

Offshore Catalogue



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Our offer, **Global Parts Productivity™**, helps our customers reduce total cost and complexity, free up capital, achieve stable quality and deliveries. What it boils down to is a seamless supply chain for our customers, where the headache with C-Parts is gone.

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Bufab Norge AS has a long reputation of a committed and trustworthy supplier of C-Parts in Norway. We are committed to meeting your needs. Give us a call or send us an e-mail if you have questions and problems with your fasteners and C-Parts. **We have the solution.**

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Steel Grades

MECHANICAL REQUIREMENTS AND GENERAL INFORMATION OF STUD BOLTS

NORSOK M-630 MDS	ALLOY	ASTM	UNS	COMMON NAME	DIAMETER	TENSILE STRENGTH MIN, MPa	YIELD STRENGTH MIN, 0,2% MPa	ELONGATION IN 4 D MIN, %	REDUCTION OF AREA MIN, %	HARDNESS	IMPACT TEST AVG./MIN. JOULES
X08	B7	A193	G41400		2 1/2" and under Over 2 1/2" to 4" Over 4" to 7"	860 795 690	720 655 515	16 16 18	50 50 50	35 HRC / 321 HBW 35 HRC / 321 HBW 35 HRC / 321 HBW	
X08	B7M	A193	G41400		4" and under Over 4" to 7"	690 690	550 515	18 18	50 50	99 HRB / 235 HBW 99 HRB / 235 HBW	
X07	L7	A320	G41400		2 1/2" and under	860	725	16	50	35 HRC / 321 HBW	27/20 (-101°C)
X07	L7M	A320	G41400		2 1/2" and under	690	550	18	50	99 HRB / 235 HBW	27/20 (-73°C)
S03	B8M cl 1	A320	S31600	316SS	All sizes	515	205	30	50	96 HRB / 223 HBW	
S03	B8M cl 2	A320	S31600	316SS	3/4" and under Over 3/4" to 1" Over 1" to 1 1/4" Over 1 1/4" to 1 1/2"	760 690 655 620	655 550 450 345	15 20 25 30	45 45 45 45	35 HRC / 321 HBW 35 HRC / 321 HBW 35 HRC / 321 HBW 35 HRC / 321 HBW	
D59	F53	A1082	S32750	Super Duplex	All sizes	860	725	16	30	35 HRC / 328 HBW	45/35 (-46°C)
D59	F55	A1082	S32760	Super Duplex	All sizes	860	725	16	30	35 HRC / 328 HBW	45/35 (-46°C)
D60	F53	A1082	S32750	Super Duplex	All sizes	750	550	16	30	33 HRC / 310 HBW	45/35 (-46°C)
D60	F55	A1082	S32760	Super Duplex	All sizes	750	550	16	30	30 HRC / 290 HBW	45/35 (-46°C)
	F44	A182	S31254	6Mo / 254 SMO	All sizes	655	300	35	50		
N03	625	F468	N06625	Alloy 625	All sizes	825	415	30		35 HRC	
N04	660	A453	N66286	Alloy 660	All sizes	895	725	15	16	24-35 HRC / 248-321 HBW	27/20 (-101°C)
N05	718	A1014	N07718	Alloy 718	All sizes	895-1250	725-1000	30		22-40 HRC / 248-363 HBW	27/20 (-101°C)
	Ti gr. 2	B348	R50400		All sizes	345	275	20	30		
	Ti gr. 5	B348	R56400		All sizes	895	828	10	25		

• Contact bn.stavanger@bufab.com or bn.sales@bufab.com for delivery time and cost.

• Grades B7 and L7 according to Equinor TR2000 MDS's (e.g. VN101, VN201) are in stock from 1/2" to 1 1/4"

• Grades F44 (6Mo) and Ti grades 2 & 5 may be manufactured from bar materials according to MDS R17 and T01, respectively

• Hex bolts and Socket caps Screws in ASTM Standards available upon request

Steel Grades

MECHANICAL REQUIREMENTS AND GENERAL INFORMATION OF NUTS

ALLOY	ASTM	UNS	COMMON NAME	DIAMETER	HB	HRC	HRB
2H	A194	K04002		1 1/2" and under Over 1 1/2"	248-327 212-237	24-35 35 max	95 min
2HM	A194	K04002		All sizes	159-235		84-99
4 / 4L ^{a, b}	A194	K14510	Gr. 4	All sizes	248-327	24-35	
7 / 7L ^a	A194	G41400	Gr. 7	All sizes	248-327	24-35	
7M / 7ML ^a	A194	G41400	Gr 7M	All sizes	159-235		84-99
8M	A194	S31600	316SS	All sizes	126-300	32 max	60 min
625	F467	N06625	Alloy 625	All sizes		35 max	85 min

^a When low-temperature requirements are specified for Grade 4, Grade 7 or Grade 7M nuts, the Charpy testing and requirements according to ASTM A320 for Grade L7/L7M shall apply. The letter "L" shall be added to the marking (e.g. "7L").

^b Grade 4 has been removed from the 2017 revision of ASTM A194.

- Contact bn.stavanger@bufab.com or bn.sales@bufab.com for delivery time and cost
- Grades 2H and 7L according to Equinor TR2000 MDS's (e.g. VN102, VN202) are in stock from 1/2" to 1 1/4 "
- Protection Caps in various dimensions available upon request.



Chemical Requirements

COMPOSITION, PERCENT

ALLOY	ASTM	C	Mn max	P max	S max	Si max	Cr	Ni	Mo	Other							
B7	A193	0,37-0,49	0,65-1,1	0,035	0,040	0,15-0,35	0,75-1,20		0,15-0,25								
B7M	A193	0,37-0,49	0,65-1,1	0,035	0,040	0,15-0,35	0,75-1,20		0,15-0,25								
L7	A320	0,38-0,48	0,75-1,00	0,035	0,040	0,15-0,35	0,80-1,10		0,15-0,25								
L7M	A320	0,38-0,48	0,75-1,00	0,035	0,040	0,15-0,35	0,80-1,10		0,15-0,25								
B8M cl 1	A320	0,08	2,00	0,045	0,030	1,00	16,0-18,0	10,0-14,0	2,00-3,00								
B8M cl 2	A320	0,08	2,00	0,045	0,030	1,00	16,0-18,0	10,0-14,0	2,00-3,00								
S32750	A1082	0,030	1,20	0,035	0,020	0,80	24,0-26,0	6,0-8,0	3,0-5,0	Cu 0,50	N 0,24-0,32						
S32760	A1082	0,030	1,00	0,030	0,010	1,00	24,0-26,0	6,0-8,0	3,0-4,0	Cu 0,5-1,0	N 0,20-0,30	W 0,50-1,00					
F44	A182	0,020	1,00	0,030	0,010	0,80	19,5-20,5	17,5-18,5	6,0-6,5	Cu 0,5-1,0	N 0,18-0,22						
625	F468	0,10	0,50	0,015	0,015	0,50	20,0-23,0	>58,00	8,0-10,0	Al 0,40	Fe 5,0	Ti 0,40	Co 1,00	Nb 3,2-4,2			
660	A453	0,08	2,00	0,040	0,030	1,00	13,5-16,60	24,0-27,0	1,00-1,50	V 0,10-0,50	Ti 1,90-2,35	Al 0,35	B 0,001-0,010				
718	A1014	0,08	0,35	0,015	0,015	0,35	17,0-21,0	50,0-55,0	2,80-3,30	Cu 0,30	Cb+Ta 4,75-5,5	Al 0,20-0,80	B 0,006	Co 1,00	Fe bal.		Ti 0,65 – 1,15
2H	A194	0,40 min	1,00	0,040	0,050	0,40											
2HM	A194	0,40 min	1,00	0,040	0,050	0,40											
4L	A194	0,40-0,50	0,70-0,90	0,035	0,040	0,15-0,35											
7L	A194	0,37-0,49	0,65-1,10	0,035	0,04	0,15-0,35	0,75-1,20										
7M	A194	0,37-0,49	0,65-1,10	0,035	0,04	0,15-0,35	0,75-1,20										
8M	A194	0,08	2,00	0,045	0,030	1,00	16,0-18,0	10,0-14,00	2,0-3,0								
625	F467	0,10	0,50	0,015	0,015	0,50	20,0-23,0	>58,0	8,0-10,0	Al 0,40	Fe 5,0	Ti 0,40	Co 1,00	Nb 3,2-4,2			
Ti gr. 2	B348	0,08									Ti balance		Fe 0,30	O 0,25	H 0,015	N 0,03	Residual each/ total max 0,1/0,4
Ti gr. 5	B348	0,08								V 3,5-4,5	Ti balance	Al 5,5-6,75	Fe 4,00	O 0,20	H 0,015	N 0,05	Residual each/ total max 0,1/0,4

Note: Max values, if not range given

Stud Bolt Dimensions and Threads

Length

INCH

The length of the stud bolts, measured parallel to axis, is the distance from first thread to first thread. First thread is defined as the intersection of the major diameter of the thread with the base of the point.

METRIC

The length of the stud bolts, measured parallel to axis, is the distance from each stud bolt, including the point.

THREADS

Nominal size or diameter
INCH SERIES

1" and smaller
UNIFIED COARSE
THREAD SERIES CLASS
2A ASME B1.1 (UNC)

1 1/8" and larger
UNIFIED 8 THREAD
SERIES CLASS
2A ASME B1.1 (8-UN)

Nominal size or diameter
METRIC SERIES

M33 and smaller
METRIC COARSE THREAD
SERIES CLASS 6g ISO 68 /
ISO 965

M36 and larger
METRIC FINE AND
COARSE PITCH
THREADS CLASS 6g /
ISO 965

Length inch	Length inch	Tolerance mm
to 12	± 0,062	± 1,5748
over 12 to 18	± 0,125	± 3,175
Over 18	± 0,250	± 6,35



Heavy Hex Nuts ASME / ANSI B18.2

NOMINAL SIZE	NUMBER OF THREADS /INCH	WIDTH ACROSS FLATS		THICKNESS		WIDTH ACROSS CORNERS		WEIGHT OF 100 NUTS IN KG
		INCH	MM	INCH	MM	INCH	MM	
3/8"	16	11/16"	17.5	3/8"	9.1	3/4"	19.7	1.4
7/16"	14	3/4"	19.0	7/16"	10.7	7/8"	22	1.9
1/2"	13	7/8"	22.2	1/2"	12.3	1"	25.4	3.0
9/16"	12	15/16"	23.8	9/16"	13.9	1 1/16"	27	3.7
5/8"	11	1 1/16"	27.0	5/8"	15.5	1 1/4"	31.2	5.4
3/4"	10	1 1/4"	31.7	3/4"	18.7	1 3/8"	35.7	8.8
7/8"	9	1 7/16"	36.5	7/8"	21.8	1 5/8"	41.6	13.5
1"	8	1 5/8"	41.3	1"	25.0	1 7/8"	47.2	19.3
1 1/8"	8	1 13/16"	46.0	1 1/8"	28.2	2 1/16"	52	26.9
1 1/4"	8	2"	50.8	1 1/4"	31.0	2 1/4"	57.8	35.7
1 3/8"	8	2 3/16"	55.6	1 3/8"	34.1	2 1/2"	63.5	46.3
1 1/2"	8	2 3/8"	60.3	1 1/2"	37.3	2 3/4"	69.3	59.5
1 3/8"	8	2 9/16"	65.1	1 5/8"	40.5	2 15/16"	75	73.6
1 3/4"	8	2 3/4"	69.8	1 3/4"	43.6	3 1/16"	78.6	92.7
1 7/8"	8	2 15/16"	74.6	1 7/8"	46.8	3 3/8"	85.5	109.5
2"	8	3 1/8"	79.4	2"	50.0	3 9/16"	90	135.8
2 1/4"	8	3 1/2"	88.9	2 1/4"	56.0	3 15/16"	100	190.3
2 1/2"	8	3 7/8"	98.4	2 1/2"	62.3	4 3/8"	111.6	256.0
2 3/4"	8	4 1/4"	108	2 3/4"	70.0	4 7/8"	124.3	335.0
3"	8	4 5/8"	117.5	3"	76.2	5 3/8"	135.3	432.0
3 1/4"	8	5"	127	3 1/4"	80.9	5 3/4"	146.5	543.0
3 1/2"	8	5 3/8"	136.5	3 1/2"	87.3	6 3/16"	157.2	694.0
3 3/4"	8	5 3/4"	146	3 3/4"	93.7	6 5/8"	168.6	824.0
4"	8	6 1/8"	155.6	4"	100.0	7 1/16"	179.5	991.0



Threads and Surface Treatment

All studs are produced according to normal thread dimension. This means:

- Plain studs can be assembled with standard thread.
- Zinc plated (ZPL) studs can normally be assembled with standard threads/material, but it is important to consider the thickness of the zinc plating. To ensure a correct fit, please indicate when purchasing that the studs are to be used with standard threads.

- Hot Dip Galvanized (HDG) studs do not fit standard thread/material, as the zinc layer is too thick. For the Stud bolt to fit standard threads, it needs to be undercut before galvanized. This must be clearly specified on the order, or else standard bolts (oversized HDG) will be delivered.



Dimensions of stud bolt FOR ASME FLANGES RAISED FACE WELD NECK (R.F.W.N)

NOMINAL DIAMETER OF FLANGES	150 LBS			300 LBS			600 LBS			900 LBS			1500 LBS		
	No.	Diam of Stud	Length	No.	Diam of Stud	Length	No.	Diam of Stud	Length	No.	Diam of Stud	Length	No.	Diam of Stud	Length
½"	4	½" 12	2 ½" 60	4	½" 12	2 ¾" 70	4	½" 12	3 ¼" 85	4	¾" 20	4 ½" 110	4	¾" 20	4 ½" 115
¾"	4	½" 12	2 ¾" 70	4	⅝" 16	3 ¼" 80	4	⅝" 16	3 ¾" 100	4	¾" 20	4 ¾" 120	4	¾" 20	4 ¾" 120
1"	4	½" 12	2 ¾" 70	4	⅝" 16	3 ¼" 80	4	⅝" 16	3 ¾" 100	4	⅞" 22	5 ¼" 135	4	⅞" 22	5 ¼" 135
1 ¼"	4	½" 12	3" 80	4	⅝" 16	3 ½" 90	4	⅝" 16	4" 105	4	⅞" 22	5 ¼" 135	4	⅞" 22	5 ¼" 135
1 ½"	4	½" 12	3" 80	4	¾" 20	3 ¾" 100	4	¾" 20	4 ½" 115	4	1" 27	6" 155	4	1" 27	6" 155
2"	4	⅝" 16	3 ½" 90	8	⅝" 16	3 ¾" 110	8	⅝" 16	4 ½" 115	8	⅞" 22	6" 155	8	⅞" 22	6" 155
2 ½"	4	⅝" 16	3 ¾" 100	8	¾" 20	4 ¼" 110	8	¾" 20	5" 130	8	1" 27	6 ¾" 175	8	1" 27	6 ¾" 175
3"	4	⅝" 16	3 ¾" 100	8	¾" 20	4 ½" 110	8	¾" 20	5 ¼" 135	8	⅞" 22	6" 155	8	1 ⅛" 30	7 ½" 190
3 ½"	8	⅝" 16	3 ¾" 100	8	¾" 20	4 ½" 120	8	⅞" 22	5 ¾" 150						
4"	8	⅝" 16	3 ¾" 100	8	¾" 20	4 ¾" 125	8	⅞" 22	6" 155	8	1 ⅛" 30	7 ¼" 185	8	1 ¼" 33	8 ¼" 210
5"	8	¾" 20	4" 105	8	¾" 20	5" 130	8	1" 27	7" 185	8	1 ¼" 33	8" 210	8	1 ½" 39	10 ¼" 260
6"	8	¾" 20	4 ¼" 110	12	¾" 20	5" 130	12	1" 27	7 ¼" 190	12	1 ⅛" 30	8" 210	12	1 ⅜" 36	10 ¾" 275
8"	8	¾" 20	4 ½" 115	12	⅞" 22	5 ¾" 150	12	1 ⅛" 30	8" 205	12	1 ⅜" 36	9 ¼" 235	12	1 ⅝" 42	12" 305
10"	12	⅞" 22	5" 130	16	1" 27	6 ¾" 175	16	1 ¼" 33	9" 230	16	1 ⅜" 36	9 ¾" 250	12	1 ⅞" 48	14" 360
12"	12	⅞" 22	5" 130	16	1 ⅛" 30	7 ¼" 190	20	1 ¼" 33	9 ¼" 235	20	1 ⅜" 36	10 ½" 270	16	2" 52	15 ½" 390
14"	12	1" 27	5 ¾" 150	20	1 ⅛" 30	7 ½" 195	20	1 ⅜" 36	9 ¾" 250	20	1 ½" 39	11 ¼" 285	16	2 ¼" 56	16 ¾" 430

Dimensions of stud bolt

FOR ASME FLANGES RAISED FACE WELD NECK (R.F.W.N)

NOMINAL DIAMETER OF FLANGES	150 LBS			300 LBS			600 LBS			900 LBS			1500 LBS		
	No.	Diam of Stud	Length	No.	Diam of Stud	Length	No.	Diam of Stud	Length	No.	Diam of Stud	Length	No.	Diam of Stud	Length
16"	16	1"	5 ¾"	20	1 ¼"	8"	20	1 ½"	10 ½"	20	1 ⅝"	11 ¾"	16	2 ½"	18 ½"
		27	150		33	205		39	270		42	300		64	470
18"	16	1 ⅛"	6 ¼"	24	1 ¼"	8 ¾"	20	1 ⅝"	11 ¼"	20	1 ⅞"	13½"	16	2 ¾"	20 ¼"
		30	160		33	210		42	290		48	340		68	520
20"	20	1 ⅛"	6 ¾"	24	1 ¼"	8 ¾"	24	1 ⅝"	12"	20	2"	14 ½"	16	3"	22 ¼"
		30	175		33	225		42	305		52	370		76	570
22"	20	1 ¼"	7 ¼"	24	1 ¼"	9 ½"	24	1 ¾"	12¾"	20	2 ½"	18"	16	3 ½"	25 ¼"
		33	185		33	245		45	330						
24"	20	1 ¼"	7 ½"	24	1 ½"	9 ¾"	24	1 ⅞"	13 ½"	20	2 ½"	18"	16	3 ½"	25 ¼"
		33	190		39	250		48	340						
26"	24	1 ¼"	7 ¾"	28	1 ⅝"	10 ¾"	28	1 ⅞"	14"	28	2"	15"	28	2 ¼"	16"
		33	200		42	275		48	360						
30"	28	1 ¼"	8"	28	1 ¾"	12"	28	2"	15"	28	2 ½"	16¾"	28	2 ½"	16¾"
		33	205		45	310		52	385						
34"	32	1 ½"	8 ¾"	28	1 ⅞"	13"	28	2 ¼"	16"	28	2 ½"	16¾"	28	2 ½"	16¾"
		39	225		48	330		56	410						
36"	32	1 ½"	9"	32	2"	13 ¾"	28	2 ½"	16¾"	28	2 ½"	16¾"	28	2 ½"	16¾"
		39	230		52	350		64	425						
42"	36	1 ½"	9 ½"	36	2"	14 ¾"	28	2 ¾"	18 ½"	28	2 ¾"	18 ½"	28	2 ¾"	18 ½"
		39	245		52	380		68	470						

Dimensions of stud bolt FOR ASME FLANGES RING TYPE JOINT (R.T.J.)

NOMINAL DIAMETER OF FLANGES	150 LBS			300 LBS			600 LBS			900 LBS			1500 LBS		
	No.	Diam of Stud	Length	No.	Diam of Stud	Length	No.	Diam of Stud	Length	No.	Diam of Stud	Length	No.	Diam of Stud	Length
1/2"			2 1/2" 60	4	1/2" 12	3 1/4" 85	4	1/2" 12	3 1/4" 85	4	3/4" 20	4 1/2" 115	4	3/4" 20	4 1/2" 115
3/4"			2 3/4" 70	4	5/8" 16	3 3/4" 95	4	5/8" 16	3 3/4" 95	4	3/4" 20	4 3/4" 120	4	3/4" 20	4 3/4" 120
1"	4	1/2" 12	2 3/4" 70	4	5/8" 16	4" 105	4	5/8" 16	4" 105	4	7/8" 22	5 1/2" 140	4	7/8" 22	5 1/2" 140
1 1/4"	4	1/2" 12	3" 80	4	5/8" 16	4" 105	4	5/8" 16	4 1/4" 110	4	7/8" 22	5 1/2" 140	4	7/8" 22	5 1/2" 140
1 1/2"	4	1/2" 12	3" 80	4	3/4" 20	4 1/2" 115	4	3/4" 20	4 1/2" 115	4	1" 27	6" 155	4	1" 27	6" 155
2"	4	5/8" 16	3 1/2" 90	8	5/8" 16	4 1/2" 115	8	5/8" 16	4 3/4" 125	8	7/8" 22	6 1/4" 160	8	7/8" 22	6 1/4" 160
2 1/2"	4	5/8" 16	3 3/4" 100	8	3/4" 20	5" 130	8	3/4" 20	5 1/4" 135	8	1" 27	7" 180	8	1" 27	7" 180
3"	4	5/8" 16	3 3/4" 100	8	3/4" 20	5 1/4" 135	8	3/4" 20	5 1/2" 140	8	7/8" 22	6 1/4" 160	8	1 1/8" 30	7 3/4" 200
3 1/2"	8	5/8" 16	3 3/4" 100	8	3/4" 20	5 1/2" 140	8	7/8" 22	6" 155	8	1 1/8" 30	7 1/2" 190			
4"	8	5/8" 16	3 3/4" 100	8	3/4" 20	5 1/2" 140	8	7/8" 22	6 1/4" 160	8	1 1/8" 30	7 1/2" 190	8	1 1/4" 33	8 1/2" 215
5"	8	3/4" 20	4" 105	8	3/4" 20	5 3/4" 150	8	1" 27	7 1/4" 185	8	1 1/4" 33	8 1/4" 210	8	1 1/2" 39	10 1/2" 270
6"	8	3/4" 20	4 1/4" 110	12	3/4" 20	6" 155	12	1" 27	7 1/2" 190	12	1 1/8" 30	8 1/4" 210	12	1 3/8" 36	11 1/4" 285
8"	8	3/4" 20	4 1/2" 115	12	7/8" 22	6 1/2" 165	12	1 1/8" 30	8 1/4" 210	12	1 3/8" 36	9 1/2" 245	12	1 5/8" 42	12 1/2" 320
10"	12	7/8" 22	5" 130	16	7/8" 22	7 1/2" 190	16	1 1/4" 33	9 1/2" 235	16	1 3/8" 36	10" 255	12	1 7/8" 48	14 1/2" 370
12"	12	7/8" 22	5" 130	16	1" 27	8" 205	20	1 1/4" 33	9 1/2" 245	20	1 3/8" 36	10 3/4" 275	16	2" 52	16 1/4" 415
14"	12	1" 27	5 3/4" 150	20	1 1/8" 30	8 1/4" 210	20	1 3/8" 36	10" 255	20	1 1/2" 39	11 3/4" 300	16	2 1/4" 56	17 3/4" 450

Dimensions of stud bolt

FOR ASME FLANGES RING TYPE JOINT (R.T.J.)

NOMINAL DIAMETER OF FLANGES	150 LBS			300 LBS			600 LBS			900 LBS			1500 LBS		
	No.	Diam of Stud	Length	No.	Diam of Stud	Length	No.	Diam of Stud	Length	No.	Diam of Stud	Length	No.	Diam of Stud	Length
16"	16	1"	6 ½"	20	1 ⅛"	8 ¾"	20	1 ½"	10 ¾"	20	1 ⅝"	12 ¼"	16	2 ½"	19 ½"
		27	165		30	225		39	275		42	315		64	495
18"	16	1 ⅛"	7"	24	1 ¼"	9"	20	1 ⅝"	11 ½"	20	1 ⅞"	14"	16	2 ¾"	21 ¼"
		30	180		33	230		42	295		48	355		68	540
20"	20	1 ⅛"	7 ¼"	24	1 ¼"	9 ½"	24	1 ⅝"	12 ¼"	20	2"	15"	16	3"	23 ½"
		30	185		33	245		42	315		52	380		76	600
22"	20	1 ¼"	8"	24	1 ¼"	10 ½"	24	1 ¾"	13 ½"	20	2 ½"	19"	16	3 ½"	26 ¾"
		33	205		33	270		45	345						
24"	20	1 ¼"	8"	24	1 ½"	10 ¾"	24	1 ⅞"	14"	20	2 ½"	19"	16	3 ½"	26 ¾"
		33	205		39	275		48	355						
26"	24	1 ¼"	8 ½"	28	1 ⅝"	11 ¾"	28	1 ⅞"	14 ¾"	28	2"	15 ½"	28	2 ¼"	16 ¾"
		33	215		42	300		48	375						
30"	28	1 ¼"	8 ¾"	28	1 ¾"	13 ¼"	28	2"	15 ½"	28	2 ½"	17 ½"	28	2 ½"	17 ½"
		33	225		45	340		50	395						
34"	32	1 ½"	9 ¾"	28	1 ⅞"	14 ¼"	28	2 ¼"	16 ¾"	28	2 ½"	17 ½"	28	2 ½"	17 ½"
		39	250		48	365		56	430						
36"	32	1 ½"	10"	32	2"	15"	28	2 ½"	17 ½"	28	2 ½"	17 ½"	28	2 ½"	17 ½"
		39	225		52	380		64	445						
42"	36	1 ½"	10 ½"	36	2"	16"	28	2 ¾"	19 ½"	28	2 ¾"	19 ½"	28	2 ¾"	19 ½"
		39	270		52	410		68	500						



Marking

According to applicable production standard if not otherwise agreed. Normally including grade and manufacturers mark.

Certificates

Inspection documents according to EN 10204, ISO 10474 or ISO 16228 can be delivered on request.

If certificates are required, please specify clearly in the order. Requests for certificates after the items are produced cannot be guaranteed.

The different inspection document types are (acc. to EN 10204):

"Type 2.1" Declaration of compliance with the order

Document in which the manufacturer declares that the products supplied are in compliance with the requirements of the order, without inclusion of test results.



"Type 2.2" Test report

Document in which the manufacturer declares that the products supplied are in compliance with the requirements of the order and in which he supplies test results based on non-specific inspection.

"Type 3.1" Inspection certificate 3.1

Document issued by the manufacturer in which he declares that the products supplied are in compliance with the requirements of the order and in which he supplies test results.

The test unit and the tests to be carried out are defined by the product specification, the official regulation and corresponding rules and/or the order.

The document is validated by the manufacturer's authorized inspection representative, independent of the manufacturing department.

It shall be permissible for the manufacturer to transfer on to the inspection certificate 3.1 relevant test results obtained by specific inspection on primary or incoming products he uses, provided that the manufacturer operates traceability procedures and can provide the corresponding inspection documents required.

"Type 3.2" Inspection certificate 3.2

Document prepared by both the manufacturer's authorized inspection representative, independent of the manufacturing department and either the purchaser's authorized inspection representative or the inspector designated by the official regulations and in which they declare that the products supplied are in compliance with the requirements of the order and in which test results are supplied.

It shall be permissible for the manufacturer to transfer on to the inspection certificate 3.2 relevant test results obtained by specific inspection on primary or incoming products he uses, provided that the manufacturer operates traceability procedures and can provide the corresponding inspection documents required.



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