

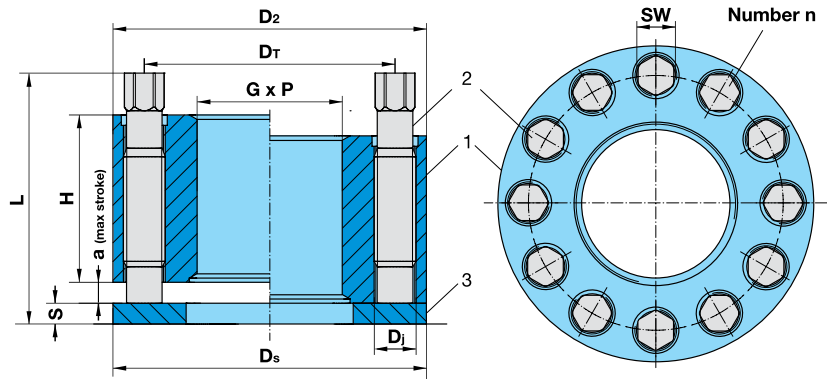


## Multiple Stud Nut Standard version (ST) Axial Bolt Tensioning using torque

### Standard version (ST)

SCHAAF MSN type series ST are designed for applications without extreme loads.

- Nut body (1)
- Pressing bolt (2)
- Disc (3)



Parts-No.	Description	Nut body				Pressing bolt				Disc		Height total L	Pretensioning force	
		G x P	D2	H	DTr	Dj	n	SW	a	Ds	S		Fnom	Fmax
		mm	mm	mm	mm	mm		mm	mm	mm	mm	mm	kN	kN
B60000100	MSN-ST/M16x2	M16 x 2	34	16	25	M6 x 0.75	4	5	6	32	3	33	73	94
B60000200	MSN-ST/M20x2.5	M20 x 2.5	38	16	29	M6 x 0.75	6	5	6	38	4	34	110	140
B60000300	MSN-ST/M22x2.5	M22 x 2.5	41	16	31	M6 x 0.75	6	5	6	41	4	34	110	140
B60000400	MSN-ST/M24x3	M24 x 3	44	16	33	M6 x 0.75	8	5	6	43	4	34	145	187
B60000500	MSN-ST/M27x3	M27 x 3	50	24	39	M8 x 1	6	6	6	50	5	45	214	285
B60000600	MSN-ST/M30x3.5	M30 x 3.5	53	24	42	M8 x 1	6	6	6	53	5	45	214	285
B60000700	MSN-ST/M33x3.5	M33 x 3.5	59	24	45	M8 x 1	8	6	6	59	5	45	285	380
B60000800	MSN-ST/M36x4	M36 x 4	66	32	51	M10 x 1.25	6	8	8	66	5	58	343	457
B60000900	MSN-ST/M39x4	M39 x 4	70	32	54	M10 x 1.25	8	8	8	70	5	58	457	610
B60001000	MSN-ST/M42x4.5	M42 x 4.5	75	32	57	M10 x 1.25	8	8	8	73	5	58	457	610
B60001100	MSN-ST/M45x4.5	M45 x 4.5	83	38	63	M12 x 1.25	8	10	10	81	6	68	700	935
B60001200	MSN-ST/M48x5	M48 x 5	85	38	66	M12 x 1.25	8	10	10	85	6	68	700	935
B60001300	MSN-ST/M52x5	M52 x 5	91	38	70	M12 x 1.25	8	10	10	90	6	68	700	935
B60001400	MSN-ST/M56x5.5	M56 x 5.5	98	38	74	M12 x 1.25	10	10	10	94	6	68	875	1160
B60001500	MSN-ST/M60x5.5	M60 x 5.5	102	38	78	M12 x 1.25	10	10	10	100	6	68	875	1160
B60001600	MSN-ST/M64x6	M64 x 6	113	53	87	M16 x 1.5	8	14	12	112	8	92	1270	1690
B60001700	MSN-ST/M68x6	M68 x 6	117	53	91	M16 x 1.5	8	14	12	117	8	92	1270	1690
B60001800	MSN-ST/M72x6	M72 x 6	120	56	95	M16 x 1.5	8	14	9	120	8	92	1270	1690
B60001900	MSN-ST/M76x6	M76 x 6	132	56	100	M16 x 1.5	12	14	9	127	8	92	1900	2530
B60002000	MSN-ST/M80x6	M80 x 6	132	56	103	M16 x 1.5	12	14	9	127	8	92	1900	2530
B60002100	MSN-ST/M85x6	M85 x 6	137	56	108	M16 x 1.5	12	14	9	137	8	92	1900	2530
B60002200	MSN-ST/M90x6	M90 x 6	145	59	113	M16 x 1.5	16	14	13	137	8	99	2530	3380
B60002300	MSN-ST/M100x6	M100 x 6	157	61	123	M16 x 1.5	16	14	11	151	10	101	2530	3380
B60002400	MSN-ST/M110x6	M110 x 6	177	79	139	M20 x 1.5	12	17	16	172	10	125	3150	4200
B60002500	MSN-ST/M120x6	M120 x 6	189	81	149	M20 x 1.5	16	17	14	179	10	125	4200	5600
B60002600	MSN-ST/M125x6	M125 x 6	194	81	154	M20 x 1.5	16	17	14	190	10	125	4200	5600
B60002700	MSN-ST/M130x6	M130 x 6	205	94	159	M20 x 1.5	18	17	16	202	10	140	4700	6300
B60002800	MSN-ST/M140x6	M140 x 6	215	94	169	M20 x 1.5	20	17	16	215	10	140	5250	7000
B60002900	MSN-ST/M150x6	M150 x 6	225	94	179	M20 x 1.5	20	17	16	225	12	142	5250	7000
B60003000	MSN-ST/M160x6	M160 x 6	234	107	189	M20 x 1.5	24	17	23	234	12	162	6300	8400

#### Further accessories for SCHAAF MSN

- torque wrench, analogue and digital
- electric torque screwdriver
- hydraulic torque screwdriver
- pneumatic torque screwdriver
- hexagonal nuts

#### Complete solution from SCHAAF

Maximum values for F<sub>max</sub> are valid for permanent bolting connections including operating loads. Any other designs, no matter if regarding materials, surface finishes or fine thread flank leads, are possible due to our own construction department and manufacture.

[www.schaaf-gmbh.com](http://www.schaaf-gmbh.com)

Visit us on the internet and convince yourself of our innovative services and products.

SCHAAF has been developing and manufacturing high-pressure hydraulic tools since 1954.



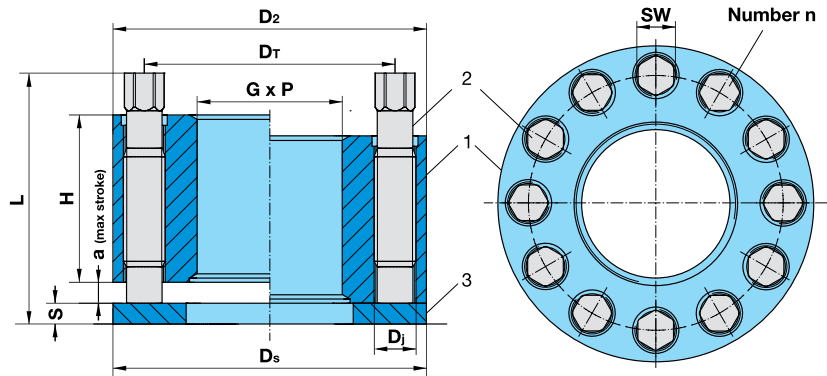


## Multiple Stud Nut High-strength version (HS) Axial Bolt Tensioning using torque

### High-strength version (HS)

SCHAAF MSN type series HS are produced with high-strength tempering steel for extreme loads.

- Nut body (1)
- Pressing bolt (2)
- Disc (3)



Parts-No.	Description	Nut body				Pressing bolt				Disc		Height total L	Pretensioning force	
		G x P mm	D2 mm	H mm	DTr mm	Dj mm	n	SW mm	a mm	Ds mm	S mm		Fnom kN	Fmax kN
B60010100	MSN-HS/M16x2	M16 x 2	34	16	25	M6 x 0.75	6	5	6	32	3	33	110	140
B60010200	MSN-HS/M20x2.5	M20 x 2.5	38	17	29	M6 x 0.75	8	5	5	38	4	34	145	185
B60010300	MSN-HS/M22x2.5	M22 x 2.5	41	17	31	M6 x 0.75	8	5	5	41	4	34	145	185
B60010400	MSN-HS/M24x3	M24 x 3	47	24	36	M8 x 1	6	6	6	47	4	44	215	285
B60010500	MSN-HS/M27x3	M27 x 3	51	24	39	M8 x 1	8	6	6	50	5	45	285	380
B60010600	MSN-HS/M30x3.5	M30 x 3.5	54	24	42	M8 x 1	8	6	6	53	5	45	285	380
B60010700	MSN-HS/M33x3.5	M33 x 3.5	63	32	48	M10 x 1.25	8	8	8	63	5	58	455	610
B60010800	MSN-HS/M36x4	M36 x 4	66	32	51	M10 x 1.25	8	8	8	66	5	58	455	610
B60010900	MSN-HS/M39x4	M39 x 4	72	32	54	M10 x 1.25	10	8	8	70	5	58	570	760
B60011000	MSN-HS/M42x4.5	M42 x 4.5	76	32	57	M10 x 1.25	12	8	8	73	5	58	685	915
B60011100	MSN-HS/M45x4.5	M45 x 4.5	84	38	63	M12 x 1.25	10	10	10	81	6	68	875	1170
B60011200	MSN-HS/M48x5	M48 x 5	85	38	66	M12 x 1.25	10	10	10	85	6	68	875	1170
B60011300	MSN-HS/M52x5	M52 x 5	94	38	70	M12 x 1.25	12	10	10	90	6	68	1050	1400
B60011400	MSN-HS/M56x5.5	M56 x 5.5	98	38	74	M12 x 1.25	12	10	10	94	6	68	1050	1400
B60011500	MSN-HS/M60x5.5	M60 x 5.5	109	59	83	M16 x 1.5	10	14	13	106	8	99	1580	2100
B60011600	MSN-HS/M64x6	M64 x 6	113	59	87	M16 x 1.5	10	14	13	112	8	99	1580	2100
B60011700	MSN-HS/M68x6	M68 x 6	117	59	91	M16 x 1.5	12	14	13	117	8	99	1900	2530
B60011800	MSN-HS/M72x6	M72 x 6	121	59	95	M16 x 1.5	12	14	13	120	8	99	1900	2530
B60011900	MSN-HS/M76x6	M76 x 6	132	61	102	M16 x 1.5	16	14	11	127	8	99	2530	3370
B60012000	MSN-HS/M80x6	M80 x 6	133	61	103	M16 x 1.5	16	14	11	127	8	99	2530	3370
B60012100	MSN-HS/M85x6	M85 x 6	139	61	108	M16 x 1.5	16	14	11	137	8	99	2530	3370
B60012200	MSN-HS/M90x6	M90 x 6	158	81	119	M20 x 1.5	12	17	14	151	10	125	3150	4200
B60012300	MSN-HS/M100x6	M100 x 6	168	81	129	M20 x 1.5	14	17	14	160	10	125	3670	4900
B60012400	MSN-HS/M110x6	M110 x 6	178	81	139	M20 x 1.5	16	17	14	172	10	125	4200	5600
B60012500	MSN-HS/M120x6	M120 x 6	189	81	149	M20 x 1.5	18	17	14	179	10	125	4700	6300
B60012600	MSN-HS/M125x6	M125 x 6	194	81	154	M20 x 1.5	18	17	14	190	10	125	4700	6300
B60012700	MSN-HS/M130x6	M130 x 6	205	94	159	M20 x 1.5	20	17	16	202	10	140	5250	7000
B60012800	MSN-HS/M140x6	M140 x 6	215	94	169	M20 x 1.5	22	17	16	215	10	140	5750	7700
B60012900	MSN-HS/M150x6	M150 x 6	225	94	179	M20 x 1.5	22	17	16	225	12	142	5750	7700
B60013000	MSN-HS/M160x6	M160 x 6	235	107	189	M20 x 1.5	24	17	23	234	12	162	6300	8400

#### Further accessories for SCHAAF MSN

- torque wrench, analogue and digital
- electric torque screwdriver
- hydraulic torque screwdriver
- pneumatic torque screwdriver
- hexagonal nuts

#### Complete solution from SCHAAF

Maximum values for F<sub>max</sub> are valid for permanent bolting connections including operating loads. Any other designs, no matter if regarding materials, surface finishes or fine thread flank leads, are possible due to our own construction department and manufacture.

[www.schaaf-gmbh.com](http://www.schaaf-gmbh.com)

Visit us on the internet and convince yourself of our innovative services and products.

**SCHAAF has been developing and manufacturing high-pressure hydraulic tools since 1954.**

