432
10	60		8.8	PLN	%47643998
10	60	FULL	8.8	PLN	%47732852
10	60		10.9	BGM	92065229
10	60		12.9	PLN	9509358
10	65		8.8	DAC	90358261
10	65		10.9	PLN	56618

**Table 3. Bolts with Shanks**

Nom Dia	Length	Thread Length	Material	Finish	Part Number
10	70		8.8	DAC	90358555
10	70		12.9	ZNM	#84011764
10	75		8.8	DAC	90358262
10	80		8.8	BZN	90335622
10	80		8.8	DAC	90358203
10	85		8.8	PLN	84056952
10	85		12.9	PLN	7120942
10	85		A4-70	PLN	47627332
10	95		10.9	PLN	355690
10	100		8.8	DAC	90358209
10	100		10.9	DAC	90358286
10	110		SST	PLN	86982113
10	110		8.8	DAC	90358263
10	110		12.9	ZNM	#2168783
10	120		8.8	DAC	90358264
10	120		10.9	DAC	90445000
10	120		12.9	PLN	1520851
10	130		8.8	PLN	87015566
10	130		10.9	DAC	90358591
10	140		8.8	DAC	90358265
10	150		8.8	PLN	72183647
10	150		10.9	DAC	90445001
10	215		10.9	PLN	2186540
10	230		10.9	PLN	2781585
12	50		8.8	BLO	47481284
12	50		8.8	DAC	90358217
12	50		8.8	PLN	87015568
12	50		A4-80	PLN	51474901
12	50		10.9	DAC	51535944
12	55		12.9	ZNM	#410532
12	60		8.8	DAC	90358218
12	60		10.9	BGM	92213936
12	60		10.9	DAC	90358293
12	60		10.9	PLN	72180205
12	70		8.8	DAC	90358221
12	70		8.8	PLN	87742348
12	70		10.9	BGM	92087983
12	70		10.9	DAC	90358524
12	70		SST	PLN	47732222
12	75		10.9	PLN	70189
12	80		8.8	PLN	394275
12	80		8.8	BGM	51538975
12	80		8.8	DAC	90395298
12	80		10.9	BGM	51451698



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**Table 3. Bolts with Shanks**

Nom Dia	Length	Thread Length	Material	Finish	Part Number
12	90		10.9	BZN	51454809
12	95		10.9	BZN	87742347
12	100		8.8	BGM	51532132
12	100		A4-80	PLN	51584397
12	110		8.8	DAC	90358222
12	110		10.9	DAC	90358530
12	120		8.8	BGM	90411978
12	130		8.8	DAC	90358266
12	150		8.8	DAC	90358272
12	160		8.8	DAC	90358273
12	160		8.8	PLN	87573377
12	180		10.9	PLN	87575687
12	200		8.8	DAC	90358275
14	50		10.9	DAC	11116234
14	55		10.9	DAC	48090726
14	65		10.9	DAC	11116534
14	65		12.9	DOR	47741743
14	70		10.9	DAC	90358597
14	85		10.9	DAC	92214797
14	181		8.8	PLN	327404
14	391		8.8	PLN	327406
16	50		8.8	PLN	412324
16	55		12.9	ZNM	#84025474
16	55		10.9	DAC	11119034
16	60		10.9	ZND	11119131
16	65		8.8	DAC	90358279
16	65		10.9	DAC	11119234
16	65		10.9	BZN	11119237
16	65		12.9	DAC	11119274
16	65		A4-80	PLN	51474963
16	70		10.9	PLN	11119330
16	70		10.9	DAC	11119334
16	70		10.9	BGM	51451701
16	75		10.9	DAC	11119434
16	75		10.9	BZN	11119437
16	80		8.8	DAC	90489144
16	80		10.9	DAC	11119534
16	80		12.9	ZNM	#84025473
16	85		8.8	DAC	90370643
16	90		8.8	DAC	90358601
16	90		8.8	PLN	16615420
16	90		10.9	DAC	92214798
16	90		12.9	DOR	47458174
16	95		10.9	BZN	11119837

**Table 3. Bolts with Shanks**

Nom Dia	Length	Thread Length	Material	Finish	Part Number
16	100		8.8	BGM	92248811
16	100		8.8	DAC	90358230
16	100		10.9	BGM	92312002
16	100		10.9	BZN	92300162
16	100		12.9	DAC	84233555
16	110		8.8	PLN	87015570
16	110		10.9	BZN	11120137
16	110		12.9	DAC	84227692
16	120		10.9	DAC	90358540
16	120		10.9	PLN	35085
16	130		10.9	DAC	11120534
16	130		10.9	BGM	51451702
16	130		12.9	DAC	47988622
16	140		8.8	PLN	87015571
16	140		10.9	BGM	51451703
16	140		10.9	DAC	47418295
16	145		8.8	PLN	87015572
16	150		10.9	DAC	11120934
16	150		10.9	BGM	51451704
16	150		12.9	BGM	51451705
16	150		12.9	PHC	84233538
16	160		8.8	PLN	87015573
16	160		8.8	BLO	47481285
16	160		10.9	DAC	90358541
16	160		10.9	PLN	84026991
16	165		8.8	PLN	87015574
16	180		8.8	PLN	13092
16	180		10.9	PLN	84026992
16	180		10.9	BGM	51451706
16	180		12.9	BGM	51451707
16	180		12.9	PHC	84233539
16	185		8.8	PLN	1675797
16	190		12.9	BGM	51451708
16	190		12.9	PHC	84233540
16	190		12.9	ZNM	#84007686
16	200		8.8	DAC	15983024
16	220		12.9	BGM	51451709
16	220		12.9	DOR	47867743
16	220		12.9	PHC	84233541
16	230		10.9	DAC	92243585
16	260		10.9	DAC	92688734
16	280		8.8	BGM	92118149
16	280		10.9	DAC	92243584
16	320		10.9	BGM	92207529



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**Table 3. Bolts with Shanks**

Nom Dia	Length	Thread Length	Material	Finish	Part Number
16	350		10.9	BGM	51452285
16	350		12.9	BGM	51451710
18	55		10.9	DAC	15202934
18	60		8.8	DAC	11122124
18	60		10.9	DAC	11122134
18	65		10.9	DAC	11122234
18	70		8.8	DAC	11122324
18	75		10.9	DAC	11122434
18	80		8.8	DAC	11122524
18	90		10.9	DAC	16040034
18	90		10.9	BZN	16040037
18	90		10.9	BGM	91834039
18	90		12.9	PLN	2900425
18	100		8.8	DAC	16040324
18	100		10.9	DAC	16040334
18	110		10.9	DAC	11123134
18	120		8.8	DAC	15203024
18	120		10.9	DAC	15203034
18	130		10.9	DAC	15203134
18	150		10.9	BGM	91834040
20	65		8.8	DAC	11125024
20	65		10.9	BGM	92055440
20	65		10.9	DAC	11125034
20	65		12.9	DAC	51435513
20	70		8.8	DAC	11125124
20	70		8.8	PLN	412532
20	70		10.9	BGM	92055441
20	70		10.9	PLN	412640
20	70		10.9	DAC	11125134
20	75		10.9	DAC	11125234
20	75		12.9	DAC	11125274
20	75		10.9	PLN	87742361
20	75		12.9	ZNM	#11125271
20	80		8.8	DAC	11125324
20	80		10.9	BGM	91903252
20	80		10.9	DAC	11125334
20	80		10.9	BZN	11125337
20	85		8.8	DAC	11125424
20	85		10.9	BGM	91903253
20	85		10.9	DAC	11125434
20	85		12.9	DAC	87380456
20	90		10.9	BGM	47765036
20	90		10.9	DAC	16050834
20	90		12.9	DAC	87394754

**Table 3. Bolts with Shanks**

Nom Dia	Length	Thread Length	Material	Finish	Part Number
20	95		8.8	DAC	11125624
20	95		10.9	BGM	91903254
20	95		12.9	DAC	51435517
20	100		8.8	DAC	90391644
20	100		10.9	DAC	11125734
20	100		10.9	BGM	47764148
20	100	FULL	10.9	BGM	47770123
20	105		10.9	DAC	91844829
20	105		12.9	DAC	11125874
20	110		8.8	DAC	11125924
20	110		10.9	DAC	11125934
20	110		10.9	BGM	92089098
20	115		12.9	DAC	87723036
20	120		10.9	DAC	11126134
20	120		10.9	BZN	11126137
20	120		10.9	BGM	92251027
20	130		10.9	DAC	16041834
20	130		10.9	BGM	92097750
20	140		10.9	BGM	51451711
20	140		10.9	DAC	11126534
20	150		10.9	BGM	92052285
20	150		10.9	DAC	11126734
20	160		10.9	BGM	92199238
20	160		10.9	DAC	16039634
20	160		12.9	PLN	9513378
20	170		10.9	DAC	92293305
20	170		12.9	PLN	1909090
20	180		8.8	DAC	15204024
20	180		10.9	BGM	92091403
20	180		10.9	DAC	90358607
20	180		10.9	PLN	422820
20	190		8.8	DAC	15204124
20	190		10.9	DAC	15204134
20	200		10.9	DAC	16040434
20	200		10.9	BGM	48002889
20	220		8.8	DAC	16039224
20	230		10.9	DAC	51564884
20	240		10.9	DAC	92293306
20	280		10.9	DAC	92260004
20	290		10.9	DAC	92293307
20	360		10.9	PLN	2270640
20	370		10.9	ZND	91729892
22	60		12.9	DOR	87023129
22	80		12.9	DOR	91785088



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**Table 3. Bolts with Shanks**

Nom Dia	Length	Thread Length	Material	Finish	Part Number
22	110		12.9	DOR	91785089
22	120		12.9	DOR	91785090
24	60		10.9	DAC	47418286
24	60		12.9	ZNM	#84075037
24	75		10.9	BGM	47789833
24	80		10.9	DAC	47418288
24	80		12.9	DOR	91806442
24	90		10.9	DAC	47774558
24	90		10.9	BGM	51451712
24	110		10.9	DAC	48014362
24	110		12.9	DAC	48135668
24	110		12.9	DOR	91806443
24	120		10.9	PLN	15206130
24	120		12.9	DOR	91806444
24	130		10.9	DAC	48021267
24	130		10.9	PLN	15206330
24	130		12.9	DOR	92175298
24	140		8.8	PLN	87034472
24	140		10.9	PLN	84074423
24	140		10.9	PLN	84074462
24	140		10.9	DAC	87329682
24	140		12.9	DOR	92175299
24	170		10.9	DAC	15206734
24	200		10.9	BZN	16162537
24	200		12.9	DOR	92648896
24	210		12.9	DOR	92655242
24	220		12.9	DOR	92648897

**Table 3. Bolts with Shanks**

Nom Dia	Length	Thread Length	Material	Finish	Part Number
24	220		12.9	DOR	92648897
24	220		10.9	PLN	157672
24	245		10.9	PLN	7120933
24	270		10.9	PLN	302422
27	100		10.9	PHC	92710851
27	130		10.9	DAC	91751809
27	160		10.9	DAC	91745931
27	170		10.9	DAC	91760865
27	190		10.9	DAC	91751810
27	210		12.9	PLN	2270622
27	220		10.9	DAC	91745932
27	230		10.9	DAC	91760866
27	260		12.9	PLN	2247481
27	280		12.9	PLN	1589256
30	150		8.8	PLN	87034473
30	200		8.8	PLN	87034474
30	260		12.9	PLN	1652579
30	260		12.9	DOR	47677236
30	330		10.9	PLN	1939780
36	140		8.8	ZND	48135669
36	340		12.9	PLN	2213609
42	300		12.9	PLN	2213610

% Left Hand Thread (LH)

# Do not use on new designs after 01OCT2011  
(Hydrogen Assisted Cracking-HAC)

**Table 3a. Bolts with Shanks**

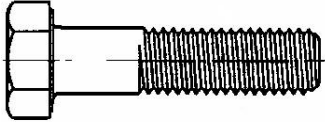
Nom Dia	Length	Thread Length	Material	Finish	Part Number
20	95		8.8	Zn-Ni	90509404

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

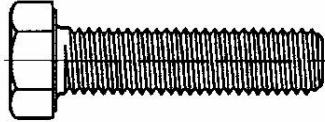
**Tables 4, 5, and 6. Bolts With Heads per Obsolete DIN standards –**
**Do not use for new design**

DIN 931 has been withdrawn and is replaced by ISO 4014

DIN 933 has been withdrawn and is replaced by ISO 4017



DIN 931 Bolt with shank



DIN 933 Bolt fully threaded

**Table 4.**

General specifications same as "ISO" except for head dimensions.

Bolt Nominal Diameter	10	12	14	22
Coarse Thread Pitch	1.5	1.75	2	2.5
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	17	19	22	32
nom./ max	18.90	21.10	24.49	36.72
Width across corners min.	6.58	7.68	8.98	14.35
Head heightmax.				

**Table 5. Bolts with Heads per DIN 933 – Fully Threaded**

Table 5. DIN 933 Bolts Fully Threaded					
Nom Dia	Length	Thread Length	Material	Finish	Part Number
10	14	FULL	8.8	DAC	10979324
10	16	FULL	8.8	DAC	10979224
10	16	FULL	10.9	DAC	10979234
10	16	FULL	10.9	PLN	10979230
10	18	FULL	8.8	BGM	91776278
10	18	FULL	8.8	DAC	11103024
10	20	FULL	8.8	PLN	300511
10	20	FULL	8.8	DAC	11106024
10	20	FULL	A2-70	PLN	11106080
10	20	FULL	10.9	DAC	11106034
10	20	FULL	R10	DAC	16204234
10	22	FULL	8.8	DAC	11106124
10	22	FULL	10.9	PLN	11106130
10	22	FULL	10.9	DAC	11106134
10	25	FULL	8.8	PLN	11106220

Table 5. DIN 933 Bolts Fully Threaded					
Nom Dia	Length	Thread Length	Material	Finish	Part Number
10	25	FULL	8.8	DAC	11106224
10	25	FULL	12.9	DAC	11106274
10	25	FULL	10.9	PLN	11106230
10	25	FULL	10.9	DAC	11106234
10	25	FULL	A2-70	PLN	11106280
10	28	FULL	5.8	ZND	11106311
10	28	FULL	10.9	DAC	11106334
10	30	FULL	8.8	DAC	11106424
10	30	FULL	10.9	PLN	11106430
10	30	FULL	10.9	DAC	11106434
10	30	FULL	A2-70	PLN	11106480
10	32	FULL	10.9	DAC	11106534
10	35	FULL	8.8	BGM	92118148
10	35	FULL	8.8	PLN	11106620
10	35	FULL	8.8	DAC	11106624



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**Table 5. DIN 933 Bolts Fully Threaded**

Nom Dia	Length	Thread Length	Material	Finish	Part Number
10	35	FULL	10.9	PLN	11106630
10	35	FULL	12.9	DAC	11106674
10	35	FULL	A2-70	PLN	11106680
10	35	FULL	10.9	ZND	2975318
10	35	FULL	10.9	DAC	11106634
10	40	FULL	A4-70	PLN	84413227
10	40	FULL	8.8	DAC	16040824
10	45	FULL	A4-70	PLN	47372446
10	50	FULL	8.8	DAC	16160124
10	55	FULL	SST	PLN	939080
10	70	FULL	8.8	DAC	11107624
10	70	FULL	SST	PLN	155769
10	70	FULL	SST	PLN	301613
10	80	FULL	8.8	DAC	15215224
10	90	FULL	SST	PLN	953285
10	90	FULL	A4-70	PLN	84390795
10	140	FULL	SST	PLN	48078400
10	170	FULL	SST	PLN	48124385
12	20	FULL	5.8	DAC	11112114
12	20	FULL	8.8	DAC	11112124
12	22	FULL	8.8	DAC	11109224
12	25	FULL	SST	PLN	152726
12	25	FULL	8.8	DAC	11112224
12	25	FULL	10.9	DAC	11112234
12	25	FULL	10.9	PLN	11112230
12	30	FULL	8.8	DAC	11112424
12	30	FULL	10.9	DAC	11112434
12	30	FULL	10.9	PLN	11112430
12	35	FULL	8.8	BGM	90350938
12	35	FULL	8.8	DAC	11112624
12	35	FULL	10.9	BGM	92298375
12	35	FULL	10.9	PLN	11112630
12	40	FULL	8.8	DAC	11112824
12	40	FULL	10.9	DAC	11112834
12	45	FULL	8.8	PLN	11113020
12	45	FULL	8.8	ZND	11113021

**Table 5. DIN 933 Bolts Fully Threaded**

Nom Dia	Length	Thread Length	Material	Finish	Part Number
12	50	FULL	8.8	DAC	15215724
12	60	FULL	8.8	DAC	15215824
12	60	FULL	10.9	BGM	90393187
12	60	FULL	10.9	DAC	15215834
12	65	FULL	10.9	DAC	11113534
12	70	FULL	8.8	DAC	15216024
12	80	FULL	10.9	DAC	11113834
12	85	FULL	10.9	DAC	15216334
12	90	FULL	10.9	DAC	11114034
12	90	FULL	10.9	BGM	92118150
12	100	FULL	10.9	DAC	11114234
12	110	FULL	10.9	DAC	15216834
14	20	FULL	8.8	DAC	16050724
14	25	FULL	10.9	DAC	11115334
14	28	FULL	8.8	DAC	11115424
14	30	FULL	8.8	DAC	11115524
14	30	FULL	10.9	DAC	11115534
14	35	FULL	10.9	DAC	11115634
14	40	FULL	10.9	DAC	11115834
14	60	FULL	10.9	PLN	15217830
14	70	FULL	8.8	PLN	87609265
14	70	FULL	12.9	ZNM	#87573378
14	80	FULL	10.9	DAC	15218234
14	105	FULL	10.9	DAC	15218734
22	60	FULL	8.8	DAC	15225924
22	60	FULL	10.9	DAC	91764446
22	65	FULL	10.9	DAC	11128134
22	80	FULL	10.9	DAC	15226334
22	70	FULL	10.9	DAC	15226134
22	115	FULL	10.9	DAC	15227034
22	120	FULL	10.9	DAC	15227134

# Do not use on new designs after 01OCT2011  
(Hydrogen Assisted Cracking-HAC)



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Table 6. Bolts with Heads per DIN 931. Bolts with Unthreaded Shanks

Table 6. DIN 931 Bolts with Shanks					
Nom Dia	Length	Thread Length	Material	Finish	Part Number
10	40		8.8	DAC	11106824
10	40		A2-70	PLN	11106880
10	45		8.8	DAC	11107024
10	50		8.8	DAC	11107224
10	50		10.9	DAC	11107234
10	50		SST	PLN	84253869
10	55		5.8	ZND	11107311
10	55		10.9	PLN	11107330
10	60		8.8	DAC	11107424
10	60		10.9	DAC	11107434
10	65		10.9	DAC	11107534
10	70		12.9	DAC	11107674
10	70		A2-70	PLN	11107680
10	75		8.8	BZN	90328718
10	75		8.8	BGM	90358861
10	75		12.9	DAC	11107774
10	75		12.9	PHC	47582654
10	80		5.8	ZND	11107811
10	80		12.9	DAC	11107874
10	90		8.8	DAC	11108024
10	90		10.9	DAC	11108034
10	90		SST	PLN	84299268
10	95		10.9	DAC	11108134
10	110		10.9	DAC	11108434
10	120		10.9	DAC	11108634
10	150		10.9	DAC	11133534
12	40		8.8	PLN	11112820
12	50		10.9	DAC	11113234
12	60		10.9	PLN	11113430

Table 6. DIN 931 Bolts with Shanks					
Nom Dia	Length	Thread Length	Material	Finish	Part Number
12	60		10.9	DAC	11113434
12	75		10.9	DAC	11113734
12	105		8.8	DAC	11114324
12	110		10.9	DAC	11114434
12	130		8.8	DAC	90358267
12	130		10.9	DAC	11114834
12	130		10.9	PLN	11114830
12	150		10.9	DAC	11115234
14	50		12.9	PLN	11116270
14	60		10.9	DAC	11116434
14	75		8.8	DAC	11116724
14	80		10.9	BGM	92070320
14	80		10.9	Zn-Ni	90509424
14	85		10.9	DAC	11116934
14	85		10.9	BGM	92089073
14	90		8.8	DAC	11117024
14	90		10.9	DAC	11117034
14	115		10.9	DAC	11117534
14	170		10.9	DAC	15201934
14	270		10.9	DAC	87363478
22	100		12.9	DAC	15204674
22	110		10.9	DAC	11129034
22	120		10.9	DAC	15204934
22	180		8.8	DAC	15205624
22	200		10.9	DAC	11130334
22	230		12.9	PLN	16039370

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