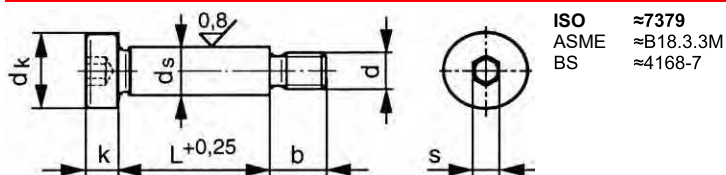


Hexagon socket head shoulder screw f9

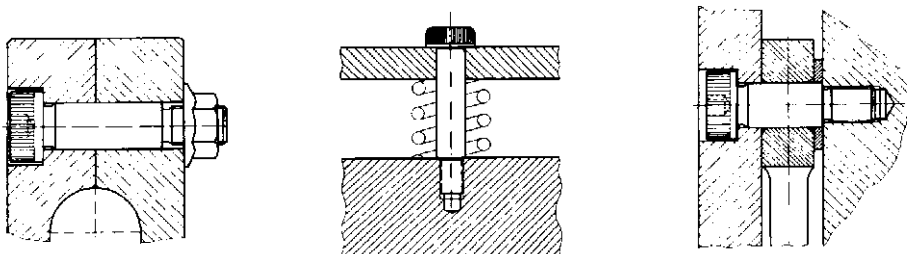


Technical Data

d	Tolerance f9 (min.)	Tolerance f9 (max.)	b	d _k (max.)	d _s (nom.)	k (max.)	P	s
M5	5.960	5.990	9.5	10.22	6	4.5	0.8	3
M6	7.951	7.987	11	13.27	8	5.5	1	4
M8	9.951	9.987	13	16.27	10	7	1.25	5
M10	11.941	11.984	16	18.27	12	9	1.5	6
M12	15.941	15.984	18	24.33	16	11	1.75	8
M16	19.928	19.980	22	30.33	20	14	2	10
M20	23.928	23.980	27	36.39	24	16	2.5	12

- Due to the unfavourable geometry of the head, these fasteners do have reduced loadability.
- When steel fasteners (e.g. 8.8 / 10.9 / 12.9) with reduced loadability needs to be marked, the marking symbol for the property class is preceded by the digit '0'. So 8.8 → 08.8 and 10.9 → 010.9 and 12.9 → 012.9.
- For the stainless steel fasteners it is indicated by only marking the steel grade and by leaving out the property class 70 (e.g. A2-70 → A2).
- The former and the new indications can occur side by side for some time.

Example of application



Materials

Thread	Driving features	Material	Class
M	Hexagon socket	St	012.9
M	Hexagon socket	St.St. A2	

Hexagon socket head shoulder screw f9

Thread	Metric thread
Material	Steel
Class	012.9



(d) d _s x L		(d) d _s x L		(d) d _s x L	
M5 6X6	50	M6 8X45	50	M10 12X12	25
M5 6X8	50	M6 8X50	50	M10 12X16	25
M5 6X10	50	M6 8X60	50	M10 12X20	25
M5 6X12	50	M6 8X70	50	M10 12X25	25
M5 6X16	50			M10 12X30	25
M5 6X20	50	M8 10X10	50	M10 12X35	25
M5 6X25	50	M8 10X12	50	M10 12X40	25
M5 6X30	50	M8 10X16	50	M10 12X45	25
M5 6X35	50	M8 10X20	50	M10 12X50	25
M5 6X40	50	M8 10X25	50	M10 12X55	25
M5 6X45	50	M8 10X30	50	M10 12X60	25
M5 6X50	50	M8 10X35	50	M10 12X70	25
		M8 10X40	50	M10 12X80	25
M6 8X8	50	M8 10X45	50	M10 12X90	25
M6 8X10	50	M8 10X50	50	M10 12X100	25
M6 8X12	50	M8 10X55	50	M10 12X120	25
M6 8X16	50	M8 10X60	50		
M6 8X20	50	M8 10X70	50		
M6 8X25	50	M8 10X80	50	M12 16X20	25
M6 8X30	50	M8 10X90	50	M12 16X25	25
M6 8X35	50	M8 10X100	25	M12 16X30	25
M6 8X40	50	M8 10X120	25	M12 16X35	25

(d) d _s x L		(d) d _s x L		(d) d _s x L	
M12 16X40	25	M16 20X30	10	M16 20X120	10
M12 16X45	25	M16 20X35	10		
M12 16X50	25	M16 20X40	10	M20 24X50	5
M12 16X55	25	M16 20X45	10	M20 24X55	5
M12 16X60	25	M16 20X50	10	M20 24X60	5
M12 16X70	25	M16 20X55	10	M20 24X70	5
M12 16X80	25	M16 20X60	10	M20 24X80	5
M12 16X90	25	M16 20X70	10	M20 24X90	5
M12 16X100	25	M16 20X80	10	M20 24X100	5
M12 16X120	25	M16 20X90	10	M20 24X120	5
		M16 20X100	10		

- Warning: electro-galvanizing of these products may cause hydrogen embrittlement.

Hexagon socket head shoulder screw f9

Thread Metric thread
Material Stainless steel A2



(d) d _s x L		(d) d _s x L		(d) d _s x L	
(M5)6X10	10	(M8)10X20	10	(M10)12X80	5
(M5)6X12	10	(M8)10X25	10	(M10)12X100	5
(M5)6X16	10	(M8)10X30	10		
(M5)6X20	10	(M8)10X40	10	(M12)16X30	5
(M5)6X25	10	(M8)10X50	10	(M12)16X40	5
(M5)6X30	10	(M8)10X60	10	(M12)16X50	5
(M5)6X40	10	(M8)10X70	10	(M12)16X60	5
		(M8)10X80	10	(M12)16X70	5
(M6)8X12	10			(M12)16X80	5
(M6)8X16	10	(M10)12X16	5	(M12)16X100	5
(M6)8X20	10	(M10)12X20	5		
(M6)8X25	10	(M10)12X25	5	(M16)20X40	3
(M6)8X30	10	(M10)12X30	5	(M16)20X50	3
(M6)8X40	10	(M10)12X40	5	(M16)20X60	3
(M6)8X50	10	(M10)12X50	5	(M16)20X70	3
		(M10)12X60	5	(M16)20X80	3
(M8)10X16	10	(M10)12X70	5		