

SELECTION GUIDE

guideline values for tightening torques










The below guidelines for relations between bolt size, strength class and required torque levels are meant for guidance only. The required torque (and related: clamp force) shall be decided by the construction. The values in these tables do offer a comprehensive method to understand the functionality of the tool chosen, compared to bolt size and bolt head size.

VDI 2230*		STEEL				STAINLESS STEEL		
Strength classes		5.8	8.8	10,9	12,9	50	70	80
Bolt	Dimension of bolt head mm	Torque Nm	Torque Nm	Torque Nm	Torque Nm	Torque Nm	Torque Nm	Torque Nm
M1.6	-	0,11	0,17	0,24	0,29	0,10	0,20	-
M2	-	0,22	0,35	0,49	0,58	0,25	0,30	-
M2.2	-	0,29	0,46	0,64	0,77	-	-	-
M2.5	-	0,44	0,70	0,98	1,20	0,45	0,60	-
M3	-	0,77	1,20	1,70	2,10	1,00	1,10	-
M3.5	-	1,20	1,90	2,70	3,30	-	-	-
M4	7	1,9	2,9	4,1	4,9	0,9	2	2,7
M5	8	3,7	6	8,5	10	2	4	5,3
M6	10	6,4	10	14	17	3,2	7	9
M8	13	16	25	35	41	8	17	23
M10	17/16	31	49	69	83	16	33	45
M12	19/18	54	86	120	145	27	58	77
M14	22/21	86	135	190	230	43	93	124
M16	24	130	210	295	355	66	142	190
M18	27	180	290	405	485	93	198	265
M20	30	255	410	580	690	130	278	371
M22	32	345	550	780	930	174	374	499
M24	36	440	710	1000	1200	224	480	640
M27	41	650	1050	1500	1800	331	708	-
M30	46	880	1450	2000	2400	450	964	-
M33	50	1200	1900	2700	3250	609	-	-
M36	55	1550	2450	3450	4150	782	-	-

* These torque values are only guide lines and are calculated with friction factor 0,125.

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	M1,6	M2	M2,2	M2,5	M3	M3,5	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27 Bolt				
	0,17	0,35	0,46	0,70	1,20	1,90	2,9	6	10	25	49	86	135	210	290	410	550	710	1050 Nm				
YOKOTA IMPULSE WRENCHES shut-off																					4,5 - 210 (PAGE 24)		
YOKOTA IMPULSE WRENCHES non shut-off																						6 - 490 (PAGE 25)	
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YOKOTA BATTERY IMPULSE WRENCH shut-off																						8 - 35 (PAGE 20)	
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YOKOTA BATTERY SYSTEM WRENCH torque control angle monitoring																						7 - 60 (PAGE 18)	
YOKOTA ELECTRIC SYSTEM WRENCH torque control angle monitoring																						3 - 90 (PAGE 16)	
YOKOTA AIR SYSTEM WRENCH torque control																						4,3 - 600 (PAGE 14)	
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	M1,6	M2	M2,2	M2,5	M3	M3,5	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27 Bolt				
	0,17	0,35	0,46	0,70	1,20	1,90	2,9	6	10	25	49	86	135	210	290	410	550	710	1050 Nm				
RED ROOSTER BATTERY IMPACT WRENCHES shut-off																						6 - 120 (PAGE 32)	
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RED ROOSTER SHUT-OFF SCREW DRIVER straight/pistol/angle																						0,4 - 10 (PAGE 48)	
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RED ROOSTER CORDLESS shut-off angle nutrunner																						3 - 70 (PAGE 36)	