

Material	Tightening torque MA [Nm]											Preload force FV [N]
	M10	M12	M16	M20	M24	M27	M30	1 1/4-8UN	M33	M42	M56	
C35E - 1.1181	20											3.200
		30										5.200
			45									12.700
				100								22.600
					175							34.000
						280						42.500
34Cr4 - 1.7033		35										11.000
			85									26.200
				200								49.700
					350							71.600
						580						99.800
							700					125.400
								900				160.000
									1.960			255.500
21CrMoV5-7 - 1.7709			70									21.200
				175								37.600
					285							56.600
						440						81.000
							600					103.000
								750				130.000
X6CrNiMoTi17-22-2 - 1.4571; ASME SA-193 Gr. B8M, cl. 1	15											2.600
		25										4.300
			40									10.400
				85								18.500
					140							27.800
						250						39.600
42CrMo4 - 1.7225; ASME SA-193 Gr. B7 + B16		52										12.780
			100									35.400
				320								57.900
					400							70.600
						650						114.000
							850					101.000
								1.300				156.000
25CrMo4 - 1.7218			100									26.400
					320							63.000
						400						81.000

\* Lubricants Molykote/OKS280

The tightening torques, specified in the table for the prestressing forces, are mean values for oiled thread surfaces which are determined by experiments. It should be noted that by repeated tightening and other lubricants or surface treated threads, the tightening torques can be change. (Deviations of + / - 10% are possible).

On request, the torques are determined by experiments in our laboratory as a function of the biasing force (resulting from the kind and size of the seal) and the lubricant used by the pressure equipment manufacturer.