

# HEXAGON SOCKET HEAD CAP SCREWS

# HEXAGON SOCKET HEAD CAP SCREWS / SPRING WASHERS

**RoHS** **LB** (With loosening prevention treatment)

Loosening prevention treatment  
Anti-loosening

SCM435  
 38 ~ 43HRC  
 (JIS B 1176 Strength class)  
 (JIS B 0205 Grade 2 12.9)

**RoHS** **SCB** (Stainless steel)

SUSXM7  
 JIS B 1176  
 ※Strength class A2-70

ℓ	Catalog No.	Base unit price	ℓ	Catalog No.	Base unit price
New JIS	Type M-L	1~49 pcs, 50~200	New JIS	Type M-L	1~49 pcs, 50~200
Full Thread	LB 4-8		Full Thread	LB 8-15	
	10			20	
	12			25	
	15			30	
	20			35	
20	LB 5-10	Quotation	28	LB 10-20	Quotation
25			50		
30			55		
35			60		
40			60		
Full Thread	LB 6-10		Full Thread	LB 12-25	
	15			30	
	20			35	
	25			40	
	30			45	
Full Thread	32		Full Thread	36	
	35			50	
	40			55	
	45			60	
	50				

ℓ	Catalog No.	Base unit price	ℓ	Catalog No.	Base unit price
Type M-L	*Less than Qty. *More than Qty.	*Qty.	Type M-L	*Less than Qty. *More than Qty.	*Qty.
Full thread	SCB 2.5-5		Full thread	SCB 6-10	
	8			12	
	10			15	
	15			20	
	20			25	
Full thread	SCB 2.6-5		Full thread	SCB 8-15	
	8			20	
	10			25	
	15			30	
	20			35	
Full thread	SCB 3-6		Full thread	SCB 10-15	
	8			20	
	10			25	
	15			30	
	20			35	
Full thread	SCB 4-6		Full thread	SCB 12-25	
	8			30	
	10			35	
	15			40	
	20			45	
Full thread	SCB 5-8		Full thread	36	
	10			50	
	12			55	
	15			60	
	20				

M×P	A	E	B
2.5×0.45	4.5	2.5	2
2.6×0.45	4.5	2.5	2
3×0.5	5.5	3	2.5
4×0.7	7	4	3
5×0.8	8.5	5	4
6×1.0	10	6	5
8×1.25	13	8	6
10×1.5	16	10	8
12×1.75	18	12	10

Reference: Dimensions of counterbore and bolt holes for hexagon socket head cap screws P.1641

Reference: Thread shear strength data P.1645

Order  
**Catalog No.**  
 LB 10-20  
 SCB 5-25

Days to Ship **Quotation**

Price **Quotation**

**ex** Example

Spring washer  
CBW P.812

※“Strength class” indicates the tensile strength of the threads.  
 Example: 12.9 (CB3~20, LB)  
 — Indicates that the yield point or the minimum proof strength is 90% of the tensile strength.  
 — Indicates that the minimum tensile strength is 1220N/mm<sup>2</sup> (124kgf/mm<sup>2</sup>).  
 10.9 (CB24)  
 — Indicates that the yield point or the minimum proof strength is 90% of the tensile strength.  
 — Indicates that the minimum tensile strength is 980N/mm<sup>2</sup> (100kgf/mm<sup>2</sup>).  
 A2-70 (SCB)  
 — Indicates that the minimum tensile strength is 700N/mm<sup>2</sup> (71.4kgf/mm<sup>2</sup>).  
 — Steel class A2 (Austenitic stainless steel)

- Ⓢ (Loosening prevention treatment)  
 A special resin with excellent elasticity, wear resistance, and oil resistance is applied to the thread grooves.  
 The effectiveness of the treatment is greatest at the initial use. In the case of repeated use, the effectiveness gradually diminishes beginning from the fourth use.
- Ⓢ Loosening prevention treatment is applied to LB only.

**RoHS** **FB** (Conventional type)  
**FBJ** (JIS type)

SCM435  
 32~38HRC  
 Black oxide (Fe<sub>3</sub>O<sub>4</sub>)  
 (JIS B 0205 Grade 2)  
 (Strength class 10.9)

■ Conventional type (space-saving E dimension specification)

M×P	A	E	B	ℓ	Catalog No.	Base unit price	*Qty.
Type M-L	min.   max.	min.   max.			Type M-L	*Less than Qty. *More than Qty.	
4X0.7	7.64   8.00	2.16   2.30	2.5	Full thread	FB 4-10	Quotation	200
					15		
					20		
					25		
					30		
5X0.8	9.64   10.00	2.66   2.80	3.0	Full thread	FB 5-10	Quotation	100
					12		
					15		
					20		
					25		
6X1.0	11.57   12.00	3.12   3.30	4.0	Full thread	FB 6-10	Quotation	100
					12		
					15		
					20		
					25		
8X1.25	15.57   16.00	4.22   4.40	5.0	Full thread	FB 8-15	Quotation	100
					20		
					25		
					30		
					35		
10X1.5	19.48   20.00	5.32   5.50	6.0	Full thread	FB 10-20	Quotation	100
					25		
					30		
					35		
					40		

■ JIS type

M×P	A	E	B	ℓ	Catalog No.	Base unit price	*Qty.
Type M-L	min.   max.	min.   max.			Type M-L	*Less than Qty. *More than Qty.	
4X0.7	7.53   8.96	2.23   2.48	2.5	Full thread	FBJ 4-10	Quotation	200
					15		
					20		
					25		
					30		
5X0.8	9.43   11.20	2.80   3.10	3.0	Full thread	FBJ 5-10	Quotation	100
					12		
					15		
					16		
					20		
6X1.0	11.34   13.44	3.30   3.72	4.0	Full thread	FBJ 6-10	Quotation	100
					12		
					15		
					16		
					20		
8X1.25	15.24   17.92	4.40   4.96	5.0	Full thread	FBJ 8-15	Quotation	100
					20		
					25		
					30		
					35		
10X1.5	19.22   22.40	5.50   6.20	6.0	Full thread	FBJ 10-20	Quotation	100
					25		
					30		
					40		
					50		

Ⓢ FB conform to the SSS (Japan Socket Screw Industry Cooperative Society) standards. (Previously there were no JIS standards for hexagon socket head cap screws, and this society created standards on its own.)  
 Ⓢ FBJ conforms to JIS standard JIS B 1194 (2000). (JIS standards were first created in 2000.)  
 Ⓢ In JIS only the max. for E dimension is listed.  
 Ⓢ With this type, the E dimension is shorter than the JIS standard.

**RoHS** **CBW** (Spring washer)

SWRH  
 42 ~ 50HRC

d	(D)	(h)	t	Catalog No.	Base unit price	Volume discount unit price
Type	No.	1~49 pcs	50~199/200~499	500-1000		
3.1	5.6	2.0	1	3	Quotation	
4.1	7	2.4	1.2	4		
5.1	8.8	3.2	1.6	5		
6.1	9.9	3.2	1.6	6		
8.1	12.7	4	2	8		
10.2	16	5	2.5	10		
12.2	18	5	2.5	12		
16.2	24.4	7	3.5	16		
20.2	30.6	9	4.5	20		
24.5	35.9	10	5	24		

(D):max. (h):min.

Order  
**Catalog No.**  
 FB 5-10  
 FBJ 8-20  
 CBW 10

Days to Ship **Quotation**

**ex** Example

Can be used without enlarging the size of the bolt head counterbore.

CBW