

PH4™ / PH6™ / CS® Torque table

PH4™ / PH6™ / CS® Torque Table | 1.050" TO 2 7/8"

SIZE (OD)	NOMINAL WEIGHT	WALL THICKNESS	NAME	SMYS OF STEEL GRADE	MAKE UP TORQUE		
					Minimum	Optimum	Maximum
in	lb/ft	in		ksi	ft.lb	ft.lb	ft.lb
1.050	1.20	0.113	CS	55	200	250	300
			CS	80	300	350	400
			CS	90	300	350	400
			CS	95	300	350	400
			CS	110	300	350	400
	1.50	0.154	CS	55	200	250	300
			CS	80	300	350	400
			CS	90	300	350	400
			CS	95	300	350	400
			CS	110	300	350	400
1.315	1.80	0.133	CS	55	300	350	400
			CS	80	400	450	500
			CS	90	400	450	500
			CS	95	400	450	500
			CS	110	400	450	500
	2.25	0.179	CS	55	300	350	400
			CS	80	400	450	500
			CS	90	400	450	500
			CS	95	400	450	500
			CS	110	400	450	500
1.660	2.40	0.140	CS	55	400	450	500
			CS	80	600	700	800
			CS	90	600	700	800
			CS	95	600	700	800
			CS	110	600	700	800
	3.02	0.191	CS	55	400	450	500
			CS	80	600	700	800
			CS	90	600	700	800
			CS	95	600	700	800
			CS	110	600	700	800
3.24	0.198	CS	55	400	450	500	
		CS	80	600	700	800	
		CS	90	600	700	800	
		CS	95	600	700	800	
		CS	110	600	700	800	
1.900	2.90	0.145	CS	55	600	700	800
			CS	80	800	900	1000
			CS	90	800	900	1000
			CS	95	800	900	1000
			CS	110	800	900	1000
	3.64	0.200	CS	55	600	700	800
			CS	80	800	900	1000
			CS	90	800	900	1000
			CS	95	800	900	1000
			CS	110	800	900	1000
4.19	0.219	CS	55	600	700	800	
		CS	80	800	900	1000	
		CS	90	800	900	1000	
		CS	95	800	900	1000	
		CS	110	800	900	1000	
2.063	3.25	0.156	CS	55	700	800	900
			CS	80	900	1000	1100
			CS	90	900	1000	1100
			CS	95	900	1000	1100
			CS	110	900	1000	1100
	4.50	0.225	CS	55	700	800	900
			CS	80	900	1000	1100
			CS	90	900	1000	1100
			CS	95	900	1000	1100
			CS	110	900	1000	1100
2 3/8	4.70	0.190	CS	55	1100	1250	1400
			CS	80	1500	1700	1900

SIZE (OD)	NOMINAL WEIGHT	WALL THICKNESS	NAME	SMYS OF STEEL GRADE	MAKE UP TORQUE		
					Minimum	Optimum	Maximum
in	lb/ft	in		ksi	ft.lb	ft.lb	ft.lb
2 3/8	4.70	0.190	CS	90	1500	1700	1900
			CS	95	1500	1700	1900
			CS	110	1500	1700	1900
			CS	55	1100	1250	1400
			CS	80	1500	1700	1900
	5.30	0.218	CS	90	1500	1700	1900
			CS	95	1500	1700	1900
			CS	110	1500	1700	1900
			CS	55	1100	1250	1400
			CS	80	1500	1700	1900
	5.95	0.254	PH-6	55	1800	2050	2300
			PH-6	80	2200	2500	2800
			PH-6	90	2400	2700	3000
			PH-6	95	2500	2800	3100
			PH-6	110	2700	3050	3400
	6.20	0.261	PH-6	55	1800	2050	2300
			PH-6	80	2200	2500	2800
			PH-6	90	2400	2700	3000
			PH-6	95	2500	2800	3100
			PH-6	110	2700	3050	3400
6.60	0.295	PH-6	55	1800	2050	2300	
		PH-6	80	2200	2500	2800	
		PH-6	90	2400	2700	3000	
		PH-6	95	2500	2800	3100	
		PH-6	110	2700	3050	3400	
7.70	0.336	PH-6	55	1800	2050	2300	
		PH-6	80	2200	2500	2800	
		PH-6	90	2400	2700	3000	
		PH-6	95	2500	2800	3100	
		PH-6	110	2700	3050	3400	
2 7/8	10.70	0.392	PH-6	55	3700	4150	4600
			PH-6	80	4500	5050	5600
			PH-6	90	4900	5500	6100
			PH-6	95	5100	5750	6400
			PH-6	110	5500	6200	6900
	11.00	0.405	PH-4	55	3800	4300	4800
			PH-4	80	5000	5650	6300
			PH-4	90	5600	6300	7000
			PH-4	95	5900	6650	7400
			PH-4	110	6500	7300	8100
	11.65	0.440	PH-4	55	3800	4300	4800
			PH-4	80	5000	5650	6300
			PH-4	90	5600	6300	7000
			PH-4	95	5900	6650	7400
			PH-4	110	6500	7300	8100
	6.50	0.217	CS	55	1500	1700	1900
			CS	80	2100	2350	2600
			CS	90	2100	2350	2600
			CS	95	2100	2350	2600
			CS	110	2100	2350	2600
7.90	0.276	PH-6	55	2600	2950	3300	
		PH-6	80	3000	3400	3800	
		PH-6	90	3200	3600	4000	
		PH-6	95	3300	3700	4100	
		PH-6	110	3500	3950	4400	
8.70	0.308	PH-6	55	2600	2950	3300	
		PH-6	80	3000	3400	3800	
		PH-6	90	3200	3600	4000	
		PH-6	95	3300	3700	4100	
		PH-6	110	3500	3950	4400	
9.50	0.340	PH-6	55	3700	4150	4600	
		PH-6	80	4500	5050	5600	
		PH-6	90	4900	5500	6100	
		PH-6	95	5100	5750	6400	
		PH-6	110	5500	6200	6900	

2 7/8" TO 5"

SIZE (OD)	NOMINAL WEIGHT	WALL THICKNESS	NAME	SMYS OF STEEL GRADE	MAKE UP TORQUE		
					Minimum	Optimum	Maximum
in	lb/ft	in		ksi	ft.lb	ft.lb	ft.lb
2 7/8	9.50	0.340	PH-6	110	5500	6200	6900
3 1/2	10.30	0.289	CS	55	2500	2800	3100
			CS	80	3000	3400	3800
			CS	90	3000	3400	3800
			CS	95	3000	3400	3800
			CS	110	3000	3400	3800
	12.95	0.375	PH-6	55	4300	4850	5400
			PH-6	80	5500	6200	6900
			PH-6	90	6100	6850	7600
			PH-6	95	6400	7200	8000
			PH-6	110	7000	7900	8800
14.30	0.430	PH-6	55	4300	4850	5400	
		PH-6	80	5500	6200	6900	
		PH-6	90	6100	6850	7600	
		PH-6	95	6400	7200	8000	
		PH-6	110	7000	7900	8800	
	15.80	0.476	PH-6	55	4300	4850	5400
			PH-6	80	5500	6200	6900
			PH-6	90	6100	6850	7600
			PH-6	95	6400	7200	8000
			PH-6	110	7000	7900	8800
16.70	0.510	PH-4	55	5800	6550	7300	
		PH-4	80	7500	8450	9400	
		PH-4	90	8300	9350	10400	
		PH-4	95	8700	9800	10900	
		PH-4	110	9500	10700	11900	
	17.05	0.530	PH-4	55	6300	7100	7900
			PH-4	80	8000	9000	10000
			PH-4	90	8800	9900	11000
			PH-4	95	9200	10350	11500
			PH-4	110	10000	11250	12500
9.20	0.254	CS	55	2500	2800	3100	
		CS	80	3000	3400	3800	
		CS	90	3000	3400	3800	
		CS	95	3000	3400	3800	
		CS	110	3000	3400	3800	
4	11.00	0.262	CS	55	3000	3400	3800
			CS	80	3500	3950	4400
			CS	90	3500	3950	4400
			CS	95	3500	3950	4400
			CS	110	3500	3950	4400
	13.40	0.330	PH-6	55	4300	4850	5400
			PH-6	80	5500	6200	6900
			PH-6	90	6100	6850	7600
			PH-6	95	6400	7200	8000
			PH-6	110	7000	7900	8800
	16.10	0.415	PH-6	55	4300	4850	5400
			PH-6	80	5500	6200	6900
			PH-6	90	6100	6850	7600
			PH-6	95	6400	7200	8000
			PH-6	110	7000	7900	8800
	19.00	0.500	PH-4	55	6800	7650	8500
			PH-4	80	8500	9550	10600
			PH-4	90	9300	10450	11600
			PH-4	95	9700	10900	12100
			PH-4	110	10500	11800	13100
21.10		0.562	PH-4	55	7300	8200	9100
			PH-4	80	9000	10150	11300
			PH-4	90	9800	11050	12300
			PH-4	95	10200	11500	12800
			PH-4	110	11000	12400	13800
22.50	0.610	PH-4	55	7800	8800	9800	

SIZE (OD)	NOMINAL WEIGHT	WALL THICKNESS	NAME	SMYS OF STEEL GRADE	MAKE UP TORQUE		
					Minimum	Optimum	Maximum
in	lb/ft	in		ksi	ft.lb	ft.lb	ft.lb
4	22.50	0.610	PH-4	80	9500	10700	11900
			PH-4	90	10300	11600	12900
			PH-4	95	10700	12050	13400
			PH-4	110	11500	12950	14400
4 1/2	12.75	0.271	CS	55	3500	3950	4400
			CS	80	4500	5050	5600
			CS	90	4500	5050	5600
			CS	95	4500	5050	5600
	13.50	0.290	CS	110	4500	5050	5600
			CS	55	3500	3950	4400
			CS	80	4500	5050	5600
			CS	90	4500	5050	5600
	15.50	0.337	CS	95	4500	5050	5600
			CS	110	4500	5050	5600
			PH-6	55	4800	5400	6000
			PH-6	80	6000	6750	7500
	17.00	0.380	PH-6	90	6600	7450	8300
			PH-6	95	6900	7750	8600
			PH-6	110	7500	8450	9400
			PH-6	55	5300	5950	6600
19.20	0.430	PH-6	80	6700	7550	8400	
		PH-6	90	7400	8350	9300	
		PH-6	95	7700	8650	9600	
		PH-6	110	8400	9450	10500	
21.60	0.500	PH-6	55	5800	6550	7300	
		PH-6	80	7500	8450	9400	
		PH-6	90	8300	9350	10400	
		PH-6	95	8700	9800	10900	
24.00	0.560	PH-6	110	9500	10700	11900	
		PH-4	55	7400	8350	9300	
		PH-4	80	9500	10700	11900	
		PH-4	90	10500	11800	13100	
26.50	0.630	PH-4	95	11000	12400	13800	
		PH-4	110	12000	13500	15000	
		PH-4	55	7500	8450	9400	
		PH-4	80	10000	11250	12500	
5	18.00	0.362	PH-4	90	11200	12600	14000
			PH-4	95	11800	13300	14800
			PH-4	110	13000	14650	16300
			PH-4	55	9000	10150	11300
20.30	0.408	PH-4	80	11500	12950	14400	
		PH-4	90	12700	14300	15900	
		PH-4	95	13300	14950	16600	
		PH-4	110	14500	16300	18100	
21.40	0.437	CS	55	5000	5650	6300	
		CS	80	6900	7750	8600	
		CS	90	7700	8650	9600	
		CS	95	8100	9100	10100	
23.20	0.478	CS	110	9200	10350	11500	
		CS	55	5200	5850	6500	
		CS	80	7100	8000	8900	
		CS	90	7900	8900	9900	
5	18.00	0.362	CS	95	8300	9350	10400
			CS	110	9400	10600	11800
			CS	55	5900	6650	7400
			CS	80	8000	9000	10000
20.30	0.408	CS	90	8900	10000	11100	
		CS	95	9400	10600	11800	
		CS	110	10600	11950	13300	
		CS	55	6900	7750	8600	
21.40	0.437	CS	80	9500	10700	11900	
		CS	90	10500	11800	13100	

5" TO 7"

SIZE (OD)	NOMINAL WEIGHT	WALL THICKNESS	NAME	SMYS OF STEEL GRADE	MAKE UP TORQUE			
					Minimum	Optimum	Maximum	
in	lb/ft	in		ksi	ft.lb	ft.lb	ft.lb	
5	23.20	0.478	CS	95	11000	12400	13800	
			CS	110	12500	14050	15600	
	24.10	0.500	CS	55	7000	7900	8800	
			CS	80	9600	10800	12000	
			CS	90	10600	11950	13300	
			CS	95	11100	12500	13900	
	27.00	0.560	CS	110	12600	14200	15800	
			CS	55	7300	8200	9100	
			CS	80	9900	11150	12400	
			CS	90	10900	12250	13600	
			CS	95	11400	12850	14300	
			CS	110	12900	14500	16100	
5 1/2	17.00	0.304	CS	55	4200	4750	5300	
			CS	80	5800	6550	7300	
			CS	90	6400	7200	8000	
			CS	95	6800	7650	8500	
			CS	110	7700	8650	9600	
	20.00	0.361	CS	55	6200	7000	7800	
			CS	80	8500	9550	10600	
			CS	90	9400	10600	11800	
			CS	95	9900	11150	12400	
			CS	110	11200	12600	14000	
	23.00	0.415	CS	55	6500	7300	8100	
			CS	80	8800	9900	11000	
			CS	90	9700	10900	12100	
			CS	95	10200	11500	12800	
			CS	110	11600	13050	14500	
	26.00	0.476	CS	55	8500	9550	10600	
			CS	80	11500	12950	14400	
			CS	90	12800	14400	16000	
			CS	95	13400	15100	16800	
			CS	110	15200	17100	19000	
	26.80	0.500	CS	55	8600	9700	10800	
			CS	80	11700	13150	14600	
			CS	90	12900	14500	16100	
			CS	95	13500	15200	16900	
			CS	110	15400	17350	19300	
	28.40	0.530	CS	55	8800	9900	11000	
			CS	80	11900	13400	14900	
			CS	90	13100	14750	16400	
			CS	95	13700	15400	17100	
			CS	110	15600	17550	19500	
	6 5/8	28.00	0.417	CS	55	9800	11050	12300
				CS	80	13600	15300	17000
				CS	90	15200	17100	19000
				CS	95	15900	17900	19900
		32.00	0.475	CS	110	18200	20600	23000
				CS	55	10300	11600	12900
CS				80	14100	15850	17600	
CS				90	15600	17550	19500	
33.00		0.500	CS	95	16400	18700	21000	
			CS	110	18700	20850	23000	
			CS	55	10500	11800	13100	
			CS	80	14300	16100	17900	
34.50		0.525	CS	90	15800	17800	19800	
			CS	95	16600	18800	21000	
			CS	110	18900	21450	24000	
			CS	55	10700	12050	13400	
			CS	80	14500	16300	18100	
			CS	90	16000	18000	20000	
			CS	95	16800	18900	21000	
			CS	110	19100	21550	24000	

SIZE (OD)	NOMINAL WEIGHT	WALL THICKNESS	NAME	SMYS OF STEEL GRADE	MAKE UP TORQUE		
					Minimum	Optimum	Maximum
in	lb/ft	in		ksi	ft.lb	ft.lb	ft.lb
7	29.00	0.408	CS	55	10800	12150	13500
			CS	80	15000	16900	18800
			CS	90	16800	18900	21000
			CS	95	17600	19800	22000
			CS	110	20000	22500	25000
	32.00	0.453	CS	55	11100	12500	13900
			CS	80	15400	17350	19300
			CS	90	17100	19050	21000
			CS	95	18000	20500	23000
			CS	110	21000	23500	26000
	35.00	0.498	CS	55	11500	12950	14400
			CS	80	15800	17800	19800
			CS	90	17500	19750	22000
			CS	95	18300	20650	23000
			CS	110	21000	23500	26000
	38.00	0.540	CS	55	14500	16300	18100
			CS	80	19900	22450	25000
			CS	90	22000	25000	28000
			CS	95	23000	26000	29000
			CS	110	27000	30500	34000
	41.00	0.590	CS	55	14900	16750	18600
			CS	80	20000	23000	26000
			CS	90	23000	26000	29000
			CS	95	24000	27000	30000
			CS	110	27000	30500	34000

- SMYS: Specified Minimum Yield Strength.
- Many factors influence torque application. A field target torque (optimum torque) mid-way between minimum and maximum is recommended.
- All CS® and CS-CB® connections of any given size are interchangeable.
- All PH6™ and PH6-CB™ connections of any given size are interchangeable.
- All PH4™ and PH4-CB™ connections of any given size are interchangeable.
- For other unlisted combinations of dimension and SMYS please contact premiumconnections@tenaris.com



For contact information, please visit
our website: www.tenaris.com