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Gap assembly value and torque for SYNTEC brass M12 – M63

				Tighten the lock nut by hand + 1/4 turn with open-ended spanner							
				Gap can be reached by hand							
				The lock nut is subject to rotation							
				4)	5)	6)	7)				
				Yes/No	Yes/No	Visually "tight", also complies with IP 68					
Model No.	Ø range	1) Cable types	2) Ø cable from – to (mm)	3) GAP from – to (mm)	8) from – to (Nm)	4)	5)	6)	7)	Comments	
M12	SZ 2411.800	3.0-7.0	Installation cable 1.5 mm ² SW Betatherm 145 2.5 mm ² 9887 TKD LIVCY 2x0.75 Paartronic-CY LIVCY TP 4x2x025	3.0 – 3.5	0.8 – 1.3	0.5 – 1.0	✓	No	Yes	✓	Open-ended spanner required
				3.5 – 5.0	1.0 – 1.5	0.5 – 1.5	✓	No	Yes	✓	Open-ended spanner required
				5.0 – 7.0	1.0 – 1.5	1.0 – 2.0	✓	No	Yes	✓	Open-ended spanner required
M16	SZ 2411.810	4.5-10.0	Helukabel L1YY 4x0.25 Helukabel CH CAN-Bus 2x2x0.22 Eurelectric Prysmian H07RN-F Helukabel L1YY 18059 Manufacturer? white 4x1.5	4.5 – 6.0	0.0 – 1.5	1.8 – 2.3	✓	No	Yes	✓	Open-ended spanner required
				6.0 – 8.0	1.0 – 2.0	2.0 – 2.5	✓	No	Yes	✓	Open-ended spanner required
				8.0 – 10.0	2.0 – 3.5	2.5 – 4.0	✓	No	Yes	✓	Open-ended spanner required
M20	SZ 2411.820	7.0-13.0	Helukabel LE R 4x0.75 Manufacturer? grey 19x0.1 mm ² NGMH11 YO G/PUR Eurelectric Prysmian H07RN-F Studer Betaflam 145 4G 2.5 Roflex orange 7x1.5 Nexans Rheyflex CH-JZ 12G 1.6	7.0 – 8.5	0.0 – 3.0	2.5 – 4.0	✓	No	Yes	✓	Open-ended spanner required
				8.5 – 10.0	2.5 – 4.0	3.5 – 5.0	✓	No	Yes	✓	Open-ended spanner required
				10.0 – 13.0	4.0 – 5.4	4.0 – 5.5	✓	No	Yes	✓	Open-ended spanner required
M25	SZ 2411.830	10.0-17.0	Roflex orange 4x1.5 Studer Roflex orange 7x1.5 Manufacturer? grey 7x1.5 Helukabel JZ-500 10024 Roflex orange 1x50 mm ²	10.0 – 12.5	1.5 – 3.5	4.0 – 5.5	✓	No	Yes	✓	Open-ended spanner required
				12.5 – 15.0	3.0 – 5.0	4.5 – 6.0	✓	No	Yes	✓	Open-ended spanner required
				15.0 – 17.0	4.0 – 5.5	6.0 – 8.5	✓	No	Yes	✓	Open-ended spanner required
M32	SZ 2411.840	13.0-21.0	DRAKAFLEX H07RN-F 5G 2.5 mm ² Helukabel 10024 42x0.5 mm ² Unlabelled cable Helukabel LIY-CY	13.0 – 16.0	1.5 – 3.0	10.0 – 14.0	✓	No	Yes	✓	Open-ended spanner required
				16.0 – 19.0	2.5 – 4.0	13.0 – 18.0	✓	No	Yes	✓	Open-ended spanner required
				19.0 – 21.0	4.0 – 5.5	17.0 – 20.0	✓	No	Yes	✓	Open-ended spanner required
M40	SZ 2411.850	19.0-28.0	Helukabel F-CY-JZ 50x1.0mm ² JZ-500 34 G 2.5 mm ² Lapp Kabel Ölflex NYSLYÖ Helukabel Topflex 611-C-PUR 4x16 mm ²	19.0 – 22.0	2.0 – 4.0	20.0 – 25.0	✓	No	Yes	✓	Open-ended spanner required
				22.0 – 25.0	3.5 – 5.0	22.0 – 30.0	✓	No	Yes	✓	Open-ended spanner required
				25.0 – 28.0	4.5 – 7.0	25.0 – 36.0	✓	No	Yes	✓	Open-ended spanner required
M50	SZ 2411.860	25.0-35.0	Lapp Kabel Ölflex NYSLYÖ Unlabelled cable Studer Cables 1 x 240/80 mm ² GKN JF Kabel	25.0 – 28.0	0.0 – 2.0	30.0 – 35.0	✓	No	Yes	✓	Open-ended spanner required
				28.0 – 32.0	2.0 – 4.0	31.0 – 36.0	✓	No	Yes	✓	Open-ended spanner required
				32.0 – 35.0	4.0 – 6.0	32.0 – 40.0	✓	No	Yes	✓	Open-ended spanner required
M63	SZ 2411.870	35.0-48.0	Unlabelled cable Betaflam FE180/E30 4x70/35 mm ² Unlabelled cable GKN KZ12	35.0 – 40.0	0.0 – 4.0	35.0 – 40.0	✓	No	Yes	✓	Open-ended spanner required
				40.0 – 44.0	3.5 – 6.0	36.0 – 42.0	✓	No	Yes	✓	Open-ended spanner required
				44.0 – 48.0	5.0 – 8.0	38.0 – 44.0	✓	No	Yes	✓	Open-ended spanner required

1) The listed types of cables were used to determine the gap and represent a selection of the large variety of cables.

2) The actual Ø of the cable must not be smaller than the smallest diameter of the cable gland specified. Select the appropriate gap range for the measured diameter of the cable to be inserted.

3)  Gap in mm: Depending on the quality, the filling degree and the properties of the cable sheathing, the gap values specified may deviate.

4) In this way, the lock nut was mounted in all tests. Tighten the lock nut by hand as far as possible and then tighten the nut a further 1/4 turn by using an open-ended spanner (tighter would be possible). Excessive torque or damages of the lock nut were not found.

5) The nut can be tightened by hand with thumb and index finger (two-handed) up to the preset range of the gap.



6) The lock nut is expected to rotate when the pressure nut is tightened up to the gap.

7) The visually perceived tightness meets the requirements to IP68.

8) Torque at specified gap (Note: Large dispersion due to great variety of tightening torques).



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