

## BOLTING UP TENSION AND TORQUE VALUES

CLAMP SIZE	PIPE SIZE	BOLT SIZE	RECOMMENDED BOLT TENSION RESIDUAL (kN)	MAXIMUM BOLT TENSION RESIDUAL (kN)	RECOMMENDED BOLT TORQUE $\mu=0,10$ (Nm)	MAXIMUM BOLT TORQUE $\mu=0,10$ (Nm)
1	1"	1/2"	8.3	12.4	20	29
1.5	1.5"	5/8"	22	33	59	87
2	2"	3/4"	24	36	57	83
B	2"	7/8"	47	69	163	241
3	3"	3/4"	34	49	79	116
C	3"	7/8"	47	69	163	241
4	4"	7/8"	47	69	163	241
D	4"	1"	63	92	225	327
5	5"	1"	63	92	225	327
E	6"	1"	63	92	225	327
6	6"	1-1/8"	81	119	351	517
F	6"	1-1/8"	81	119	351	517
XF	6"	1-1/4"	103	152	486	716
ZX	6"	1-1/4"	103	152	486	716
G	6"	1-3/8"	129	189	652	961
XG	6"	1-3/8"	129	189	652	961
8	8"	1-1/4"	103	152	486	716
X8	8"	1-3/8"	129	189	652	961
12M	12"	1-3/4"	220	324	1376	2013
X12M	12"	2"	295	435	2054	3024
14	14"	1-5/8"	187	275	1089	1604
X14	14"	1-5/8"	187	275	1089	1604
R	14"	1-7/8"	248	367	1558	2279
A-P	14"	2"	295	435	2054	3024
5P	14"	2-1/2"	478	703	4048	5961
16	16"	1-3/4"	220	324	1376	2013
X16	16"	1-3/4"	220	324	1376	2013
18	18"	1-7/8"	248	367	1558	2279
X18	18"	1-7/8"	248	367	1558	2279
U	18"	2-1/2"	478	703	4048	5961
20	20"	2"	295	435	2054	3024
X20	20"	2"	295	435	2054	3024
V	20"	2-1/4"	398	583	2690	4328
3V	20"	2-1/4"	398	583	2690	4328
5V	20"	2-1/2"	478	703	4048	5961
W	22"	2-1/4"	398	583	2690	4328
3W	22"	2-1/2"	478	703	4048	5961
24	24"	2-1/4"	398	583	2690	4328
X24	24"	2-1/4"	398	583	2690	4328
Y	24"	2-3/4"	505	802	4515	7182
3Y	24"	3-1/4"	833	1227	8963	12006
28	28"	3-1/4"	833	1227	8963	12006
30	30"	3-1/4"	833	1227	8963	12006
32	32"	3-1/4"	833	1227	8963	12006
34	34"	3-1/4"	833	1227	8963	12006
36	36"	3-1/4"	833	1227	8963	12006

## Note:

- Bolt material: ASTM A193 B7

- In case of friction coefficient different from 0,1 or different bolt material please contact our technical department

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1	1"	1/2"	1.87	2.79	14.8	21.4
1.5	1.5"	5/8"	4.95	7.42	43.5	64.2
2	2"	3/4"	5.40	8.09	42.1	61.3
B	2"	7/8"	10.6	15.5	120.3	177.9
3	3"	3/4"	7.64	11.02	58.3	85.6
C	3"	7/8"	10.6	15.5	120.3	177.9
4	4"	7/8"	10.6	15.5	120.3	177.9
D	4"	1"	14.2	20.7	166.1	241.3
5	5"	1"	14.2	20.7	166.1	241.3
E	6"	1"	14.2	20.7	166.1	241.3
6	6"	1-1/8"	18.2	26.8	259.0	381.5
F	6"	1-1/8"	18.2	26.8	259.0	381.5
XF	6"	1-1/4"	23.2	34.2	358.7	528.4
ZX	6"	1-1/4"	23.2	34.2	358.7	528.4
G	6"	1-3/8"	29.0	42.5	481.2	709.2
XG	6"	1-3/8"	29.0	42.5	481.2	709.2
8	8"	1-1/4"	23.2	34.2	358.7	528.4
X8	8"	1-3/8"	29.0	42.5	481.2	709.2
12M	12"	1-3/4"	49.5	72.8	1015.5	1485.6
X12M	12"	2"	66.3	97.8	1515.9	2231.7
14	14"	1-5/8"	42.0	61.8	803.7	1183.8
X14	14"	1-5/8"	42.0	61.8	803.7	1183.8
R	14"	1-7/8"	55.8	82.5	1149.8	1681.9
A-P	14"	2"	66.3	97.8	1515.9	2231.7
5P	14"	2-1/2"	107.5	158.0	2987.4	4399.2
16	16"	1-3/4"	49.5	72.8	1015.5	1485.6
X16	16"	1-3/4"	49.5	72.8	1015.5	1485.6
18	18"	1-7/8"	55.8	82.5	1149.8	1681.9
X18	18"	1-7/8"	55.8	82.5	1149.8	1681.9
U	18"	2-1/2"	107.5	158.0	2987.4	4399.2
20	20"	2"	66.3	97.8	1515.9	2231.7
X20	20"	2"	66.3	97.8	1515.9	2231.7
V	20"	2-1/4"	89.5	131.1	1985.2	3194.1
3V	20"	2-1/4"	89.5	131.1	1985.2	3194.1
5V	20"	2-1/2"	107.5	158.0	2987.4	4399.2
W	22"	2-1/4"	89.5	131.1	1985.2	3194.1
3W	22"	2-1/2"	107.5	158.0	2987.4	4399.2
24	24"	2-1/4"	89.5	131.1	1985.2	3194.1
X24	24"	2-1/4"	89.5	131.1	1985.2	3194.1
Y	24"	2-3/4"	113.5	180.3	3332.1	5300.3
3Y	24"	3-1/4"	187.3	275.8	6614.7	8860.4
28	28"	3-1/4"	187.3	275.8	6614.7	8860.4
30	30"	3-1/4"	187.3	275.8	6614.7	8860.4
32	32"	3-1/4"	187.3	275.8	6614.7	8860.4
34	34"	3-1/4"	187.3	275.8	6614.7	8860.4
36	36"	3-1/4"	187.3	275.8	6614.7	8860.4

## Note:

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