

Note that, for some of the types shown here, order might be unable to be received by the MISUMI Thailand, Malaysia, Indonesia, and/or India offices.

# Hex Socket Head Cap Screws

Steel (Available in Box)

# Hex Socket Head Cap Screws

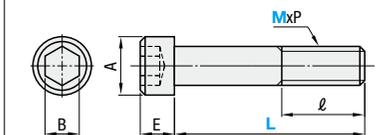
Steel (Available in Single item)



Box package is cost-saving for in-house stock or when large quantities are needed.

Type	Material	Surface Treatment	Hardness
BOX-CBF	SCM435	Black Oxide	38~43HRC

Strength Class 12.9



MxP (Coarse)	A	E	B
2 x0.4	3.8	2	1.5
2.5x0.45	4.5	2.5	2
2.6x0.45	4.5	2.6	2
3 x0.5	5.5	3	2.5
4 x0.7	7	4	3
5 x0.8	8.5	5	4
6 x1.0	10	6	5
8 x1.25	13	8	6
10 x1.5	16	10	8

Can be ordered as a separate item. P172

\*The strength class signifies the screw's tensile strength.

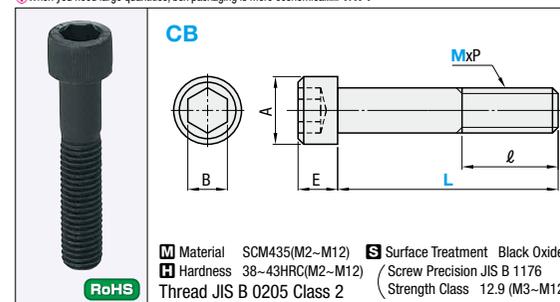
(Ex.) 12.9  
 This indicates that the minimum value for yielding point or proof stress is 90% of tensile strength.  
 This indicates that the minimum value of tensile strength is 1220N/mm<sup>2</sup>.

Please specify in box quantity when ordering. One box is shipped for an order of 1.

Ordering Example  
 Part Number  
**BOX-CBF3-6**

ℓ	Part Number		Unit Price 1~50 boxes		Pcs./Box				
	Type	M-L	Price per pkg.	1 Box					
16	Studs - Fully Threaded	BOX-CBF	2- 5		1,000 pcs./box				
			8						
			10						
			12						
			15						
			2.5- 5						
			8						
			10						
			2.6- 5						
			8						
			10						
			3- 5						
			6						
			8						
			10						
18	Studs - Fully Threaded	BOX-CBF	6		500 pcs./box				
			8						
			10						
			12						
			15						
			20						
			25						
			30						
			4- 5						
			6						
			8						
			10						
			12						
			15						
			20						
20	Studs - Fully Threaded	BOX-CBF	25		400 pcs./box				
			30						
			35						
			40						
			5- 8						
			10						
			12						
			15						
			20						
			25						
			30						
			35						
			40						
			6- 8						
			10						
12									
22	Studs - Fully Threaded	BOX-CBF	15		600 pcs./box				
			20						
			25						
			30						
			35						
			40						
			6- 8						
			10						
			12						
			15						
			20						
			25						
			30						
			35						
			40						
24	Studs - Fully Threaded	BOX-CBF	20		400 pcs./box				
			25						
			30						
			35						
			40						
			8-12						
			15						
			20						
			25						
			30						
			35						
			40						
			28	Studs - Fully Threaded		BOX-CBF	25		200 pcs./box
							30		
							35		
40									
10-20									
25									
30									
35									
40									
30	Studs - Fully Threaded	BOX-CBF			25			150 pcs./box	
					30				
					35				
					40				

When you need large quantities, box packaging is more economical. P171



Material SCM435(M2~M12) Surface Treatment Black Oxide  
 Hardness 38~43HRC(M2~M12) (Screw Precision JIS B 1176)  
 Thread JIS B 0205 Class 2 (Strength Class 12.9 (M3~M12))

MxP	A	E	B
2x0.4	3.8	2	1.5
2.5x0.45	4.5	2.5	2
2.6x0.45	4.5	2.6	2
3x0.5	5.5	3	2.5
4x0.7	7	4	3
5x0.8	8.5	5	4
6x1.0	10	6	5
8x1.25	13	8	6
10x1.5	16	10	8
12x1.75	18	12	10

\*The strength class signifies the screw's tensile strength.  
 (Ex.) 12.9  
 This indicates that the minimum value for yielding point or proof stress is 90% of tensile strength.  
 This indicates that the minimum value of tensile strength is 1220N/mm<sup>2</sup>.  
 (Ex.) 10.9  
 This indicates that the minimum value for yielding point or proof stress is 90% of tensile strength.  
 This indicates that the minimum value of tensile strength is 1040N/mm<sup>2</sup>.

Reference: Dimensions of Counterbore and Cap Screw Hole for Hex Socket Head Cap Screws P1891

Part Number	ℓ	Unit Price
Type M- L		1 ~ 1000 pcs.
CB 2- 4	4	
5		
6		
8		
10		
12		
15		
CB 2.5- 4	4	
5		
6		
8		
10		
12		
15		
CB 2.6- 4	4	
5		
6		
8		
10		
12		
15		
CB 3- 5	5	
6		
8		
10		
12		
14		
15		
16		
18		
20		
22		
25		
30		
35		
40		
45		
50		
55		
CB 4- 5	5	
6		
8		
10		
12		
14		
15		
16		
18		
20		
22		
25		
30		
35		
40		
45		
50		
55		
60		

Part Number	ℓ	Unit Price
Type M- L		1 ~ 1000 pcs.
CB 5- 5	5	
6		
8		
10		
12		
14		
15		
16		
18		
20		
22		
25		
30		
35		
40		
45		
50		
55		
60		
65		
70		
75		
80		
CB 6- 6	6	
8		
10		
12		
14		
15		
16		
18		
20		
22		
25		
30		
35		
40		
45		
50		
55		
60		
65		
70		
75		
80		
85		
90		
95		

Part Number	ℓ	Unit Price
Type M- L		1 ~ 1000 pcs.
CB 8- 8	8	
10		
12		
15		
16		
18		
20		
22		
25		
30		
35		
40		
45		
50		
55		
60		
65		
70		
75		
CB 10- 10	10	
12		
15		
20		
25		
30		
35		
40		
45		
50		
55		
60		
65		
70		
CB 12- 15	15	
20		
25		
30		
35		
40		
45		
*50		

Screws larger and longer than M12 are listed on the catalog of Standard Components for Press Molds.

Ordering Example  
 Part Number  
**CB8-40**

Note that, for some of the types shown here, order might be unable to be received by the MISUMI Thailand, Malaysia, Indonesia, and/or India offices.

# Hex Socket Head Cap Screws

Stainless Steel (Available in Box)

# Hex Socket Head Cap Screws

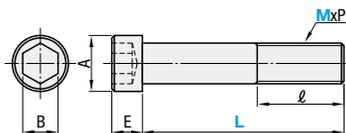
Stainless Steel (Available in Single item)



RoHS

Type	Material
BOX-SCB	SUS304 Equivalent

Strength Class A2-70



MxP (Coarse)	A	E	B
2 x0.4	3.8	2	1.5
2.5x0.45	4.5	2.5	2
2.6x0.45	4.5	2.6	2
3 x0.5	5.5	3	2.5
4 x0.7	7	4	3
5 x0.8	8.5	5	4
6 x1.0	10	6	5
8 x1.25	13	8	6
10 x1.5	16	10	8

Can be ordered as a separate item. P.174

\*The strength class signifies the screw's tensile strength.  
(Ex.) A2 - 70  
This indicates that the minimum value of tensile strength is 700N/mm<sup>2</sup>.  
The steel class is A2 (Austenitic Stainless Steel)

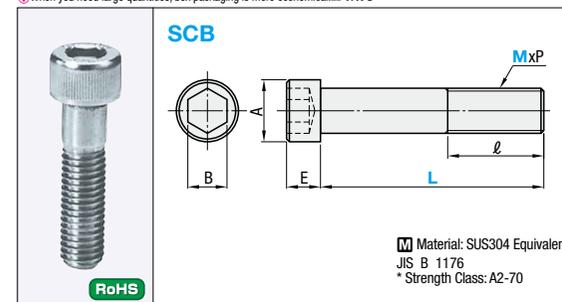
Please specify in box quantity when ordering.  
One box is shipped for an order of 1.

Ordering Example  
Part Number  
BOX-SCB3-6

Box package is cost-saving for in-house stock or when large quantities are needed.

ℓ	Part Number		Unit Price 1 to 10 boxes		Pcs./Box				
	Type	M-L	Price per pkg.	1 Box					
18	Studs - Fully Threaded	BOX-SCB	2- 5		1,000 pcs./box				
			8						
			10						
			12						
			15						
			2.5- 5						
			8						
			10						
			2.6- 5						
			8						
			10						
			3- 5						
			6						
			8						
			10						
12									
15									
20									
25									
30									
20	Studs - Fully Threaded	BOX-SCB (Stainless Steel)	4- 5		500 pcs./box				
			6						
			8						
			10						
			12						
			15						
			20						
			25						
			30						
			35						
			40						
			5- 8						
			10						
			12						
			15						
20									
25									
30									
35									
40									
22	Studs - Fully Threaded	BOX-SCB (Stainless Steel)	6- 8		1,000 pcs./box				
			10						
			12						
			15						
			20						
			25						
			30						
			35						
			40						
			8- 12						
			15						
			20						
			25						
			30						
			35						
40									
24	Studs - Fully Threaded	BOX-SCB (Stainless Steel)	8- 12		500 pcs./box				
			15						
			20						
			25						
			30						
			35						
			40						
			10- 20						
			25						
			30						
			35						
			40						
			28	Studs - Fully Threaded		BOX-SCB (Stainless Steel)	10- 20		200 pcs./box
							25		
							30		
35									
40									
15- 20									
25									
30									
35									
40									
20- 30									
35									
40									
32	Studs - Fully Threaded	BOX-SCB (Stainless Steel)			20- 30			150 pcs./box	
					35				
			40						
			25- 35						
			35						
			40						
			30- 40						
			40						
			40						
			40						
			40						
			40						
			40						
			40						
			40						
40									

When you need large quantities, box packaging is more economical. P.173



Material: SUS304 Equivalent  
JIS B 1176  
\* Strength Class: A2-70

Part Number	Unit Price	Volume Discount Rate
Type M- L	ℓ	1 - 9 pc(s), 10 - 29 pcs, 30 - 99 pcs, 100 - 500 pcs.
SCB 2- 3		
4		
5		
6		
8		
10		
12		
15		
SCB 2.5- 4		
5		
6		
8		
10		
12		
15		
SCB 2.6- 4		
5		
6		
8		
10		
12		
15		
SCB 3- 4		
5		
6		
8		
10		
12		
14		
15		
16		
18		
20		
22		
24		
25		
30		
35		
40		
SCB 4- 5		
6		
8		
10		
12		
14		
15		
16		
18		
20		
22		
24		
25		

Part Number	Unit Price	Volume Discount Rate
Type M- L	ℓ	1 - 9 pc(s), 10 - 29 pcs, 30 - 99 pcs, 100 - 500 pcs.
SCB 4- 30		
35		
40	20	
45		
50		
SCB 5- 6		
8		
10		
12		
14		
15		
16		
18		
20		
22		
25		
SCB 6- 8		
10		
12		
14		
15		
16		
18		
20		
22		
25		
30		
35		
40		
45		
50		
55		
60		
65		
70		
SCB 8- 10		
12		
14		
15		
16		

Part Number	Unit Price	Volume Discount Rate
Type M- L	ℓ	1 - 9 pc(s), 10 - 29 pcs, 30 - 99 pcs, 100 - 500 pcs.
SCB 8- 18		
20		
22		
25		
30		
35		
40		
45		
50		
55		
60	28	
65		
70		
75		
80		
SCB 10- 12		
14		
15		
16		
18		
20		
25		
30		
35		
40		
45		
50		
55		
60	32	
65		
70		
75		
SCB 12- 15		
20		
25		
30		
35		
40		
45		
50		
55		
60	36	

Ordering Example  
Part Number  
SCB3-5

\*The strength class signifies the screw's tensile strength.

(Ex.) A2 - 70  
This indicates that the minimum value of tensile strength is 700N/mm<sup>2</sup>.  
The steel class is A2 (Austenitic Stainless Steel)

Reference: Dimensions of Counterbore and Cap Screw Hole for Hex Socket Head Cap Screws P.1891

# Hex Socket Head Cap Screws

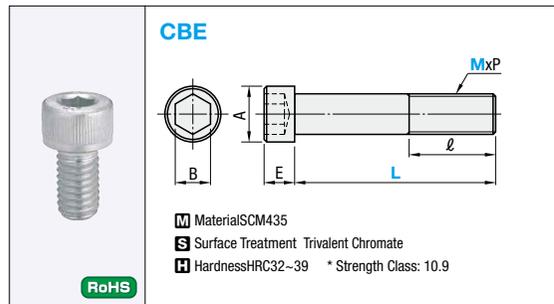
Trivalent Chromate

Note that, for some of the types shown here, order might be unable to be received by the MISUMI Malaysia, Indonesia, and/or India offices.

# Hex Socket Head Cap Screws / Hex Socket Head Cap Screws

Trivalent Chromate (Available in Pkg.)-

Bright Chromate Plating



**CBE**

Material: SCM435  
 Surface Treatment: Trivalent Chromate  
 Hardness: HRC32~39 \* Strength Class: 10.9

MxP	A	E	B
2x0.4	3.8	2	1.5
2.6x0.45	4.5	2.6	2
3x0.5	5.5	3	2.5
4x0.7	7	4	3
5x0.8	8.5	5	4
6x1.0	10	6	5
8x1.25	13	8	6
10x1.5	16	10	8
12x1.75	18	12	10

\* The strength class signifies the screw's tensile strength.  
 (Ex.)10.9  
 This indicates that the minimum value for yielding point or proof stress is 90% of tensile strength.  
 This indicates that the minimum value of tensile strength is 1040N/mm<sup>2</sup>.

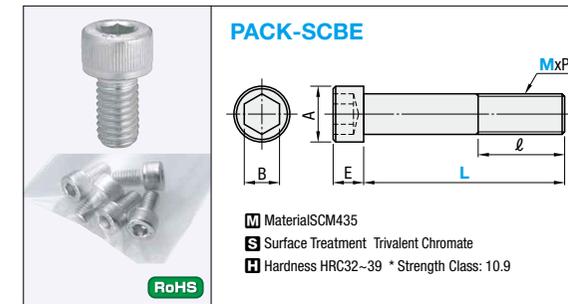
Reference: Dimensions of Counterbore and Cap Screw Hole for Hex Socket Head Cap Screws P.1891

Part Number	Unit Price	Volume Discount Rate
Type M-L	1 ~ 9 pc(s)	10 ~ 19 pcs, 20 ~ 49 pcs, 50 ~ 500 pcs.
CBE 2- 5		
6		
8		
10		
CBE 2.6- 5		
6		
8		
10		
CBE 3- 4		
5		
6		
8		
10		
12		
15		
18		
20		
25		
30		
35		
CBE 4- 5		
6		
8		
10		
12		
15		
18		
20		
25		
30		
35		
CBE 5- 6		
8		
10		
12		

Part Number	Unit Price	Volume Discount Rate
Type M-L	1 ~ 9 pc(s)	10 ~ 19 pcs, 20 ~ 49 pcs, 50 ~ 500 pcs.
CBE 5- 15		
18		
20		
25		
30		
35		
40		
45		
50		
CBE 6- 8		
10		
12		
15		
18		
20		
25		
30		
35		
40		
45		
50		
55		
60		
65		
70		
75		
CBE 8- 10		
12		
15		
18		
20		
25		
30		
35		
40		
45		
50		
55		
60		

Part Number	Unit Price	Volume Discount Rate
Type M-L	1 ~ 9 pc(s)	10 ~ 19 pcs, 20 ~ 49 pcs, 50 ~ 500 pcs.
CBE 8- 60		
65		
70		
75		
80		
CBE 10- 15		
20		
25		
30		
35		
40		
45		
50		
55		
60		
65		
70		
75		
CBE 12- 15		
20		
25		
30		
35		
40		
45		
50		
55		
60		

Ordering Example **Part Number**  
CBE4-10



**PACK-SCBE**

Material: SCM435  
 Surface Treatment: Trivalent Chromate  
 Hardness: HRC32~39 \* Strength Class: 10.9

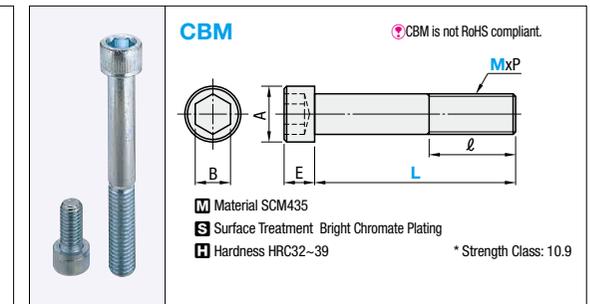
Part Number	Unit Price	Volume Discount Rate
Type M-L	1 ~ 9 pc(s)	10 ~ 19 pcs, 20 ~ 49 pcs, 50 ~ 500 pcs.
PACK-SCBE 2-5		
6		
8		
10		
PACK-SCBE 2.6-5		
6		
8		
10		
PACK-SCBE 3-5		
6		
8		
10		
12		
15		
20		
25		
30		
35		
PACK-SCBE 4-6		
8		
10		
12		
15		
20		
25		
30		
35		
40		
45		
50		
55		
60		
PACK-SCBE 5-8		
10		
12		
15		
20		
25		
30		
35		
40		
45		
50		
55		
60		

Part Number	Unit Price	Volume Discount Rate
Type M-L	1 ~ 9 pc(s)	10 ~ 19 pcs, 20 ~ 49 pcs, 50 ~ 500 pcs.
PACK-SCBE 6-8		
10		
12		
15		
20		
25		
30		
35		
PACK-SCBE 8-12		
15		
20		
25		
30		
35		
40		
45		
50		
55		
60		
PACK-SCBE 10-15		
20		
25		
30		
35		
40		
45		
50		
55		
60		
PACK-SCBE 12-15		
20		
25		
30		
35		
40		
45		
50		
55		
60		

\*The (L) part is based on JIS B 1176 (2000).

Ordering Example **Part Number**  
PACK-SCBE6-10  
CBM8-20

PACK-SCBE is sold by the package, and CBM is sold as a single item.  
 For package sales, minimum order is 1 pack.



**CBM**

Material: SCM435  
 Surface Treatment: Bright Chromate Plating  
 Hardness: HRC32~39 \* Strength Class: 10.9

Part Number	Unit Price	Volume Discount Rate
Type M-L	1 ~ 99 pcs	100 ~ 200 pcs.
CBM 3-6		
8		
10		
12		
15		
20		
25		
30		
35		
40		
45		
50		
55		
60		
CBM 4-6		
8		
10		
12		
15		
20		
25		
30		
35		
40		
45		
50		
55		
60		
CBM 5-8		
10		
12		
15		
20		
25		
30		
35		
40		
45		
50		
55		
60		
CBM 6-8		
10		
12		
15		
20		
25		
30		
35		
40		
45		
50		
55		
60		

Part Number	Unit Price	Volume Discount Rate
Type M-L	1 ~ 99 pcs	100 ~ 200 pcs.
CBM 8-12		
15		
20		
25		
30		
35		
40		
45		
50		
55		
60		
CBM 10-15		
20		
25		
30		
35		
40		
45		
50		
55		
60		
CBM 12-15		
20		
25		
30		
35		
40		
45		
50		
55		
60		

\*The (L) part is based on JIS B 1176



# Hex Socket Head Cap Screws / Hex Socket Head Cap Screws with Hole With Threadlocker Adhesive

**Hex Socket Head Cap Screws - With Threadlocker Adhesive**

Type	Material	Surface Treatment	Hardness	Strength Class	M x P	A	E	B
LB	SCM435	Black Oxide	38-43HRC	12.9	4x0.7	7	4	3
SUSLB	SUS304 Equivalent	-	-	A2-70	5x0.8	8.5	5	4
					6x1.0	10	6	5
					8x1.25	13	8	6
					10x1.5	16	10	8
					12x1.75	18	12	10

**RoHS**

**Thread Locking Compound**

**Loosening Prevention Treatment**  
This treatment applies the special plastic excellent in elasticity, abrasion resistance and oil resistance to the thread grooves. It can be used repeatedly with a lubricant. The effect is most pronounced at the first use, and will gradually decrease after that.

**Strength Class Significance**  
\* The strength class signifies the screw's tensile strength.  
(Ex) 12.9: This indicates that the minimum value for yielding point or proof stress is 90% of tensile strength. This indicates that the minimum value of tensile strength is 1220N/mm<sup>2</sup>.  
(Ex) A2-70: This indicates that the minimum value of tensile strength is 700N/mm<sup>2</sup>. The steel class is A2 (Austenitic Stainless Steel).

Part Number	M-L	ℓ	LB		SUSLB	
			Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate
LB	4-8	Studs - Fully Threaded				
SUSLB	10					
	12					
	15					
	20					
	25	20				
	30					
	35					
	40					
	45					
	50	22				
	12					
	15					
	20					
	25					
	30	24				
	35					
	40					
	45					
	50					

No specifications available for sizes with no prices shown. For orders larger than indicated quantity, please check with WOS.

Ordering Example  
Part Number: LB8-40

**Hex Socket Head Cap Screws with Hole**

Type	Material	Surface Treatment	Hardness	Strength Class	M x P	A	E	B
CBLH	SCM435	Black Oxide	22-32HRC	B.8 Equivalent	6x1.0	10	6	5
SCBLH	SUS304 Equivalent	-	-	A2-70 Equivalent	8x1.25	13	8	6
					10x1.5	16	10	8
					12x1.75	18	12	10

**RoHS**

**Put wire through the hole in the screw head to prevent the screw from loosening or falling off.**

Part Number	M-L	ℓ	CBLH		SCBLH	
			Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate
CBLH	6-10	Studs - Fully Threaded				
SCBLH	12					
	16					
	20					
	25					
	30	24				
	35					
	40					
	45					
	50					
	8-12	20				
	15					
	20					
	25					
	30					
	35	28				
	40					
	45					
	50					
	10-20					
	25					
	30					
	35					
	40					
	45	36				
	12-25					
	30					
	40					
	50					

No specifications available for sizes with no prices shown. For orders larger than indicated quantity, please check with WOS.

**Tapped Socket Head Screws**

Type	Material	Surface Treatment	Strength Class
TSCB	SUS304 Equivalent	-	A2-50 Equivalent

**RoHS**

**Cap Screws with Tapped Hole are Coarse Full Thread.**

Part Number	M1 (Coarse)-L	M2 (Coarse) (Tap Size)	A	E	B	TSCB	
						Unit Price	Volume Discount Rate
TSCB	6-10	3	10	6	5		
	12						
	16						
	20						
	25						
	8-10	4	13	8	6		
	16						
	25						
	30						
	35						
	10-16	4	16	10	8		
	20						
	25						
	30						
	35						
	12-20	6	18	12	10		
	24						
	30						
	35						
	16-30						
	35						

No specifications available for sizes with no prices shown. For orders larger than indicated quantity, please check with WOS.

**Space Saving**  
It can be used when space is limited or when two or more holes in installation seat are not needed.

Ordering Example: Part Number CBLH8-12, SCBLH8-40, TSCB10-20 - 5

# Hex Socket Head Cap Screws / Cover Caps Fine Thread / Left-Hand Thread

**Hex Socket Head Cap Screws Fine Thread**

Type	Material	Surface Treatment	Hardness	Strength Class
CBPK	SCM435	Black Oxide	39-44HRC	12.9
SCBPK	SUS304 Equivalent	-	-	A2-70

**RoHS**

Part Number	M-L	M x P	ℓ	A	E	B	CBPK		SCBPK	
							Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate
CBPK	6-10	6	Studs - Fully Threaded	10	6	5				
SCBPK	12									
	15									
	20									
	25									
CBPK	8-12	8	Studs - Fully Threaded	13	8	6				
SCBPK	15									
	20									
	25									
	30									
CBPK	10-15	10	Studs - Fully Threaded	16	10	8				
SCBPK	20									
	25									
	30									
	35									
CBPK	12-20	12	Studs - Fully Threaded	18	12	10				
SCBPK	25									
	30									
	40									
	50									

\* SCBPK is Full Thread Type.

No specifications available for sizes with no prices shown.

Ordering Example  
Part Number: CBPK6-15, SCBL8-20

**For Hex Socket Cap Screws**

BTCSW (White)  
BTCBS (Black)

**RoHS**

Material: Polyacetal (White / Black)

Part Number	Applicable No.	Screw	D	D1	D2	D2 Tolerance	d	h	h1	t	Unit Price
BTCSW	3	M3	4.5	1.5	2.5	+0.10 / +0.05	1.5	1	0.3	1	
	4	M4	6	2	3	+0.20	2	1.1			
	5	M5	7.5	3	4	+0.10	3	1.3	0.4	1.5	
	6	M6	9	4	5	+0.10	4	1.5	0.4	1.8	
	8	M8	12	5	6	+0.25	4.5	1.8	0.5	2.3	
	10	M10	15	6	8	+0.15	6.5	2	0.5	2.9	
	12	M12	17	8	10	+0.15	8.5	2.2	0.6	3.5	

**Example**  
It covers the hex hole of a Hex socket head cap screw and prevents dust accumulation. Available in white and black for identification. Please note that repetitive screwing and unscrewing causes gradual loosening.

Ordering Example  
Part Number: BTCSW8, MTCWS6

**Hex Socket Head Cap Screws Left-Hand Thread**

Type	Material	Surface Treatment	Hardness	Strength Class
BCBL	SCM435	Black Oxide	38-43HRC	12.9 Equivalent
SCBL	SUS304 Equivalent	-	-	A2-70 Equivalent

**RoHS**

Part Number	M-L	M x P	A	E	B	BCBL		SCBL	
						Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate
BCBL	4-10	4	7	4	3				
SCBL	12								
	15								
	20								
	25								
BCBL	5-10	5	8.5	5	4				
SCBL	12								
	15								
	20								
	25								
BCBL	6-10	6	10	6	5				
SCBL	12								
	15								
	20								
	25								
BCBL	8-15	8	13	8	6				
SCBL	20								
	25								
	30								
	35								
BCBL	10-20	10	16	10	8				
SCBL	25								
	30								
	40								
	50								
BCBL	12-20	12	18	12	10				
SCBL	25								
	30								
	40								
	50								

No specifications available for sizes with no prices shown.

No specifications available for sizes with no prices shown.

**Cover Caps for Counterbore Holes**

MTCWS (White)  
MTCBS (Black)  
MTCSC (Transparent)

M	D2 Tolerance	R
M3	+0.3 / +0.1	0.2
M4, 5	+0.4 / +0.2	
M6-12	+0.5 / +0.3	0.5

Material: Ether Type Urethane Shore A90

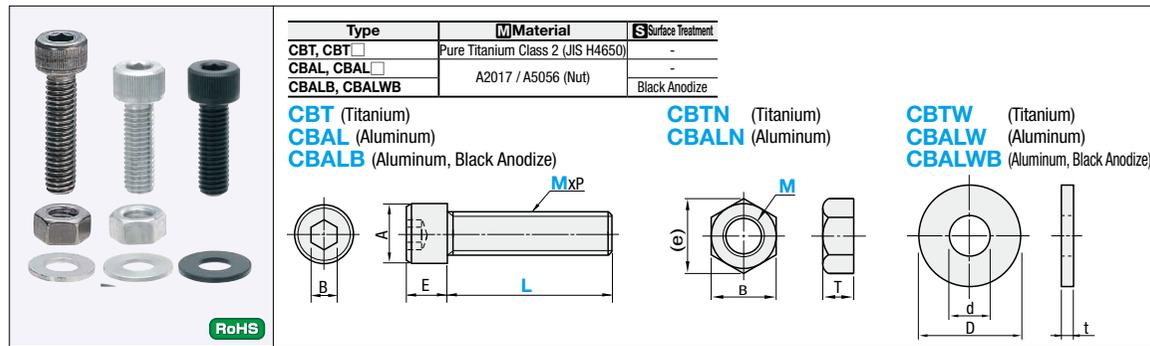
**RoHS**

Part Number	Applicable No.	Screw	D	D1	D2	d	h	h1	t	Unit Price
MTCWS	3	M3	9	7	2.5	1	1	0.2	1.2	
	4	M4	10	8	3	1.5	1	0.2	1.7	
	5	M5	12	9.5	4	2.5	1	0.2	2.2	
	6	M6	14	11	5	3.5	1.3	0.3	2.7	
	8	M8	17	13.5	6	4.8	1.5	0.3	3.5	
	10	M10	21	16	8	6.5	2	0.4	4	
	12	M12	23	17	10	8.5	2.5	0.5	5	

**Example**  
It is excellent in hydrolysis-proof. Ether type urethane is applicable to following test methods.  
Japanese Food Sanitation Law, Standard for Foods and Additives (Ministry of Health and Welfare Notification No.370, 1959)  
Rubber Apparatus or Container and Package (Except nursing apparatus) (No.85 Notification of the Ministry of Health and Welfare, Japan 1986)

# Hex Socket Head Cap Screws / Nuts / Washers

Titanium, Aluminum



## Hex Socket Head Cap Screws

Part Number	M x P	A	E	B	CBT		CBAL		CBALB		Quantity
					Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate	
3-6	3 x 0.5	5.5	3	2.5	-	-	-	-	-	-	100
8					-	-	-	-	-		
10					-	-	-	-	-		
12					-	-	-	-	-		
15					-	-	-	-	-		
20	4 x 0.7	7	4	3	-	-	-	-	-	-	100
8					-	-	-	-	-		
10					-	-	-	-	-		
12					-	-	-	-	-		
15					-	-	-	-	-		
20	5 x 0.8	8.5	5	4	-	-	-	-	-	-	100
8					-	-	-	-	-		
10					-	-	-	-	-		
12					-	-	-	-	-		
15					-	-	-	-	-		
20	6 x 1.0	10	6	5	-	-	-	-	-	-	100
8					-	-	-	-	-		
10					-	-	-	-	-		
12					-	-	-	-	-		
15					-	-	-	-	-		
20	8 x 1.25	13	8	6	-	-	-	-	-	-	50
8					-	-	-	-	-		
10					-	-	-	-	-		
12					-	-	-	-	-		
15					-	-	-	-	-		
20	10 x 1.5	16	10	8	-	-	-	-	-	-	50
8					-	-	-	-	-		
10					-	-	-	-	-		
12					-	-	-	-	-		
15					-	-	-	-	-		

⊕ Sizes with no price listings are not available.

## Characteristics of Titanium (JIS H4650 Pure Titanium Class 2)

- Strength of titanium is comparable to low-carbon steel, yet the specific gravity is 60% of steel.
- It can be used in low to high temperatures.
- It has better chemical resistance than that of stainless steel.

## Typical Physical Properties of Titanium

Item	Unit	Data
Purity	%	99.5 or More
Tensile Strength	N/mm <sup>2</sup>	340~510
Yield Stress	N/mm <sup>2</sup>	215 or More
Operating Temp.	°C	-200~350

## Chemical Resistance of Titanium

Chemical Solution	Concentration (%)	Temperature (°C)	Titanium	SUS316
Hydrochloric Acid	10	30	○	×
Sulfuric Acid	20	30	○	×
Sodium Hydroxide	50	120	○	○

○: Corrosion resistant enough for use.

○: Corrosive but usable depending on conditions.

×: Unusable due to insufficient corrosion resistance.

## Changes in Mechanical Characteristics of Titanium by Temperature

Item	Unit	Data		
		-200°C	Ambient Temperature	350°C
Tensile Strength	N/mm <sup>2</sup>	994	421	167
Elongation	%	25.7	46	54

## Nuts

Part Number	M	B	(e)	T	CBTN		CBALN		Quantity
					Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate	
3	3	5.5	6.4	2.4	-	-	-	-	100
4	4	7	8.1	3.2	-	-	-	-	
5	5	8	9.2	4	-	-	-	-	
6	6	10	11.5	5	-	-	-	-	
8	8	13	15	6.5	-	-	-	-	
10	10	17	19.6	8	-	-	-	-	50

## Washers

Part Number	No.	D	d	t	CBTW		CBALW		CBALWB		Quantity
					Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate	
3	3	7	3.2	0.5	-	-	-	-	-	-	100
4	4	10	4.3	0.8	-	-	-	-	-	-	
5	5	12	5.5	0.8	-	-	-	-	-	-	
6	6	13	6.5	1.0	-	-	-	-	-	-	
8	8	18	8.5	1.5	-	-	-	-	-	-	
10	10	22	10.5	1.5	-	-	-	-	-	-	50



Ordering Example  
 Part Number  
 CBT5-12  
 CBTN8  
 CBTW10

## Comparison by Metals

Item	Unit	Titanium	Aluminum	Steel
Specific Gravity	g/cm <sup>3</sup>	4.5	2.7	7.9
Tensile Strength	N/mm <sup>2</sup>	377	78	315
Thermal Conductivity	cal/cm · sec · °C	0.041	0.487	0.145
Young's Modulus	kN/mm <sup>2</sup>	106	69	205

## Mechanical Characteristics of Hex Socket Cap Screws (Reference)

	Tensile Breaking Load N		Torsional Breaking Torque N·m	
	Titanium	Aluminum	Titanium	Aluminum
	M3	3210	1650	2.4
M4	5610	2890	4.7	2.5
M5	9080	4680	9.8	6.7
M6	12800	6630	11.3	11.0
M8	23400	12000	22.8	30.0
M10	37100	23560	61.5	48.0

- Shown above are reference values and not guaranteed.
- Recommended tightening torque is torsional shear torque x50%.
- Use torque driver or torque wrench for tightening.
- Values of black anodized products are approx. 80% of values above.

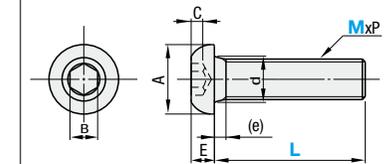
Note that, for some of the types shown here, order might be unable to be received by the MISUMI Thailand, Malaysia, Indonesia, and/or India offices.

# Hex Socket Button Head Cap Screws

Box



Type	Material	Hardness	Surface Treatment
BOX-BCB	SCM435	34~44HRC	Black Oxide
BOX-SBCB	SUS304 Equivalent	-	-



MxP (Coarse)	A	E	B	C (Min.)	d	(e)
3x0.5	5.7	1.65	2	1.04	3.6	1
4x0.7	7.6	2.2	2.5	1.3	4.7	1.4
5x0.8	9.5	2.75	3	1.56	5.7	1.6
6x1.0	10.5	3.3	4	2.08	6.8	2

⊕ Can be ordered as a separate item P.185

⊕ Please specify in box quantity when ordering. One box is shipped for an order of 1.



Ordering Example  
 Part Number  
 BOX-BCB5-10  
 BOX-SBCB5-10

Box package is cost-saving for in-house stock or when large quantities are needed.

Type	M-L	Unit Price 1 to 10 boxes		Pcs./Box	
		Price per pkg.	1 Box		
BOX-BCB	3-5			1,000 pcs./box	
	6				
	8				
	10				
	12				
	15				
	20				
	25				
	4-6				500 pcs./box
	8				
	10				
	12				
	15				
	20				
	25				200 pcs./box
30					
5-8			500 pcs./box		
10					
12					
15					
20					
25			200 pcs./box		
30					
6-10				500 pcs./box	
12					
15					
20					
25					
30			200 pcs./box		

Type	M-L	Unit Price 1 to 10 boxes		Pcs./Box	
		Price per pkg.	1 Box		
BOX-SBCB (Stainless Steel)	3-5			1,000 pcs./box	
	6				
	8				
	10				
	12				
	15				
	20				
	25				
	30				500 pcs./box
	4-6				
	8				
	10				
	12				
	15				
	20				200 pcs./box
25					
30					
5-8			500 pcs./box		
10					
12					
15					
20					
25			200 pcs./box		
30					
6-10				500 pcs./box	
12					
15					
20					
25					
30			200 pcs./box		



# Hexagon Socket Head Cap Screws (Steel·SUS)

-Sold by the Pack-

Similar Products Comparison Points | Not RoHS Compliant / GB Standard

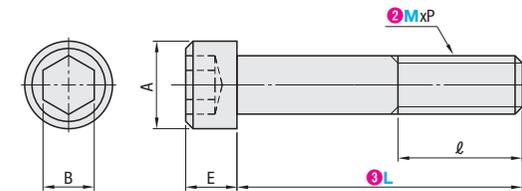
When ordering, select Part Number and Values from Selection Steps ①~③.

Ordering Example	Part Number (①Type-②M) - ③L
	PACK-CCB3 - 6
	PACK-CSCB6 - 10

## Hexagon Socket Head Cap Screws



Type	Material	Surface Treatment	Hardness	Strength Class
PACK-CCB	SCM435	Black Oxide	39~44HRC	12.9
PACK-CSCB	SUS304	-	-	A2-70



MxP (Coarse)	A	E	B
3x0.5	5.5	3	2.5
4x0.7	7	4	3
5x0.8	8.5	5	4
6x1.0	10	6	5
8x1.25	13	8	6
10x1.5	16	10	8

### [Steel]

#### Pack

Part Number	①Type	②M-③L	ℓ	Qty. / Pack	
PACK-CCB	3-	5	Studs - Fully Threaded	100 pcs.	
					6
					8
					10
					12
					16
	4-	8	Studs - Fully Threaded	100 pcs.	
					10
					12
					16
					20
					25
	5-	8	Studs - Fully Threaded	100 pcs.	
					10
					12
					16
					20
					25

### [Stainless Steel]

#### Pack

Part Number	①Type	②M-③L	ℓ	Qty. / Pack	
PACK-CCB	6-	10	Studs - Fully Threaded	100 pcs.	
					12
					16
					20
					25
					30
	8-	16	Studs - Fully Threaded	50 pcs.	
					20
					25
					30
					40
					28
10-	20	Studs - Fully Threaded	50 pcs.		
				25	
				30	
				35	
				40	
				40	

① This product is sold by the package.  
For Qty. per Package of each size, refer to above Specification Table.  
② When placing an order, please specify number of packages.  
1 package will be delivered for an order for 1.

# Hexagon Socket Set Screws / Hexagon Socket Button Head Cap Screws

-Sold by the Pack-

Similar Products Comparison Points | Not RoHS Compliant / GB Standard

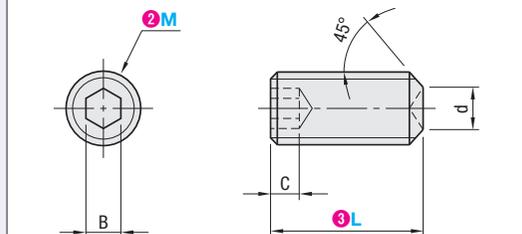
When ordering, select Part Number and Values from Selection Steps ①~③.

Ordering Example	Part Number (①Type-②M) - ③L
	PACK-CMSSK3 - 6
	PACK-CSBCB5 - 10

## Hexagon Socket Set Screws



Type	Material	Hardness	Surface Treatment
PACK-CMSSK	SCM435 Equivalent	45~53HRC	Black Oxide



MxP (Coarse)	B	C (Min.)	d (Max.)
3x0.5	1.5	1.2	2
4x0.7	2	1.5	2.5
5x0.8	2.5	2	3.5

Part Number	①Type	②M-③L	Qty. / Pack
PACK-CMSSK	3-	3	100 pcs.
		4	
		5	
		6	
		8	
		10	
	4-	4	100 pcs.
		5	
		6	
		10	

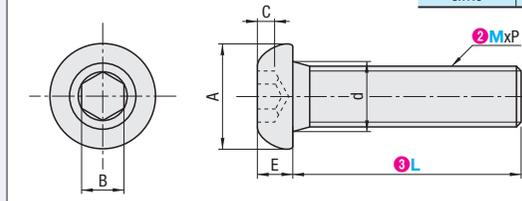
Part Number	①Type	②M-③L	Qty. / Pack
PACK-CMSSK	5-	5	100 pcs.
		6	
		8	
		10	
		10	

① This product is sold by the package.  
For Qty. per Package of each size, refer to left-hand Specification Table.  
② When placing an order, please specify number of packages.  
1 package will be delivered for an order for 1.

## Hexagon Socket Button Head Cap Screws



Type	Material	Strength Class
PACK-CSBCB	SUS304	A2-50



MxP (Coarse)	A	E	B	C (Min.)	d
3x0.5	5.7	1.65	2	1.04	3.6
4x0.7	7.6	2.2	2.5	1.3	4.7
5x0.8	9.5	2.75	3	1.56	5.7
6x1.0	10.5	3.3	4	2.08	6.8

Part Number	①Type	②M-③L	Qty. / Pack
PACK-CSBCB	3-	6	150 pcs.
		8	
		10	
	4-	6	160 pcs.
		8	
		10	

Part Number	①Type	②M-③L	Qty. / Pack
PACK-CSBCB	5-	10	100 pcs.
		12	
		20	
	6-	10	60 pcs.
		12	
		20	

① This product is sold by the package.  
For Qty. per Package of each size, refer to left-hand Specification Table.  
② When placing an order, please specify number of packages.  
1 package will be delivered for an order for 1.