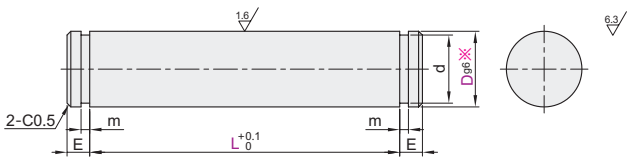
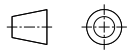
Pivot Pins

with Retaining Ring Groove

Code		Material		Hardness	Surface Treatment	Accessory	
L Selectable	L Configurable	GB	Equiv.			Kind	Material
—	MHC21	45	S45C	—	Black Oxide	Retaining Ring 2 Pcs.	Spring Steel
MHC02	MHC22			40~45 HRC			
	MHC24				Electroless Nickel Plating		Stainless Steel
—	MHC25			40~45 HRC, Plating Hardness 850 HV~	Hard Chrome Plating, Plating Thickness of 3~5 μm		Spring Steel
	MHC31	0Cr18Ni9	SUS304	—	—		Stainless Steel
	MHC42	9Cr18	SUS440C	48~53 HRC, Plating Hardness 850 HV~	Hard Chrome Plating, Plating Thickness of 3~5 μm		




The first perspective

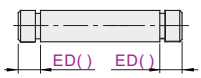
※ Dg6 Tolerance is available for L dimensions only. Others are general tolerance.

L Selectable

Part Number Code	Dg6		L	m		E	d		Attached Retaining Ring	
MHC02	3	-0.002 -0.008	10 12 14 15 16 18 20	0.5	+0.05 0	2.5	2	+0.06 0	E Type	2
	4						3			3
	5	-0.004 -0.012		0.7	+0.1 0		4	+0.075 0		4
	6		15 16 18 20 22 24 25 30				5			5
	8	-0.005 -0.014		0.9		3.5	7	+0.09 0		7
	10		15 16 18 20 22 24 25 30 35 40 45 50	1.15	+0.14 0		9.6	0 -0.09	C Type	10
	12	-0.006 -0.017	18 20 22 24 25 30 35 40 45 50			4.5	11.5	0 -0.11		12

Optional Processing

Code	Spec.
ED( )	Retaining Ring Groove Position



Ordering Code ED3

D	ED	D	ED
2~4	1.5~3	8	2.4~5
5	1.7~3	10~18	2.7~5
6	1.9~4	20~25	2.9~5

! Not Applicable to L Selectable Type.

L Configurable

Part Number Code	Dg6		0.1 mm Inc. L	m		E	d		Attached Retaining Ring	
MHC21 MHC22 MHC24 MHC25 MHC31 MHC42	2	-0.002 -0.008	5.0~40.0	0.5	+0.05 0	2.5	1.5	+0.06 0	E Type	1.5
	3						2			2
	4		5.0~60.0				3			3
	5	-0.004 -0.012	10.0~80.0	0.7	+0.1 0		4	+0.075 0		4
	6		10.0~110.0				5			5
	8	-0.005 -0.014		0.9		3.5	7	+0.09 0		7
	10		15.0~120.0				9.6	0 -0.09		10
	12		15.0~220.0				11.5			12
	13						12.4			13
	14		25.0~220.0	1.15			13.4			14
	15	-0.006 -0.017					14.3	0 -0.11		15
	16				+0.14 0	4.5	15.2		C Type	16
	17						16.2			17
	18		30.0~220.0				17			18
	20	-0.007 -0.020		1.35			19			20
	22						21	0 -0.21		22
	25						23.9			25

Please order as shown

L Selectable

Part Number Code	D	L
MHC02	3	10 12 14
	4	

MHC02—D3—L12

L Configurable

Part Number Code	D	L
MHC21	3	5.0~60.0
MHC22	4	

MHC21—D3—L12

Optional Processing

Part Number Code	D	L	Optional Processing Code
MHC21	3	5.0~60.0	ED1.5
MHC22	4		

MHC21—D3—L12—ED1.5

Discount price

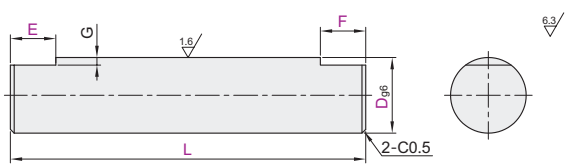
Per	1~19	20~
Price	100%	Additional quotation

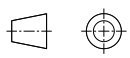
Delivery 10 ! No Surface Treatment

Delivery 11 ! Surface Treatment

D-Cut

Code	Type	Material GB	Material Equiv.	Hardness	Surface Treatment
MHM02	D-Cut	45	S45C	40~45 HRC	Black Oxide




The first perspective

Part Number Code	Dg6		0.1 mm Inc. L	1 mm Inc. E	F	G
MHM02	4	-0.002 -0.008	10.0~60.0	2≤E≤20	2≤F≤20	0.5
	5		10.0~80.0			
	6	-0.004 -0.012	10.0~110.0	2≤E≤30	2≤F≤30	
	8					
	10		15.0~110.0			
	12	-0.005 -0.014	15.0~220.0			1
	13		25.0~220.0			
	14					
	15			5≤E≤30	5≤F≤30	
	16		30.0~220.0			2
	20	-0.006 -0.017				
	25					

Please order as shown

Part Number Code	D	L	E	F
MHM02	6	10.0~100.0	2≤E≤30	2≤F≤30
	8			

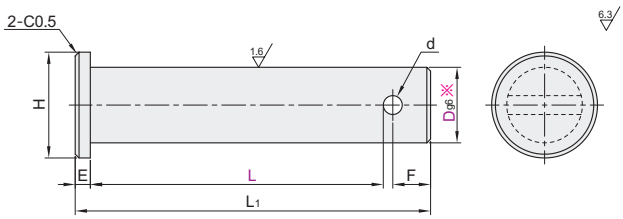
MHM02—D6—L40—E6—F6

Discount price

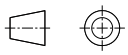
Per	1~4	5~
Price	100%	Additional quotation

Delivery 11

Code	Type		Material GB	Material Equiv.	Hardness	Surface Treatment	Accessory Kind	Accessory Material
MIB01	Cotter Pins Fixed	L Selectable	45	S45C	—	Black Oxide	Cotter Pin 1 pc.	SWRM(BLK21)
MIB02					40~45HRC			
MIB06			0Cr18Ni9	SUS304	—	—		SUS304(BLK31)
MIB11		L Configurable	45	S45C	40~45HRC	Black Oxide		SWRM(BLK21)
MIB12								
MIB14						Electroless Nickel Plating		SUS304(BLK31)
MIB15					40~45HRC,Plating Hardness:850HV~	Hard Chrome Plating,Plating Thickness of 3~5μm		SWRM(BLK21)
MIB21			0Cr18Ni9	SUS304	—	—		SUS304(BLK31)
MIB31			9Cr18	SUS440C	48~53HRC			



※ D_{g6} Tolerance is available for L dimensions only. Others are general tolerance.



The first perspective

L Selectable

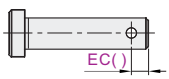
Part Number Code	Dg6		L	L1	F	d	E	H	Attached Cotter Pin
MIB01 MIB02 MIB06	3	-0.002 -0.008		L+4.4	2.5	0.8	1.5	5.5	0.8-L8
	4		10 12 14 15 16 18 20	L+4.5		1		6.5	1-L10
	5	-0.004 -0.012		L+5.6	3.5	1.2		8	1.2 -L10
	6		12 15 16 18 20 22 24 25 30	L+5.8		1.6		9	1.6 -L10
	8	-0.005 -0.014	16 18 20 22 24 25 30 35 40 45 50	L+7	4	2	2	12	2-L12
	10			L+8.25	5	2.5		14	2.5-L15
	12	-0.006 -0.017	20 22 24 25 30 35 40 45 50	L+10.6	6	3.2	3	17	3.2-L20

L Configurable

Part Number Code	Dg6		L 0.1 mm Inc.	L1	F	d	E	H	Attached Cotter Pin
MIB11 MIB12 MIB14 MIB15 MIB21 MIB31	3	-0.002 -0.008	5.0~60.0	L+4.4	2.5	0.8	1.5	5.5	0.8-L8
	4			L+4.5		1		6.5	1-L10
	5	-0.004 -0.012	10.0~60.0	L+5.6	3.5	1.2		8	1.2-L10
	6		10.0~110.0	L+5.8		1.6		9	1.6-L10
	8	-0.005 -0.014		L+7	4	2	2	12	2-L12
	10		15.0~110.0	L+8.25	5	2.5		14	2.5-L15
	12		15.0~220.0	L+10.6	6	3.2		17	3.2-L20
	13	-0.006 -0.017		L+12	7	4	3	18	4-L20
	14							19	
	15							20	
	16							21	
	17		20.0~220.0					22	4-L25
	18							23	
	20	-0.007 -0.020		L+14.5	8	5	4	26	5-L35
	22							27	
	25			L+15.5	9			30	

Optional Processing

Code	Spec.
EE( )	**Change Shoulder Thickness**  Ordering Code EE3 ! 0.5 mm Inc. ! EE=E~5
HA	**Shoulder Diameter Cut**  Ordering Code HA ! D=3~10,HA=H/2-1 D=12~25,HA=H/2-2

Code	Spec.
EC( )	**Cotter Pin Hole Position**  Ordering Code EC1.5

D	EC
3	1.5
4	1.5 2
5	1.5 2 2.5
6·8	2 2.5 3
10	2.5 3 4
12	3 4 5
13~18	3 4 5 6
20~25	4 5 6 7

Please order as shown

L Selectable

Part Number Code	D	L
MIB01 MIB02	3	10 12 14 15
	4	16 18 20
	5	

MIB02—D3—L14

L Configurable

Part Number Code	D	L
MIB11 MIB12	3	5.0~60.0
	4	
	5	10.0~60.0

MIB12—D3—L30.1

Optional Processing

Part Number Code	D	L	Optional Processing Code
MIB11 MIB12	3	5.0~60.0	EE EC( ) HA
	4		
	5	10.0~60.0	

MIB12—D3—L30.1—EC1.5

Discount price

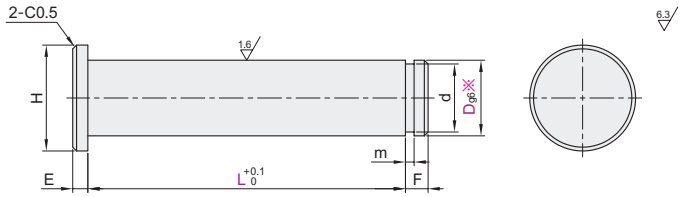
Per	1~19	20~
Price	100%	Additional quotation

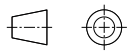
Delivery 8 ! No Hardness

Delivery 10 ! No Surface Treatment

Delivery 11 ! Surface Treatment

Code	Type		Material GB	Material Equiv.	Hardness	Surface Treatment	Accessory Kind	Accessory Material
MIC01	with Retaining Ring Groove	L Selectable	45	S45C	—	Black Oxide	Retaining Ring 1 Pc.	Spring Steel
MIC02					40~45HRC			
MIC06			0Cr18Ni9	SUS304	—	—		Stainless Steel
MIC11		L Configurable	45	S45C	40~45HRC	Black Oxide		Spring Steel
MIC12								
MIC14						Electroless Nickel Plating		Stainless Steel
MIC15					40~45 HRC,Plating Hardness:850 HV~	Hard Chrome Plating,Plating Thickness of 3~5μm		Spring Steel
MIC21			0Cr18Ni9	SUS304	—	—		Stainless Steel
MIC31			9Cr18	SUS440C	48~53HRC			





※ D_{g6} Tolerance is available for L dimensions only. Others are general tolerance.

L Selectable

Part Number Code	Dg6		L	m		F	d		E	H	Attached Retaining Ring Shape	No.
MIC01 MIC02 MIC06	3	-0.002 -0.008	10 12 14 15 16 18 20	0.5	+0.05 0	2.5	2	+0.06 0	1.5	5.5	E Type	2
	4	-0.004 -0.012		0.7	+0.1 0		3			6.5		3
	5						4	+0.075 0		8		4
	6		15 16 18 20 22 24 25 30				5			9		5
	8	-0.005 -0.014	18 20 22 24 25 30 35 40 45 50	0.9			7	+0.09 0	2	12		7
	10			1.15	+0.14 0	3.5	9.6	0 -0.09		14	C Type	10
	12	-0.006 -0.017	22 24 25 30 35 40 45 50				11.5	0 -0.11	3	17		12

L Configurable

Part Number Code	Dg6		L 0.1 mm Inc.	m		F	d		E	H	Attached Retaining Ring Shape	No.
MIC11 MIC12 MIC14 MIC15 MIC21 MIC31	2	-0.002 -0.008	5.0~32.0	0.5	+0.05 0	2.5	1.5	+0.06 0	1.5	4.5	E Type	1.5
	3						2			5.5		2
	4	-0.004 -0.012	5.0~55.0				3			6.5		3
	5		10.0~65.0	0.7	+0.1 0		4	+0.075 0		8		4
	6		10.0~110.0				5			9		5
	8	-0.005 -0.014		0.9			7	+0.09 0	2	12		7
	10		15.0~110.0				9.6	0 -0.09		14		10
	12		15.0~220.0				11.5			17		12
	13						12.4			18		13
	14			1.15			13.4			19		14
	15	-0.006 -0.017				3.5	14.3	0 -0.11	3	20		15
	16				+0.14 0		15.2			21	C Type	16
	17		20.0~220.0				16.2			22		17
	18						17			23		18
	20			1.35			19			26		20
	22	-0.007 -0.020					21	0 -0.21	4	27		22
	25						23.9			31		25

Optional Processing

Code	Spec.
EE( )	**Change Shoulder Thickness**  Ordering Code EE3 ! 0.5 mm Inc. ! EE=E~5
HA	**Shoulder Diameter Cut**  Ordering Code HA ! D=2~10, HA=H/2-1 D=12~25, HA=H/2-2

Code	Spec.
ED( )	**Retaining Ring Groove Position**  Ordering Code ED3 ! 0.1 mm Inc.

D	ED
2~4	1.5~3
5	1.7~3
6	1.9~4
8	2.4~5
10~18	2.7~5
20~25	2.9~5

Please order as shown

L Selectable

Part Number Code	D	L
MIC01 MIC02	3	10 12 14 15
	4	16 18 20
	5	

MIC02—D3—L14

L Configurable

Part Number Code	D	L
MIC11 MIC12	3	5.0~55.0
	4	
	5	10.0~65.0

MIC12—D3—L30

Optional Processing

Part Number Code	D	L	Optional Processing Code
MIC11 MIC12	3	5.0~55.0	EE EC( ) HA
	4		
	5	10.0~65.0	

MIC12—D3—L30—EC1.5

Discount price

Per	1~19	20~
Price	100%	Additional quotation

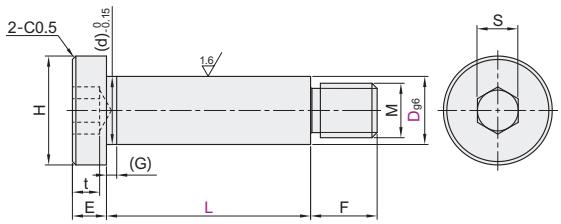
Delivery	No Hardness	No Surface Treatment	Surface Treatment
	8	10	11

Pivot Pins with Shoulder

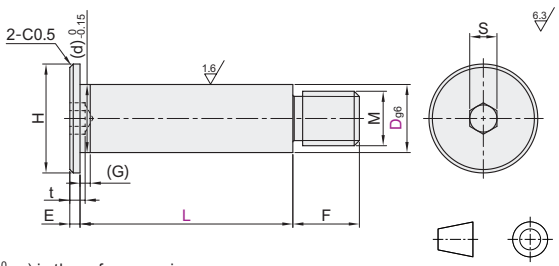
◀ Lock Nut with Hex Socket Head
◀ Lock Nut with Extra Low Hex Socket Head

Code: Lock Nut with Hex Socket Head	Code: Lock Nut with Extra Low Hex Socket Head	Material: GB	Material: Equiv.	Hardness	Surface Treatment	Accessory(1 Pc.)
MIJ01	MIK01			—	Black Oxide	U Nut(Zinc-plated)
MIJ02	MIK02			40~45HRC		
MIJ03		45	S45C	—	Electroless Nickel Plating	U Nut(Stainless Steel)
MIJ04	—			40~45HRC		
MIJ05				40~45HRC,Plating Hardness 850HV	Hard Chrome Plating,Plating Thickness of 3~5μm	U Nut(Zinc-plated)
MIJ11	MIK11	0Cr18Ni9	SUS304	—	—	U Nut(Stainless Steel)
—	MIK21	9Cr18	SUS440C	48~53HRC		

Lock Nut with Hex Socket Head
MIJ01/02/03/04/05/11



Lock Nut with Extra Low Hex Socket Head
MIK01/02/11/21



The first perspective

When D=4, M3 accessories are standard nuts.

Diameter (d $^{0}_{-0.15}$) is the reference size.

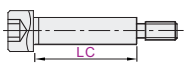
Lock Nut with Hex Socket Head

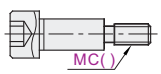
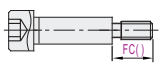
Part Number: Code	Dg6		L 0.1 mm Inc.	H	E	F	S	t	(d)	(G)	M	Included Nuts
MIJ01 MIJ02 MIJ03 MIJ04 MIJ05 MIJ11	4	-0.004 -0.012	10.0~55.0	7		6	2.5		3.9		M3	M3×0.5
	5		10.0~65.0	9				2	4.9		M4	M4×0.7
	6		10.0~110.0	10		9	3		5.8		M5	M5×0.8
	8	-0.005 -0.014	10.0~110.0	13			5	3	7.8		M6	M6×1.0
	10			16		12			9.8		M8	M8×1.25
	12		10.0~220.0	18		16	6	4	11.8		M10	M10×1.5
	13								12.8			
	14				5				13.8	1.5		
	15	-0.006 -0.017		24		18			14.8		M12	M12×1.75
	16		20.0~220.0				8	5	15.8			
	17								16.8			
	18								17.8			
	20					24	10	6	19.8			
	22	-0.007 -0.020		27					21.8		M16	M16×2.0
	25			30			12	8	24.8			

Lock Nut with Extra Low Hex Socket Head

Part Number: Code	Dg6		L 0.1 mm Inc.	H	E	F	S	t	(d)	(G)	M
MIK01 MIK02 MIK11 MIK21	4	-0.004 -0.012	10.0~55.0	7		6	2		3.9		M3
	5		10.0~65.0	9			2.5	2	4.9		M4
	6		10.0~110.0	10	1.5	9			5.8		M5
	8	-0.005 -0.014		13			3		7.8		M6
	10		15.0~110.0	16		12			9.8		M8
	12		15.0~220.0	18		16	4		11.8	1.5	M10
	13								12.8		
	14	-0.006 -0.017	25.0~220.0	24		18		3	13.8		M12
	15				2.5		5		14.8		
	16								15.8		
	20	-0.007 -0.020	30.0~220.0	27		24	6	4	19.8		M16
	25			30			8	5	24.8		

Optional Processing

Code	Spec.	
LC	**L Dimension Tolerance** 	Ordering Code YC Changes L dimension tolerance to ±0.04.
HA	**Shoulder Diameter Cut** 	Ordering Code HA D=4~10, HA=H/2-1 D=12~25,HA=H/2-2

Code	Spec.	
MC( )	**Change Thread Diameter** 	Ordering Code MC3
FC( )	**Thread Part Length** 	Ordering Code FC4 1 mm Inc.

D	MC	D	MC
5	3	12	5 6 8
6	3 4	13~16	6 8 10
8	3 4 5	20	8 10 12
10	4 5 6	25	10 12

Please order as shown

Lock Nut with Hex Socket Head

Part Number: Code	D	L 0.1 mm Inc.	H
MIJ01	4	10.0~ 55.0	7
MIJ02	5	10.0~ 65.0	9

MIJ02 — D5 — L14

Optional Processing

Part Number: Code	D	L 0.1 mm Inc.	Optional Processing Code
MIJ01	4	10.0~55.0	LC HA
MIJ02	5	10.0~65.0	FC( ) MC( )

MIJ02 — D5 — L14 — MC3

Discount price

Per	1~4	5~
Price	100%	Additional quotation

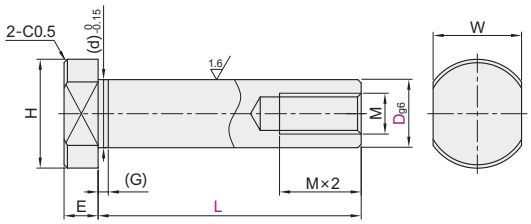
Delivery	Delivery	Delivery
8	10	11
No Hardness	No Surface Treatment	Surface Treatment

Pivot Pins with Shoulder

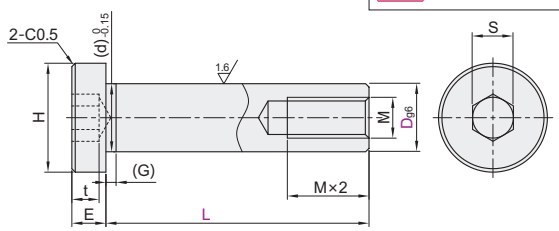
Code	Type	Material GB	Material Equiv.	Hardness	Surface Treatment
MIM05	Tapped	45	S45C	40~45HRC,Plating Hardness:850HV~	Hard Chrome Plating,Plating Thickness of 3~5μm
MIM11		0Cr18Ni9	SUS304	—	—
MIP21	Tapped, Hex Socket Head	9Cr18	SUS440C	48~53HRC	

Self-made

Tapped
MIM05
MIM11



Tapped, Hex Socket Head
MIP21



The first perspective

Diameter (d $^{0}_{-0.15}$) is the reference size.

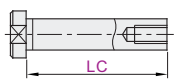
Tapped

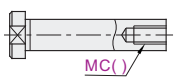
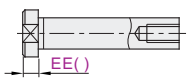
Code	Dg6		L 0.1 mm Inc.	H	W	(d)	(G)	E	M
MIM05 MIM11	6	-0.004 -0.012	15.0~110.0	10	8	5.8			M3
	8	-0.005 -0.014		13	10	7.8			M5
	10		20.0~110.0	16	13	9.8			M6
	12		20.0~220.0	18	14	11.8			
	13		25.0~220.0			12.8			M8
	14					13.8			
	15	-0.006 -0.017		24	21	14.8	1.5	5	
	16					15.8			M10
	17		30.0~220.0			16.8			
	18					17.8			M12
	20	-0.007 -0.020	35.0~220.0	27	23	19.8			
	22					21.8			M16
	25			30	27	24.8			

Tapped, Hex Socket Head

Code	Dg6		L 0.1 mm Inc.	H	E	S	t	(d)	(G)	M
MIP21	6	-0.004 -0.012	15.0~110.0	10		3	2	5.8		M3
	8	-0.005 -0.014	20.0~110.0	13		5	3	7.8		M5
	10		25.0~110.0	16				9.8		M6
	12		25.0~220.0	18		6	4	11.8		
	13							12.8		
	14		30.0~220.0					13.8		M8
	15	-0.006 -0.017		24	5			14.8	1.5	
	16					8	5	15.8		M10
	17		35.0~220.0					16.8		
	18							17.8		M12
	20	-0.007 -0.020	40.0~220.0	27		10	6	19.8		
	22							21.8		M16
	25		55.0~220.0	30		12	8	24.8		

Optional Processing

Code	Spec.	
LC	**L Dimension Tolerance** 	Ordering Code LC Changes L dimension tolerance to ±0.04.
HA	**Shoulder Diameter Cut** 	Ordering Code HA D=6~8, HA=H/2-1 D=10~25, HA=H/2-2

Code	Spec.	
MC( )	**Change Thread Diameter** 	Ordering Code MC2.6
EE( )	**Change shoulder thickness** 	Ordering Code EE3 0.5 mm Inc. EE=2~5 Not available for Tapped, Hex Socket Head Type.

D	MC	D	MC
6	2.6	16~18	6 8
8	3 4	20·22	8 10
10·12	4 5	25	10 12
13~15	5 6		

Please order as shown

Tapped

Code	D	L 0.1 mm Inc.	H
MIM05 MIM11	6	15.0~110.0	10
	8		13
	10	20.0~110.0	16

MIM11—D6—L50

Optional Processing

Code	D	L 0.1 mm Inc.	Optional Processing Code
MIM05 MIM11	6	15.0~110.0	LC HA EE( ) MC( )
	8		
	10	20.0~110.0	

MIM11—D6—L50—LC

Discount price

Per	1~4	5~
Price	100%	Additional quotation

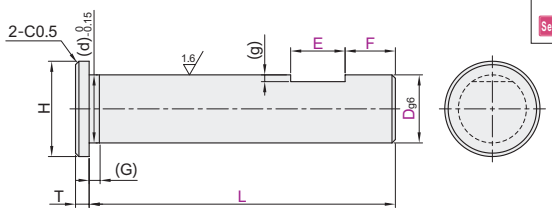

Delivery 8
No Hardness


Delivery 10
No Surface Treatment


Delivery 11
Surface Treatment

Set Screw Flat

Code	Type	Material GB	Material Equiv.	Hardness	Surface Treatment
MIR04	Set Screw Flat	45	S45C	40~45HRC	Electroless Nickel Plating



The first perspective

Diameter (d $^{0}_{-0.15}$) is the reference size.

Optional Processing

Code	Spec.	
LC	L Dimension Tolerance 	Ordering Code LC; Changes L dimension tolerance to ±0.04.
EE( )	Change Shoulder Thickness 	Ordering Code EE3; 0.5 mm Inc.; EE=T~5

Part Number Code	Dg6		L 0.1 mm Inc.	1 mm Inc. E	1 mm Inc. F	H	(d)	T	(G)	(g)
MIR04	3	-0.002 -0.008	5.0~55.0			5.5	2.9			
	4					6.5	3.9	2		0.5
	5	-0.004 -0.012	10.0~65.0			8	4.9			
	6		10.0~110.0			9	5.8			
	8	-0.005 -0.014				12	7.8	2.5		
	10		15.0~110.0			14	9.8			
	12		15.0~ 220.0			17	11.8			1
	13			1≤E≤55	0≤F≤L/2	18	12.8		1.5	
	14	-0.006 -0.017				19	13.8			
	15					20	14.8	3.5		
	16					21	15.8			
	17		20.0~ 220.0			22	16.8			
	18					23	17.8			2
	20					26	19.8			
	22	-0.007 -0.020				27	21.8	4		
	25					30	24.8			

Please order as shown

Part Number Code	D	L 0.1 mm Inc.	1 mm Inc. E	1 mm Inc. F
MIR04	6 / 8	10.0~110.0	1≤E≤55	0≤F≤L/2

MIR04 — D6 — L60 — E5 — F10

Optional Processing

Part Number Code	D	L 0.1 mm Inc.	1 mm Inc. E	1 mm Inc. F	Optional Processing Code
MIR04	6 / 8	10.0~110.0	1≤E≤55	0≤F≤L/2	LC EE( )

MIR04 — D6 — L60 — E5 — F10 — LC

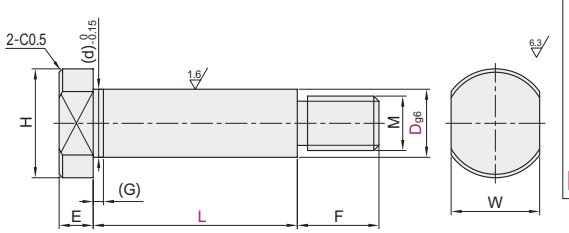
Discount price

Per	1~4	5~
Price	100%	Additional quotation

Delivery 11

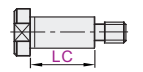
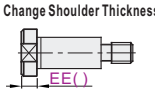
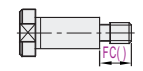
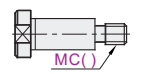
Lock Nut

Code L Selectable	Code L Configurable	Material GB	Material Equiv.	Hardness	Surface Treatment	Accessory(1 Pc.)
MIE01	—			—	Black Oxide	U Nut(Zinc-plated)
MIE02	MIE12	45	S45C	40~45HRC		
	MIE14				Electroless Nickel Plating	U Nut(Stainless Steel)
—	MIE15			40~45HRC, Plating Hardness: 850HV~	Hard Chrome Plating, Plating Thickness of 3~5μm	U Nut(Zinc-plated)
	MIE31	9Cr18	SUS440C	48~53HRC	—	U Nut(Stainless Steel)



Diameter (d $^{0}_{-0.15}$) is the reference size. When D=4, M3 accessories are standard nuts.

Optional Processing

Code	Spec.	
LC	L Dimension Tolerance 	Ordering Code LC; Changes L dimension tolerance to ±0.04.
EE( )	Change Shoulder Thickness 	Ordering Code EE3; 0.5 mm Inc.; EE=2~5
FC( )	Change Thread Part Length 	Ordering Code FC4; 1 mm Inc.
MC( )	Change Thread Diameter 	Ordering Code MC3

D	MC	D	MC
5	3	12	5 6 8
6	3 4	13-18	6 8 10
8	3 4 5	20-22	8 10 12
10	4 5 6	25	10 12

L Selectable

Part Number Code	Dg6		L	H	W	E	F	(d)	(G)	M	Included Nut
MIE01 MIE02	4	-0.004 -0.012	10 12 14 15 16 18 20 22 24 25 30	7	5	3	6	3.9	1.5	M3	M3×0.5
	5			9	7	4		4.9		M4	M4×0.7
	6		15 16 18 20 22 24 25 30	10	8	5	9	5.8		M5	M5×0.8
	8	-0.005 -0.014	15 16 18 20 22 24 25 30 40 45 50	13	10			7.8		M6	M6×1.0
	10		18 20 22 24 25 30 35 40 45 50	16	13		12	9.8		M8	M8×1.25
	12	-0.006 -0.017	22 24 25 30 35 40 45 50	18	14		16	11.8		M10	M10×1.5

L Configurable

Part Number Code	Dg6		L 0.1 mm Inc.	H	W	E	F	(d)	(G)	M	Included Nut
MIE12 MIE14 MIE15 MIE31	4	-0.004 -0.012	5.0~55.0	7	5	3	6	3.9	1.5	M3	M3×0.5
	5		5.0~65.0	9	7	4		4.9		M4	M4×0.7
	6		10.0~110.0	10	8	24	9	5.8		M5	M5×0.8
	8	-0.005 -0.014		13	10	21	5	7.8		M6	M6×1.0
	10			16	13		18	9.8		M8	M8×1.25
	12		15.0~220.0	18	14		16	11.8		M10	M10×1.5
	13	-0.006 -0.017	20.0~220.0					12.8		M12	M12×1.75
	14							13.8			
	15							14.8			
	16							15.8			
	17							16.8			
	18							17.8			
	20	-0.007 -0.020		27	23		24	19.8		M16	M16×2.0
	22							21.8			
	25			30	27			24.8			
	30		40.0~220.0	35	30		30	29.0			

Please order as shown

L Selectable

Part Number Code	D	L
MIE01	4	10 12 14
MIE02	5	

MIE02 — D5 — L14

L Configurable

Part Number Code	D	L 0.1 mm Inc.
MIE12	4	5.0~ 55.0
MIE14	5	5.0~ 65.0

MIE14 — D5 — L50.1

Optional Processing

Part Number Code	D	L 0.1 mm Inc.	Optional Processing Code
MIE12	4	5.0~ 55.0	LC EE( ) FC( ) MC( )
MIE14	5	5.0~ 65.0	

MIE14 — D5 — L50.1 — LC

Discount price

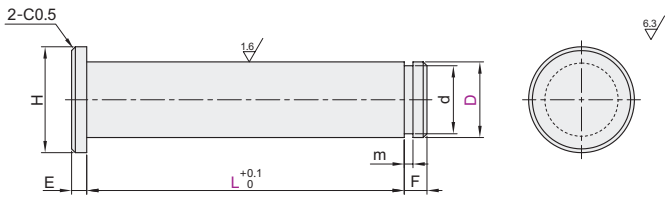
Per	1~4	5~
Price	100%	Additional quotation

Delivery 8 — No Hardness
Delivery 10 — No Surface Treatment
Delivery 11 — Surface Treatment

Pivot Pins with Shoulder

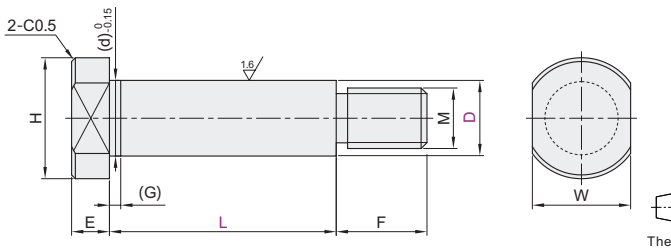
Code		Material		Hardness	Surface Treatment	Accessory			
						Retaining Ring		Lock Nut	
Retaining Ring	Lock Nut	GB	Equiv.			Name	Material	Name	Material
MIT01	—			—	Black Oxide	Retaining Ring 1 Pc.	Spring Steel	U Nut 1Pc.	Zinc-plated
MIT02	MIT22	45	S45C	40~45HRC					
MIT04	MIT24				Electroless Nickel Plating		Stainless Steel		Stainless Steel
MIT11	—	0Cr18Ni9	SUS304	—	—		Stainless Steel		Stainless Steel

Retaining Ring
MIT01
MIT02
MIT04
MIT11



D	Tolerance Selection		
	M	P	H
	m6	p6	h7
2·3	+0.008 +0.002	+0.012 +0.006	0 -0.010
4·5·6	+0.012 +0.004	+0.020 +0.012	0 -0.012
8·10	+0.015 +0.006	+0.024 +0.015	0 -0.015
12~18	+0.018 +0.007	+0.029 +0.018	0 -0.018
20~25	+0.021 +0.008	+0.035 +0.022	0 -0.021

Lock Nut
MIT22
MIT24



D	Tolerance Selection		
	F	C	T※
	f8	c9	—
2·3	-0.006 -0.020	-0.060 -0.085	-0.025 -0.034
4·5·6	-0.010 -0.028	-0.070 -0.100	-0.025 -0.037
8·10	-0.013 -0.035	-0.080 -0.116	-0.025 -0.040
12~18	-0.016 -0.043	-0.095 -0.138	-0.025 -0.043
20~25	-0.020 -0.053	-0.110 -0.162	-0.025 -0.046

※T tolerances are recommended values for Multi-Layer Oil Free Bushings .

The first perspective

Diameter (d $^{0}_{-0.15}$) is the reference size.

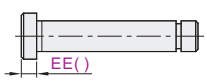
Retaining Ring

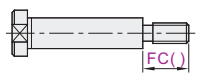
Part Number			L	m		F	d		E	H	Attached Retaining Ring	
Code	Tol.	D	0.1 mm Inc.									
MIT01 MIT02 MIT04 MIT11	M(m6) P(p6) H(h7) F(f8) C(c9) T (for Bushings)	2	5.0~32.0	0.5	+0.05 0	2	1.5	+0.06 0	2	4.5	E Type	1.5
		3	5.0~55.0				2			5.5		2
		4			+0.1 0		3			6.5		3
		5	10.0~65.0	0.7			4	+0.075 0		8		4
		6	10.0~110.0				5			9		5
		8		0.9			7	+0.09 0	2.5	12		7
		10	15.0~110.0	1.15	+0.14 0	3	9.6	0 -0.09		14		10
		12	15.0~220.0				11.5			17		12
		13	25.0~220.0				12.4	0 -0.11	3.5	18	C Type	13
		14					13.4			19		14
		15					14.3			20		15
		16	30.0~220.0				15.2			21		16
		17					16.2			22		17
		18		1.35			17			23		18
		20					19	0 -0.21	4	26		20
		22					21			27		22
		25					23.9			31		25

Lock Nut

Part Number			L	H	W	E	F	(d)	(G)	M	Included Nut
Code	Tol.	D	0.1 mm Inc.								
MIT22 MIT24	M(m6) P(p6) H(h7) F(f8) C(c9) T (for Bushings)	4	5.0~55.0	7	5	4	6	3.9	1.5	M3	M3×0.5
		5	5.0~65.0	9	7			4.9		M4	M4×0.7
		6	10.0~110.0	10	8	5	9	5.8		M5	M5×0.8
		8		13	10			7.8		M6	M6×1.0
		10		16	13		12	9.8		M8	M8×1.25
		12	15.0~220.0	18	14		16	11.8		M10	M10×1.5
		13	25.0~220.0	24	21	5	18	12.8		M12	M12×1.75
		14						13.8			
		15						14.8			
		16						15.8			
		17	30.0~220.0					16.8			
		18						17.8			
		20		27	23		24	19.8		M16	M16×2.0
		22						21.8			
		25		30	27			24.8			

Optional Processing

Code	Spec.	
EF( )	**Change Shoulder Thickness** 	Ordering Code EF3 0.5 mm Inc. EF=2~5 Not applicable to Retaining Ring Type.
EE( )	**Change Shoulder Thickness** 	Ordering Code EE3 0.5 mm Inc. EE=E~5 Not applicable to Lock Nut Type.
MC( )	**Change Thread Diameter** 	Ordering Code MC3 D / MC: 5: 3; 6: 3 4; 8: 3 4 5; 10: 4 5 6; 12: 5 6 8; 13~18: 6 8 10; 20·22: 8 10 12; 25: 10 12 Not applicable to Retaining Ring Type.

Code	Spec.	
EC( )	**Retaining Ring Groove Position** 	Ordering Code EC3 0.1 mm Inc. D / EC: 2~4: 1.5~3; 5: 1.7~3; 6: 1.9~4; 8: 2.4~5; 10~18: 2.7~5; 20~25: 2.9~5 Overall Length is L+EC+E. Not applicable to Lock Nut Type.
FC( )	**Thread Part Length** 	Ordering Code FC4 1 mm Inc.

Delivery 8 — No Hardness
Delivery 10 — No Surface Treatment
Delivery 11 — Surface Treatment

Please order as shown

Retaining Ring

Part Number			L	m
Code	Tol.	D	0.1 mm Inc.	
MIT01 MIT02 MIT04	M(m6) P(p6) H(h7)	2	5.0~32.0	0.5
		3	5.0~55.0	
		4		0.7

MIT02 — H — D2 — L14

Optional Processing (Retaining Ring)

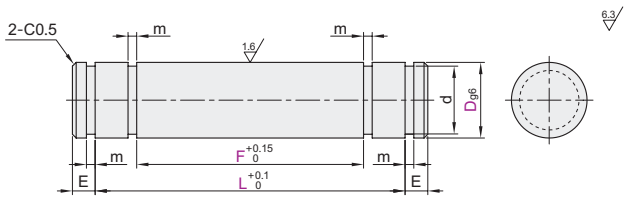
Part Number			L	Optional Processing Code
Code	Tol.	D	0.1 mm Inc.	
MIT01 MIT02 MIT04	M(m6) P(p6) H(h7)	2	5.0~32.0	EE( ) EC( )
		3	5.0~55.0	
		4		

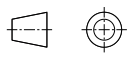
MIT02 — H — D2 — L14 — EE3

Discount price

Per	1~4	5~
Price	100%	Additional quotation

Code	Type	Material		Surface Treatment	Accessory	
		GB	Equiv.		Name	Material
MJD11	with Double Retaining Ring Groove	0Cr18Ni9	SUS304	—	Retaining Rings 4 Pcs.	Stainless Steel





The first perspective

Part Number			1 mm Inc.		E	d		m	
Code	Dg6		L	F					
MJD11	3	-0.002 -0.008	8~65	5~47	2	2	+0.06 0	0.5	+0.05 0
	4	-0.004 -0.012	9~65	5~48		3		0.7	+0.1 0
	5		14~65	14~60		4	+0.075 0		
	6		14~110	10~96		5			
	8	-0.005 -0.014			3	7	+0.09 0	0.9	
	10		20~110	15~95		9.6	0 -0.09		
	12		20~220	15~195		11.5			
	13	-0.006 -0.017				12.4		1.15	
	14		30~220	25~195		13.4	0 -0.11		+0.14 0
	15				4	14.3			
	16					15.2			
	20	-0.007 -0.020	35~220	30~195		19	0 -0.21	1.35	
	25					23.9			


Please order as shown

Part Number		1 mm Inc.	
Code	Dg6	L	F
MJD11	8	14~110	10~96
	10	20~110	15~95
	12	20~220	15~195

MJD11 — D8 — L80 — F20

Discount price

Per	1~4	5~
Price	100%	Additional quotation

Delivery 8

Fulcrum Pins

◀ Straight Slot Groove
◀ Hex Hole
Standard

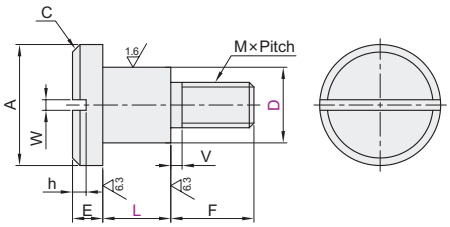
Code				Material		Hardness	Surface Treatment
Straight Slot Groove		Hex Hole		GB	Equiv.		
$D^{-0.01}_{-0.05}$	D_{g6}	$D^{-0.01}_{-0.05}$	D_{g6}				
MJK01	MJK05	MJK11	MJK15	45	S45C	—	Black Oxide
—	—	MJK13	MJK12			40~45HRC	
MJK04	MJK06	MJK14	MJK16	0Cr18Ni9	SUS304	—	—

D_{g6}	
4~6	-0.004 -0.012
8·10	-0.005 -0.014
12~15	-0.006 -0.017

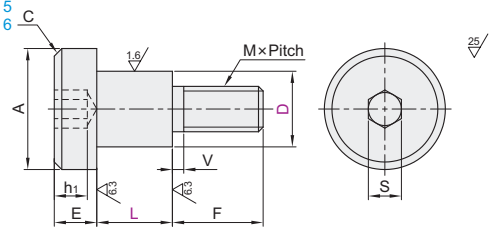
L Tolerance	
Unhardened	+0.15 +0.05
Hardened	+0.2 0

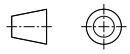
Self-made

Straight Slot Groove
MJK01
MJK04
MJK05
MJK06



Hex Hole
MJK11
MJK13
MJK14
MJK12
MJK15
MJK16





The first perspective

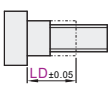
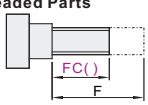
Straight Slot Groove

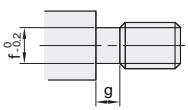
Part Number Code	D	L 1 mm Inc.	A	E	M×Pitch	F	V	W	h	C
(D Tol. $^{-0.01}_{-0.05}$) MJK01 MJK04	4	1~22	6	2	2.6×0.45	4	0.8	0.8	1	0.5
(D Tol. g6) MJK05 MJK06	5		8		3×0.5	6	1			
	6		10	2.5	4×0.7	8	1.2	1.2	1.5	
	8		12	3	5×0.8	10	1.4			
	10		16	4	6×1.0	12	1.5	1.4	1.8	1
	12		18	5	8×1.25			1.5	2	

Hex Hole

Part Number Code	D	L 1 mm Inc.	A	E	M×Pitch	F	V	S	h_1	C
(D Tol. $^{-0.01}_{-0.05}$) MJK11 MJK13 MJK14	4	5~22	6	3.5	2.6×0.45	4	0.8	2	2	0.5
(D Tol. g6) MJK15 MJK12 MJK16	5		8	4	3×0.5	6	1	2.5	2.5	
	6		10		4×0.7	8	1.2	3	3	
	8		12	4.5	5×0.8	10	1.4	4	3.5	
	10		16	5	6×1.0	12	1.5	5	4	1
	12		18		8×1.25					

Optional Processing

Code	Spec.	
LD( )	**Change the L Dimension Increment** 	Ordering Code LD5.5 ! 0.1 mm Inc. ! LD=1.1~19.9(Straight Slot Groove) ! LD=5.1~19.9(Hex Hole) ! In selection, L must be changed to LD.
FC( )	**Change the Length of Threaded Parts** 	Ordering Code FC8 ! 1 mm Inc.

Code	Spec.	
PB	**Adds a Relief to M** 	Ordering Code PB

D	M×P	g	f
4	2.6×0.45	1	1.9
5	3×0.5		2.3
6	4×0.7	1.2	3.2
8	5×0.8	1.4	4.0
10	6×1.0	1.7	4.8
12	8×1.25		6.5

Please order as shown

Straight Slot Groove

Part Number Code	D	L 1 mm Inc.	A
MJK05 MJK06	4	1~22	6
	5		8
	6		10

MJK06 — D4 — L14

Optional Processing

Part Number Code	D	L 1 mm Inc.	Optional Processing Code
MJK05 MJK06	4	1~22	LD( ) FC( ) PB
	5		
	6		

MJK06 — D4 — LD5.5

Discount price

Per	1~9	10~
Price	100%	Additional quotation

Delivery	Delivery	Delivery
8	10	11
! No Hardness	! No Surface Treatment	! Surface Treatment

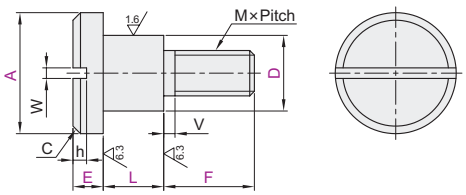
Fulcrum Pins

Code				Material		Hardness	Surface Treatment
Straight Slot Groove		Hex Hole		GB	Equiv.		
$D^{-0.01}_{-0.05}$	D_{g6}	$D^{-0.01}_{-0.05}$	D_{g6}				
—	—	MJR12	MJR15	45	S45C	—	Black Oxide
		MJR11	MJR13			40~45HRC	
MJR04	MJR06	MJR14	MJR16	0Cr18Ni9	SUS304	—	—

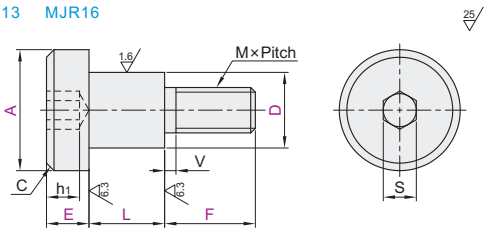
D_{g6}	
4~6	-0.004 -0.012
8·10	-0.005 -0.014
12~15	-0.006 -0.017

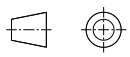
L Tolerance	
Unhardened	+0.1 0
Hardened	+0.2 0

Straight Slot Groove
MJR04
MJR06



Hex Hole
MJR11 MJR14
MJR12 MJR15
MJR13 MJR16




The first perspective

Straight Slot Groove

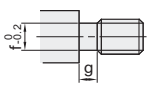
Part Number Code	D	L 0.1 mm Inc.	A	E 0.1 mm Inc.	F 1 mm Inc.	M×Pitch	V	W	h	C
(D Tol. $^{-0.01}_{-0.05}$) (D Tol. g6) MJR04 MJR06	4	1~22	6 8	2.0~6.0	3·4	2.6×0.45	0.8	0.8	1	0.5
	5		8 10		3~8	3×0.5	1			
	6		10 12	2.5~6.0	4~10	4×0.7	1.2	1.2	1.5	
	8		12 16		5~12	5×0.8	1.4			
	10		16 18 20	3.0~7.0	6~15	6×1.0	1.5	1.4	1.8	1
	12		18 20 22 24		8~15	8×1.25		1.5	2	

Hex Hole

Part Number Code	D	L 0.1 mm Inc.	A	E 0.1 mm Inc.	F 1 mm Inc.	M×Pitch	V	S	h_1	C
(D Tol. $^{-0.01}_{-0.05}$) (D Tol. g6) MJR11 MJR13 MJR12 MJR15 MJR14 MJR16	4	5~22	6 8	2.0~6.0	3·4	2.6×0.45	0.8	2	2	0.5
	5		8 10		3~8	3×0.5	1	2.5	2.5	
	6		10 12	2.5~6.0	4~10	4×0.7	1.2	3	3	
	8		12 16		5~12	5×0.8	1.4	4	3.5	
	10		16 18 20		6~15	6×1.0	1.5	5	4	1
	12		18 20 22 24	3.0~7.0	8~15	8×1.25				
	13									
	15		20 22 24		10~18	10×1.5				

Optional Processing

Code	Spec.
PB	**Adds a relief to M**



Ordering Code PB

D	M×P	g	f
4	2.6×0.45	1	1.9
5	3×0.5		2.3
6	4×0.7	1.2	3.2
8	5×0.8	1.4	4.0
10	6×1.0	1.7	4.8
12·13	8×1.25		6.5
15	10×1.5	2	8.2

Please order as shown

Straight Slot Groove

Part Number Code	D	L	A	E	F
MJR04	4	1~22	6 8	2.0~6.0	3·4
MJR06	5		8 10		4~5

MJR06 — D5 — L14 — A10 — E3 — F5

Optional Processing

Part Number Code	D	L	A	E	F	Optional Processing Code
MJR04	4	1~22	6 8	2.0~6.0	3·4	PB
MJR06	5		8 10		4~5	

MJR06 — D5 — L14 — A10 — E3 — F5 — PB

Discount price

Per	1~9	10~
Price	100%	Additional quotation


Delivery 8
No Hardness

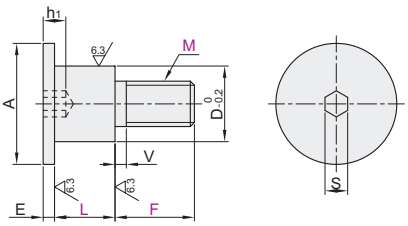

Delivery 10
No Surface Treatment


Delivery 11
Surface Treatment

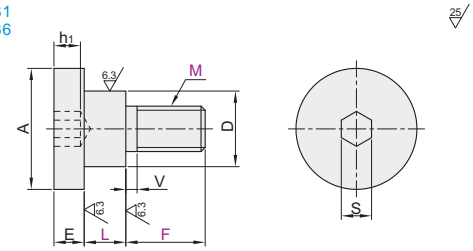
Stepped Screws

Code			Material		Surface Treatment
Extra Low Head	Low Head		GB	Equiv.	
$D^{0}_{-0.2}$	$D^{0}_{-0.2}$	D_{h7}			
MJT01	MJT21	MJT31	45	S45C	Black Oxide
MJT06	MJT26	MJT36	0Cr18Ni9	SUS304	—

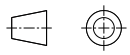
Extra Low Head
MJT01
MJT06



Low Head
MJT21
MJT26
MJT31
MJT36



When the outer diameter tolerance of D is h7, the surface roughness of D outer diameter is 1.6.


The first perspective

Extra Low Head

Part Number		1 mm Inc.		E	D	A	S	V	h_1
Code	M	L	F						
MJT01 MJT06	3	5~25	3~6	1.5	5	8	1.5	1	1.5
	4		4~8		6	10	2	1.2	2
	5		5~12		8	12	3	1.4	3
	6		6~12		10	16	3		3
	8		8~15		12	18	4	1.5	3.5
	10		10~18		15	20	5		4

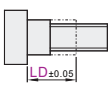
Low Head($D^{0}_{-0.2}$)

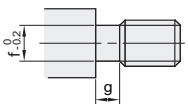
Part Number		1 mm Inc.		E	D	A	S	V	h_1
Code	M	L	F						
MJT21 MJT26	3	3~25	3~6	2	5	8	2	1	2
	4		4~8	2.8	6	10	2.5	1.2	2.5
	5		5~12	3.5	8	12	3	1.4	3
	6		6~12	4	10	16	4		3.5
	8		8~15	5	12	18	5	1.5	4
	10		10~15	6	15	20	6		4.5

Low Head(D_{h7})

Part Number		L	F	E	D_{h7}	A	S	V	h_1
Code	M								
MJT31 MJT36	3	3 4 5 6	3 4 5 6	2	5	8	2	1	2
		7 8	4 5 6						
	4	3 4 5 6 7	4 5 6 8	2.8	6	10	2.5	1.2	2.5
		8	5 6 8						
		10	6 8						
	5	3 4 5 6 7 8	5 6 8 10	3.5	8	12	3	1.4	3
	6	3 4 5 6 7 10	8 10 12	4	10	16	4	1.5	3.5

Optional Processing

Code	Spec.
LD( )	**Change L Dimension Increment**  Ordering Code LD5.5 0.1 mm Inc. LD=5.1~24.9 Applicable Extra Low Head Type. LD=3.1~24.9 Applicable Low Head ($D^{0}_{-0.2}$) Type. In selection, L must be changed to LD.

Code	Spec.
PB	**Adds a Relief on M**  Ordering Code PB

D	M×P	g	f
5	3×0.5	1	2.3
6	4×0.7	1.2	3.2
8	5×0.8	1.4	4.0
10	6×1.0	1.7	4.8
12	8×1.25		6.5
15	10×1.5	2	8.2

Please order as shown

Extra Low Head

Part Number		1 mm Inc.	
Code	M	L	F
MJT01	3	5~25	3~6
MJT06	4		4~8

MJT06 — M4 — L6 — F4

Optional Processing

Part Number		1 mm Inc.		Optional Processing Code
Code	M	L	F	
MJT01	3	5~25	3~6	LD() PB
MJT06	4		4~8	

MJT06 — M4 — L6 — F4 — PB

Discount price

Per	1~19	20~
Price	100%	Additional quotation


Delivery 11

Cantilever Shafts Pivot Pins


Self-made P167
Cantilever Shafts , Threaded with Retaining Ring Groove
MDD


Self-made P168
Cantilever Shafts , Threaded with Retaining Ring Groove
MDE


Self-made P169
Cantilever Shafts , Threaded with Tapped End
MDJ/MDL


Self-made P170
Cantilever Shafts , Threaded with Tapped End
MDK


Self-made P171
Cantilever Shafts , Both Ends Threaded
MDP

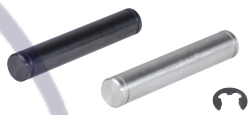

Self-made P174
Cantilever shafs , Bolt Mount with Retaining Ring Groove
MED


Self-made P178
Cantilever Shafts,Pilot－Threaded with Retaining Ring Groove
MFD


Self-made P180
Cantilever Shafts,Pilot－Threaded with Tapped End
MFJ


Self-made P184
Cantilever Shafts,Heavy Load Type
MGB


Self-made P186
Cantilever Shafts,Flanged Type
MGJ


Self-made P190
Pivot Pins,Straight Type
MHC


Self-made P192
Pivot Pins,Straight Type,D-Cut
MHM


Self-made P193
Pivot Pins with Shoulder,Cotter Pins Fixed
MIB


Self-made P194
Pivot Pins with Shoulder,with Retaining Ring Groove
MIC


Self-made P195
Pivot Pins with Shoulder,Lock Nut with Hex Socket Head, Lock Nut with Extra Low Hex Socket Head
MIJ


Self-made P196
Pivot Pins with Shoulder,Tapped/Tapped, Hex Socket Head
MIM


Self-made P197
Pivot Pins with Shoulder,Set Screw Flat
MIR


Self-made P197
Pivot Pins with Shoulder,Lock Nut
MIE


Self-made P198
Pivot Pins with Shoulder,Diameter Tolerance Selectable Type
MIT


Self-made P200
Pivot Pins,with Double Retaining Ring Groove
MJD


Self-made P201
Fulcrum Pins·Straight Slot Groove/Hex Hole
MJK


Self-made P202
Fulcrum Pins·Straight Slot Groove/Hex Hole
MJR


Self-made P204
Stepped Screws,Extra Low Head/Low Head
MJT