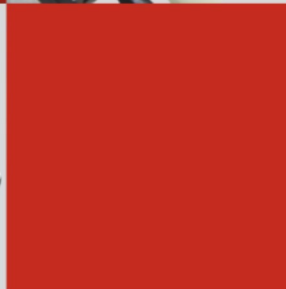




Hydraulic Shock Absorber Buffer



Softly
Safely
Smoothly



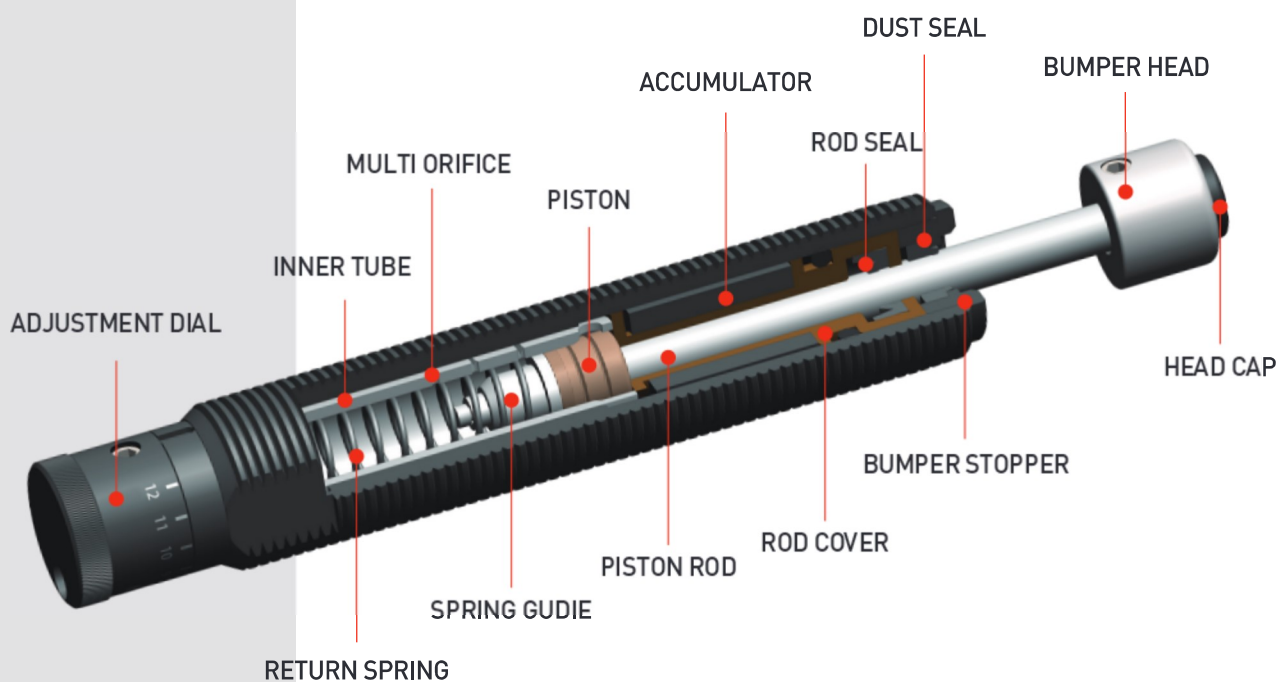
KOBA
Best Energy Absorption
www.kobapage.com

KMA Series



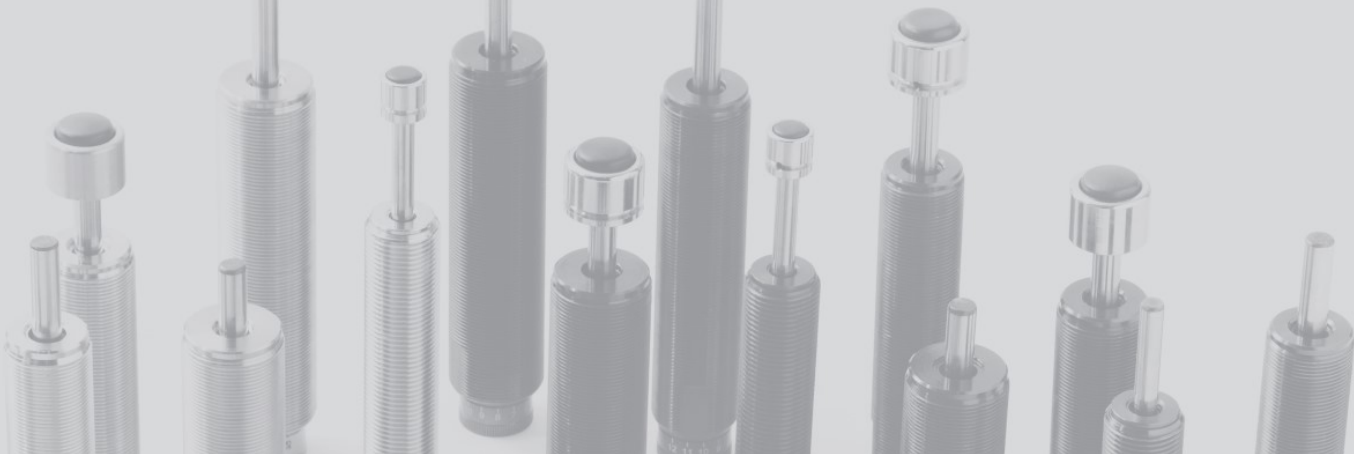
KOBA
Best Energy Absorption

KMA - the adjustable industrial shock absorber for a broad range of application

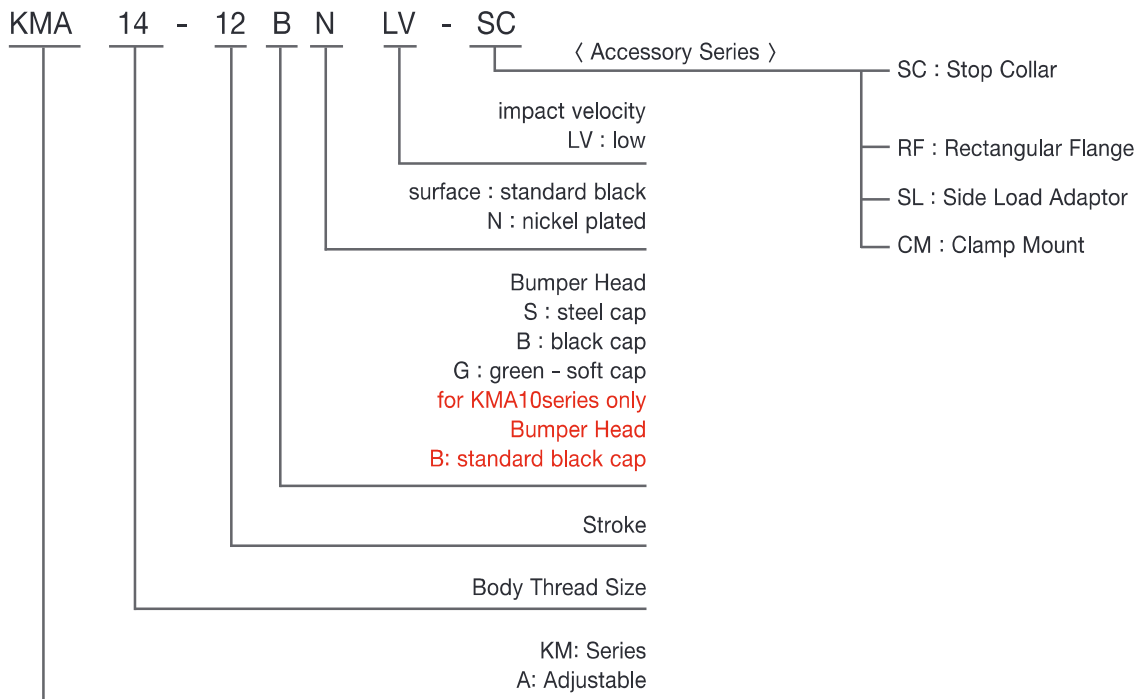


Properties

- KMA is the adjustable series to control damping force according impact velocity by 12 steps.
- KMA series offer highest energy capacity and a wide range of effective Weight.
- Body has been developed as compact unit to avoid the Bottom Out problem.
- Fully threaded Body for highest mounting flexibility and improved thermal energy dissipation to the atmosphere.
- The hardened stainless steel piston Rod as well special treatment of the piston offers high life cycle rate.
- Several options of bumper head material - steel, black standard PU, green soft PU
- Impact velocity : 0,3~5,0m/s or for - LV(low velocity) models : 0,08~1,3m/s
- Standard temperature range -10~80 °C
- Option -40~120 °C (special seal, special oil)



KMA Series Ordering Information



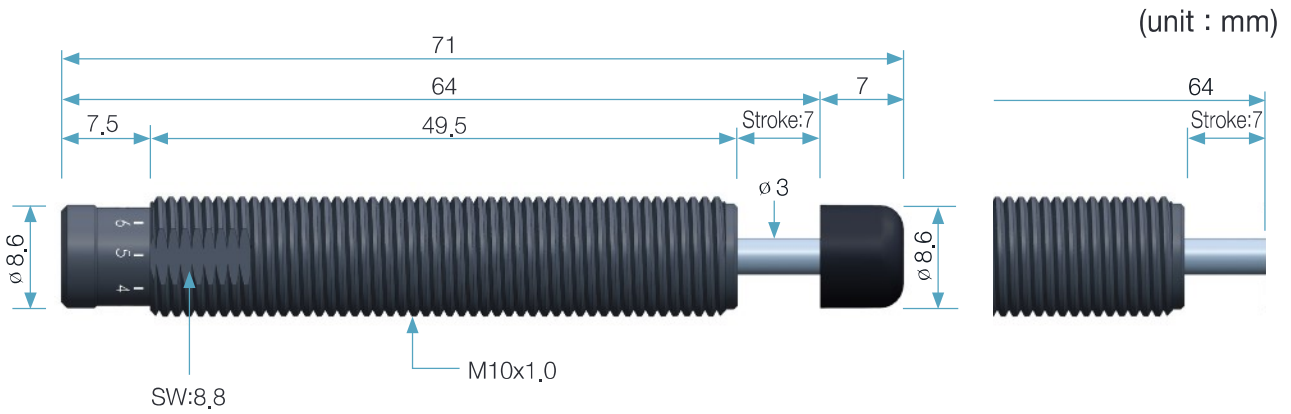
Accessory Series Charts

Accessories	Side Load Adapter	Stop Collar	Rectangular Flange	Clamp Mount
Model \ Symbols	SL	SC	RF	CM
KMA 10-07	●	●		●
KMA 12-14	●	●		●
KMA 14-12	●	●		●
KMA 16-12	●	●		●
KMA 20-16	●	●		●
KMA 25-25	●	●		●
KMA 27-25	●	●		●
-40		●		●
KMA 30-35	●	●		●
KMA33-25	●	●	●	●
-50		●	●	●
KMA 36-25	●	●	●	●
-50		●	●	●

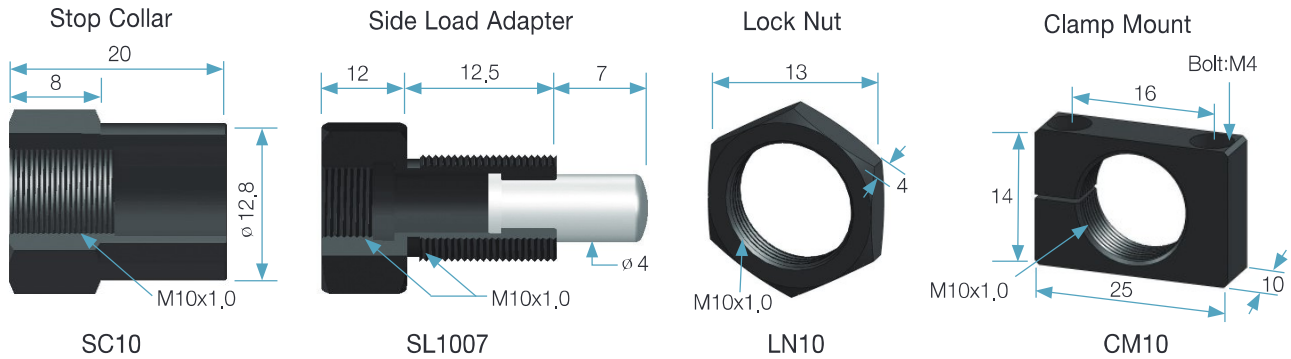
KMA 10 - 07(B)

Engineering Data

Model	Stroke (mm) S	Max_Energy / Cycle (Nm) E _T	Max_Energy /Hour (Nm/h) E _T C	Effective Weight (kg) We	Recoil Force (N)		Weight (g)
					Ext	Comp	
KMA10-07(B)	7	5.5	15,000	1-123	2.4	5.4	21



Accessory (unit : mm)



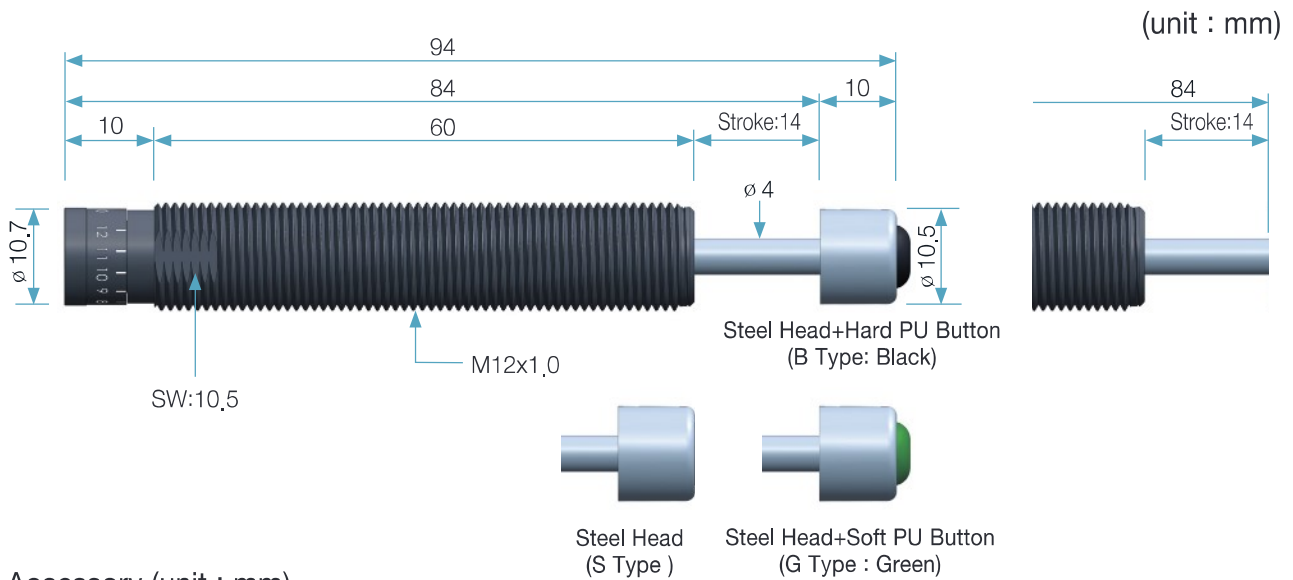
Adjustment Diagram



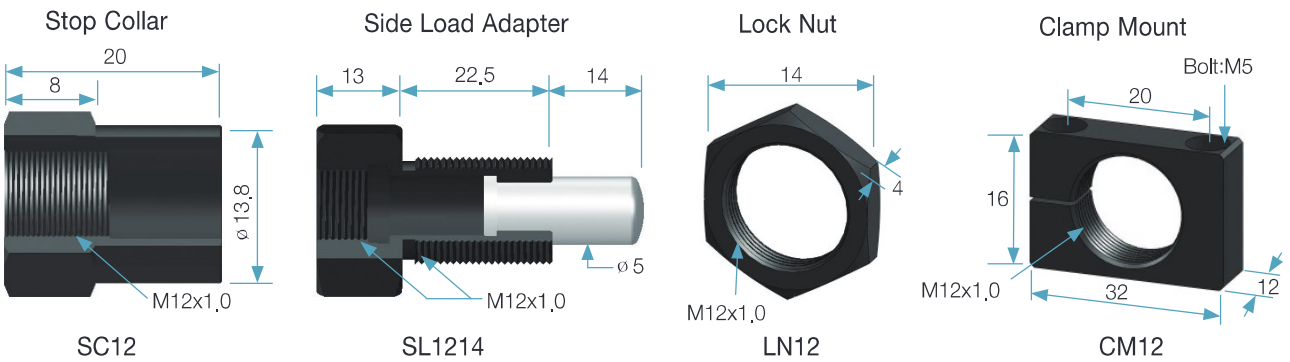
KMA 12 - 14(B)

Engineering Data

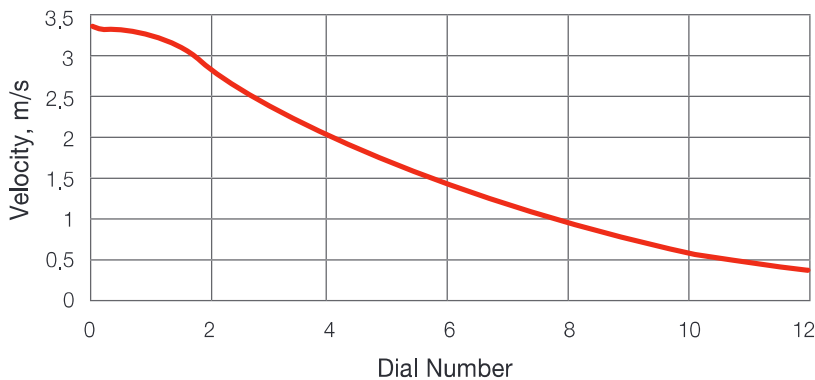
Model	Stroke (mm) S	Max_Energy / Cycle (Nm) E _T	Max_Energy /Hour (Nm/h) E _T C	Effective Weight (kg) We	Recoil Force (N)		Weight (g)
					Ext	Comp	
KMA12-14(B)	14	21,5	35,000	4-477	3,7	9,6	33



Accessory (unit : mm)



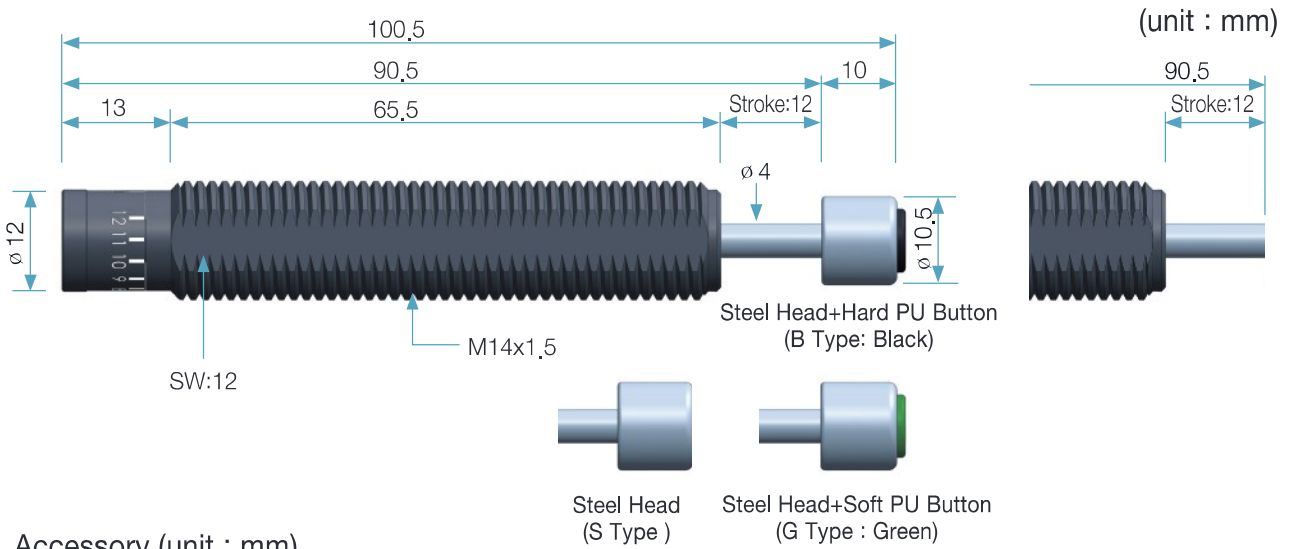
Adjustment Diagram



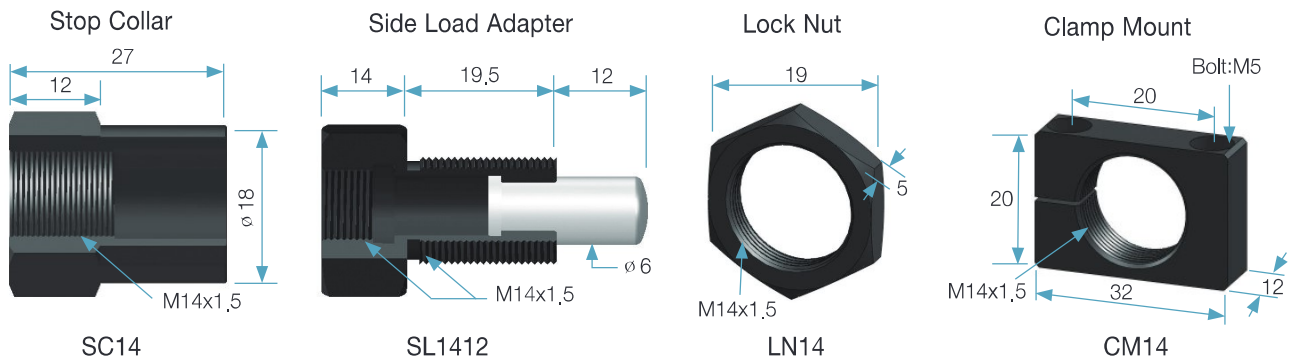
KMA 14 - 12(B)

Engineering Data

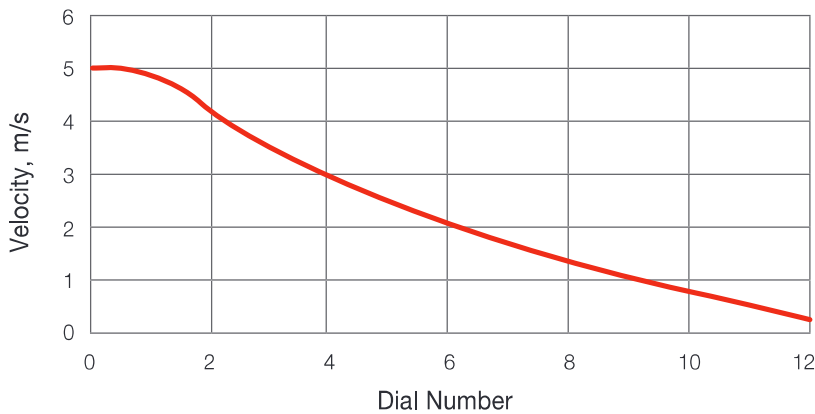
Model	Stroke (mm) S	Max_Energy / Cycle (Nm) E _T	Max_Energy / Hour (Nm/h) E _T C	Effective Weight (kg) We	Recoil Force (N)		Weight (g)
					Ext	Comp	
KMA14-12(B)	12	21,5	45,000	1,5-494	3,6	9,8	55
-12(B)LV				25,4-1,650			



Accessory (unit : mm)



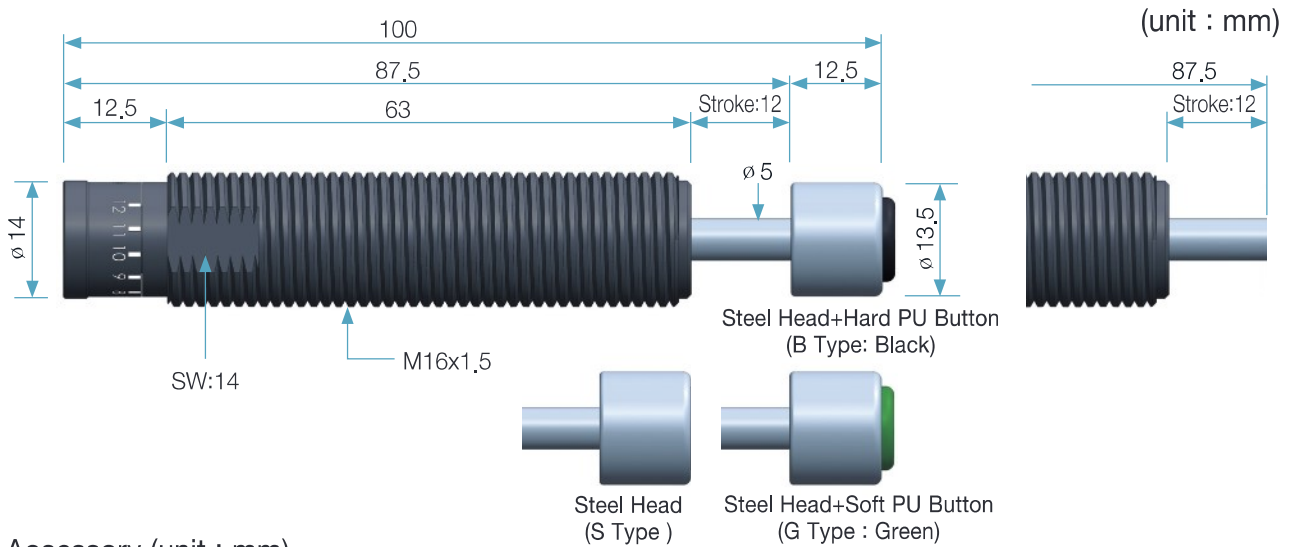
Adjustment Diagram



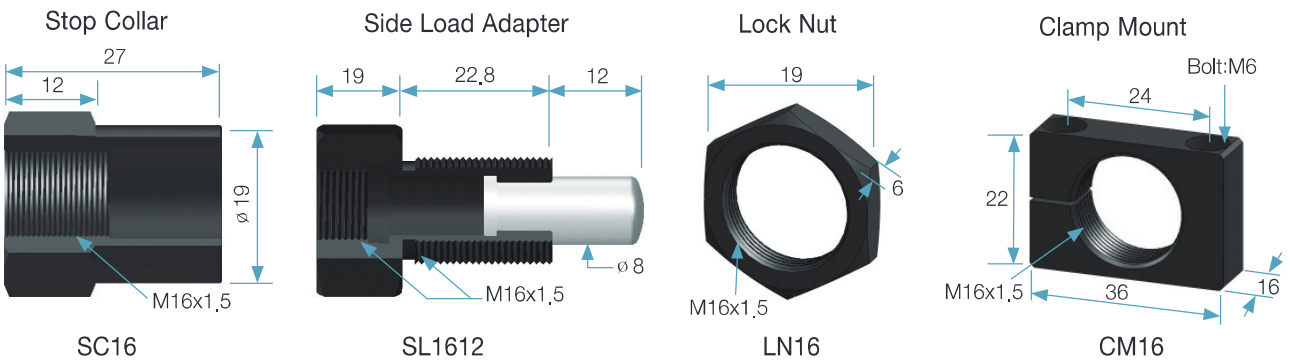
KMA 16 - 12(B)

Engineering Data

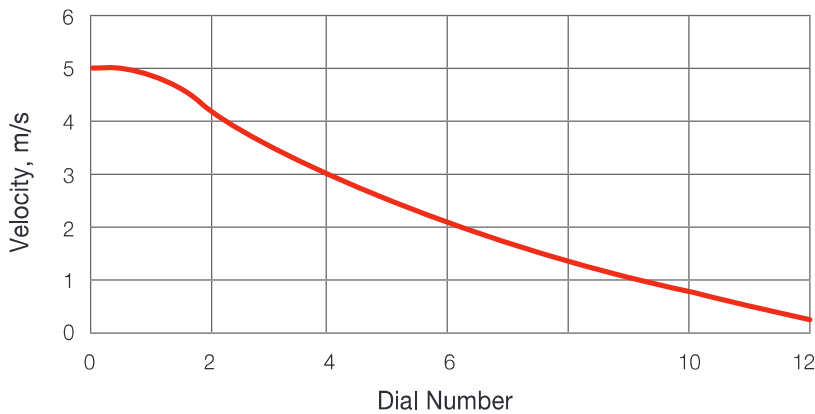
Model	Stroke (mm) S	Max_Energy / Cycle (Nm) E _T	Max_Energy / Hour (Nm/h) E _T C	Effective Weight (kg) We	Recoil Force (N)		Weight (g)
					Ext	Comp	
KMA16-12(B)	12	27	51,000	2-527	4.9	11.4	80
-12(B)LV				31.9-3,375			



Accessory (unit : mm)



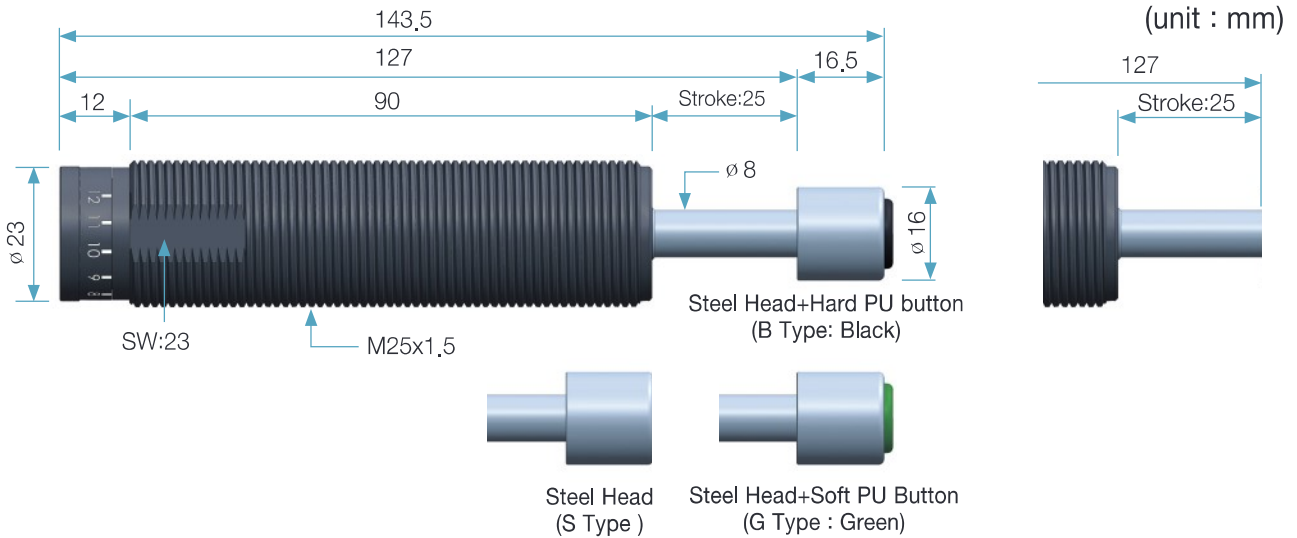
Adjustment Diagram



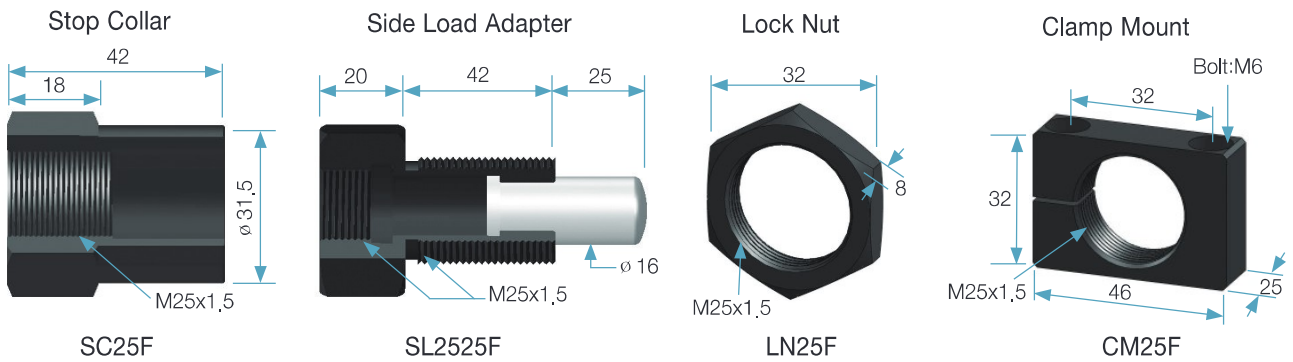
KMA 25 - 25(B)

Engineering Data

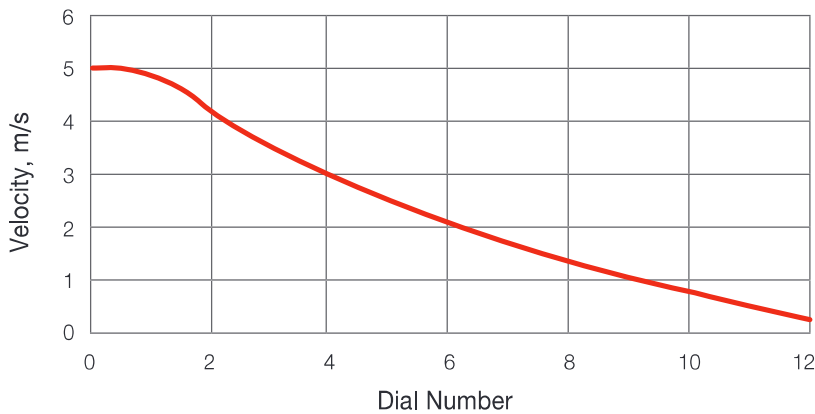
Model	Stroke (mm) S	Max_Energy / Cycle (Nm) E _T	Max_Energy / Hour (Nm/h) E _T C	Effective Weight (kg) We	Recoil Force (N)		Weight (g)
					Ext	Comp	
KMA25-25(B)	25	177	113,000	8,3-2,150	10,2	29,5	285
-25(B)LV				209,4-15,750			



Accessory (unit : mm)



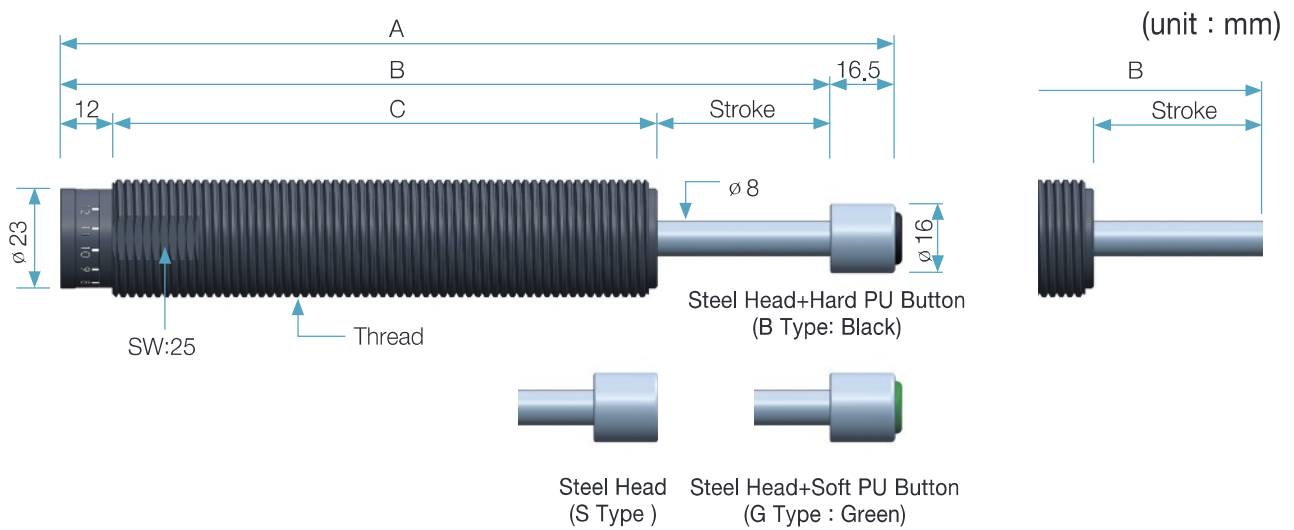
Adjustment Diagram



KMA 27 Series

Engineering Data

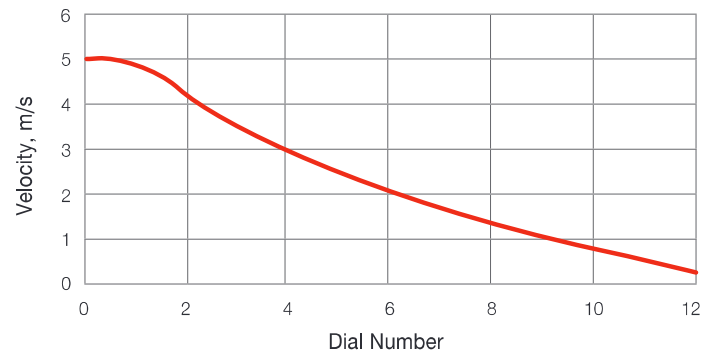
Model	Stroke (mm) S	Max_Energy / Cycle (Nm) E _T	Max_Energy /Hour (Nm/h) E _T C	Effective Weight (kg) We	Recoil Force (N)		Weight (g)
					Ext	Comp	
KMA27-25(B) -25F(B) -25(F)(B)LV	25	177	113,000	8,3-2,150 209,4-15,750	10,2	29,5	305
-40(B) -40(B)LV	40	283	149,000	20-5,120 334,9-25,200	10	31	429



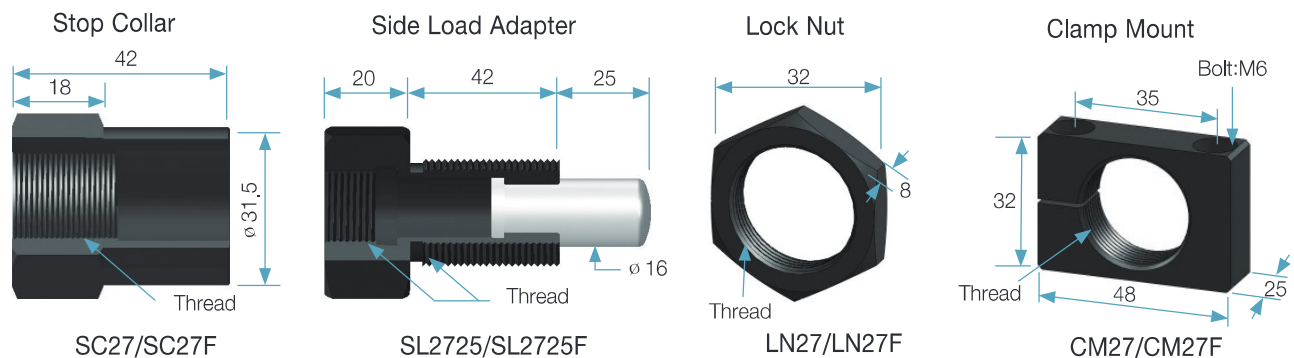
Dimensions (unit : mm)

Model	St	THREAD	A	B	C
KMA27-25(B) 25(B)LV	25	M27x3,0	143,5	127	90
-25F(B) -25F(B)LV		M27x1,5			
-40(B) -40(B)LV	40	M27x2,0	194,5	178	126

Adjustment Diagram



Accessory (unit : mm)

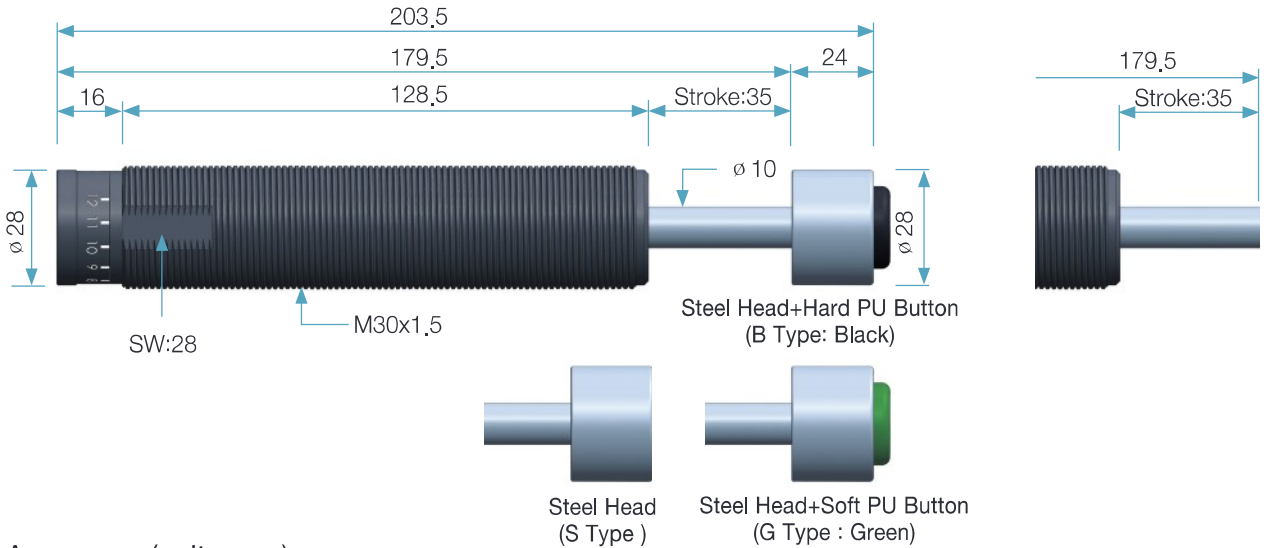


KMA 30 - 35(B)

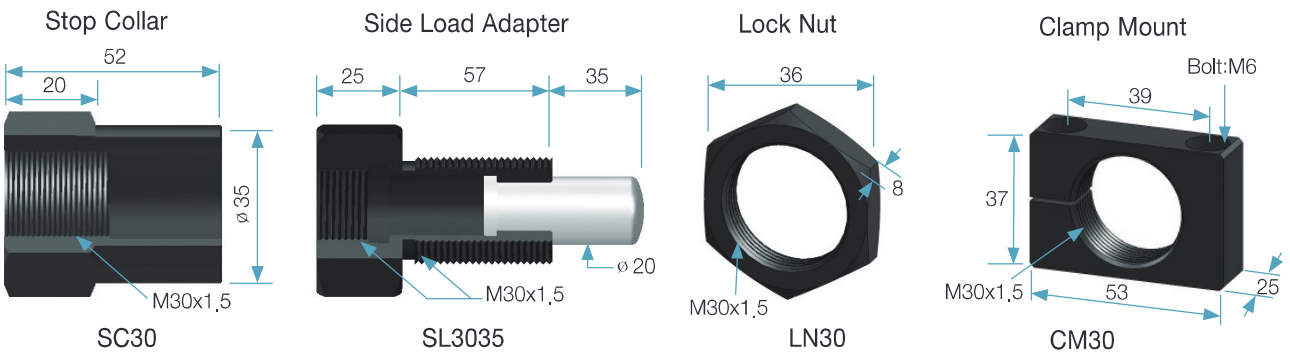
Engineering Data

Model	Stroke (mm) S	Max_Energy / Cycle (Nm) E _T	Max_Energy / Hour (Nm/h) E _T C	Effective Weight (kg) We	Recoil Force (N)		Weight (g)
					Ext	Comp	
KMA30-35(B)	35	356	137,000	25-6,950	17,8	50,3	610

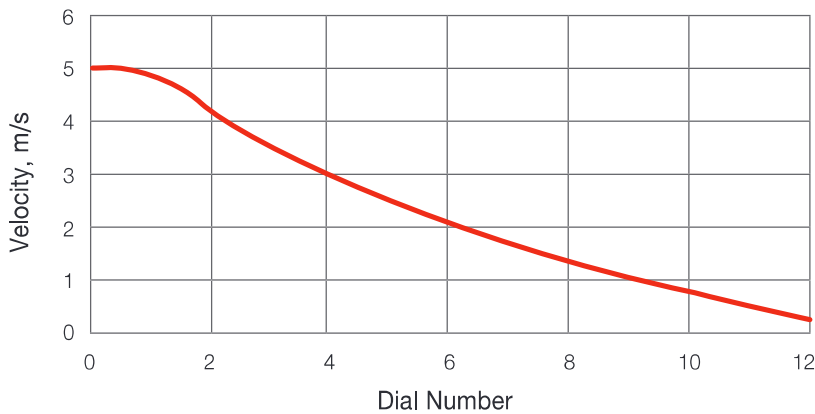
(unit : mm)



Accessory (unit : mm)



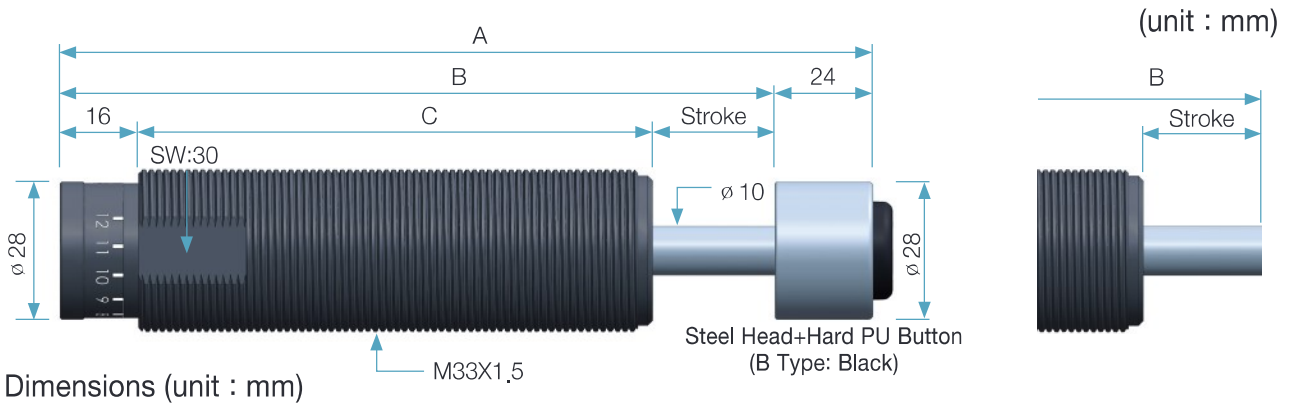
Adjustment Diagram



KMA 33 Series

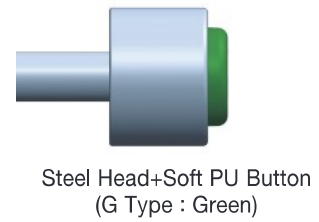
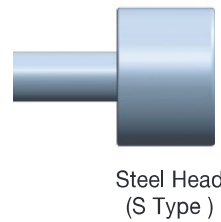
Engineering Data

Model	Stroke (mm) S	Max_Energy / Cycle (Nm) E _T	Max_Energy / Hour (Nm/h) E _T C	Effective Weight (kg) We	Recoil Force (N)		Weight (g)
					Ext	Comp	
KMA33-25(B) -25(B)LV	25	314	120,000	25-6,980 97-60,930	17,5	48,8	454
-50(B) -50(B)LV	50	628	150,000	50-14,000 192-120,312	13,6	65,3	580

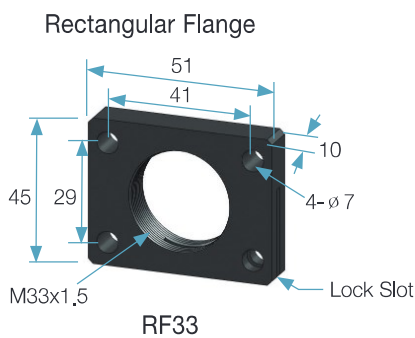
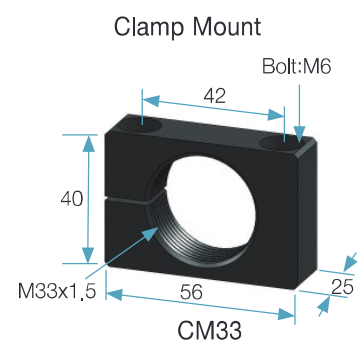
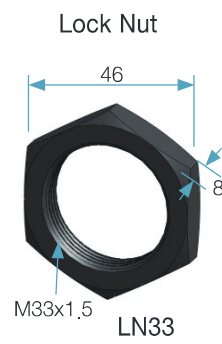
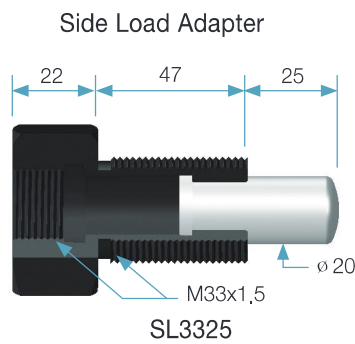
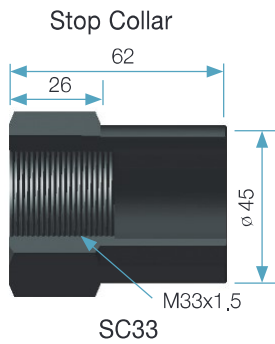


Dimensions (unit : mm)

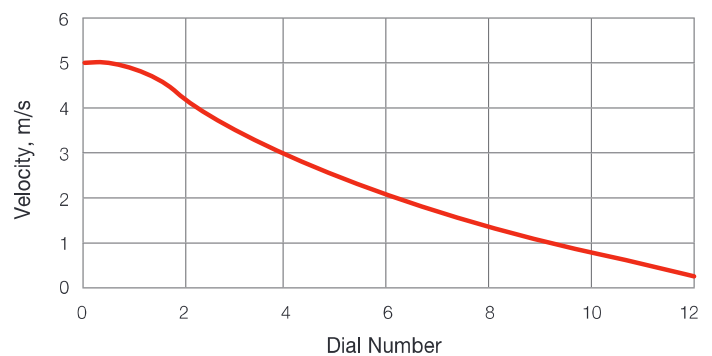
Model	St	A	B	C
KMA33-25(B) -25LV(B)	25	170	146	105
-50(B) -50LV(B)	50	229	205	139



Accessory (unit : mm)



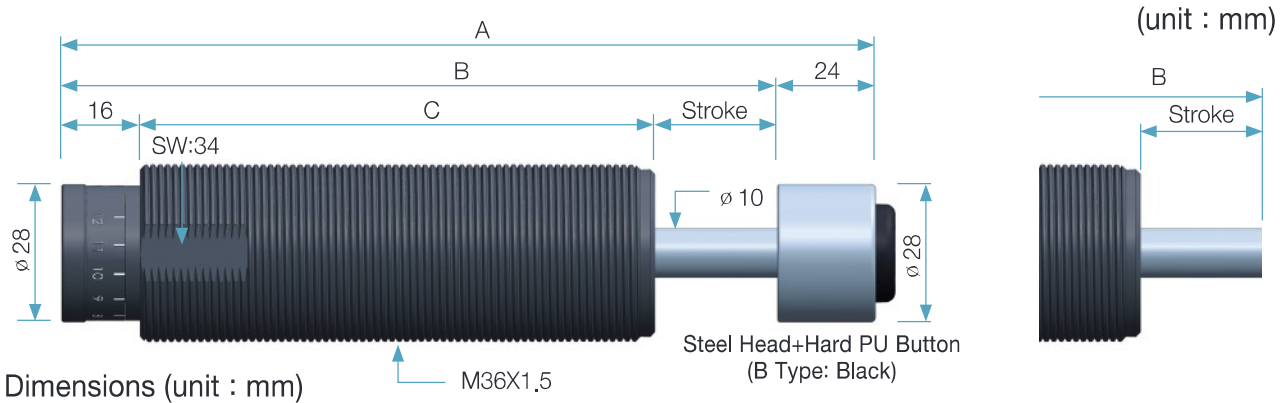
Adjustment Diagram



KMA 36 Series

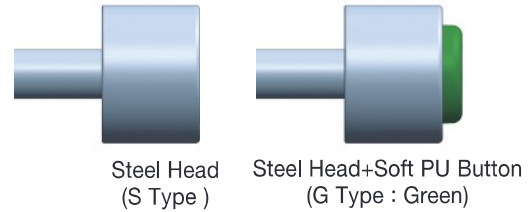
Engineering Data

Model	Stroke (mm) S	Max_Energy / Cycle (Nm) E _T	Max_Energy / Hour (Nm/h) E _T C	Effective Weight (kg) We	Recoil Force (N)		Weight (g)
					Ext	Comp	
KMA36-25(B)	25	346	125,000	25-6,980	25	56,2	725
-25(B)LV				97-60,930			
-50(B)	50	692	160,000	50-14,000	22,5	60	885
-50(B)LV				192-120,312			

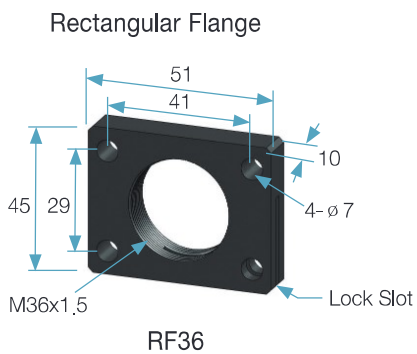
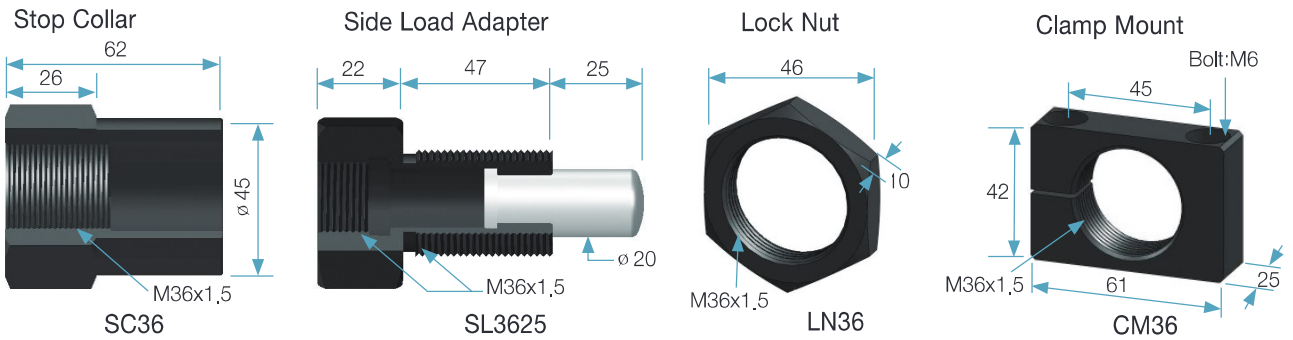


Dimensions (unit : mm)

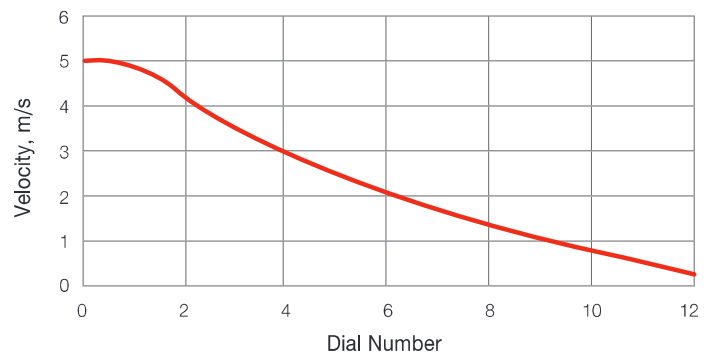
Model	St	A	B	C
KMA36-25(B)	25	170	146	105
-25LV(B)				
-50(B)	50	229	205	139
-50LV(B)				




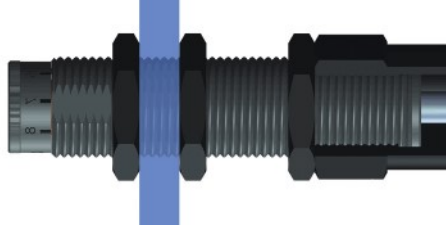
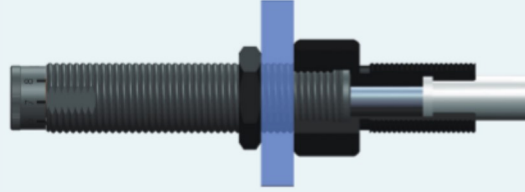
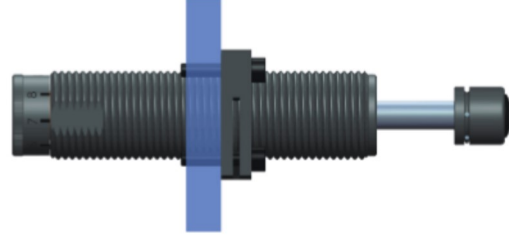
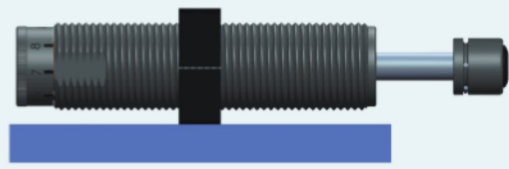
Accessory (unit : mm)



Adjustment Diagram

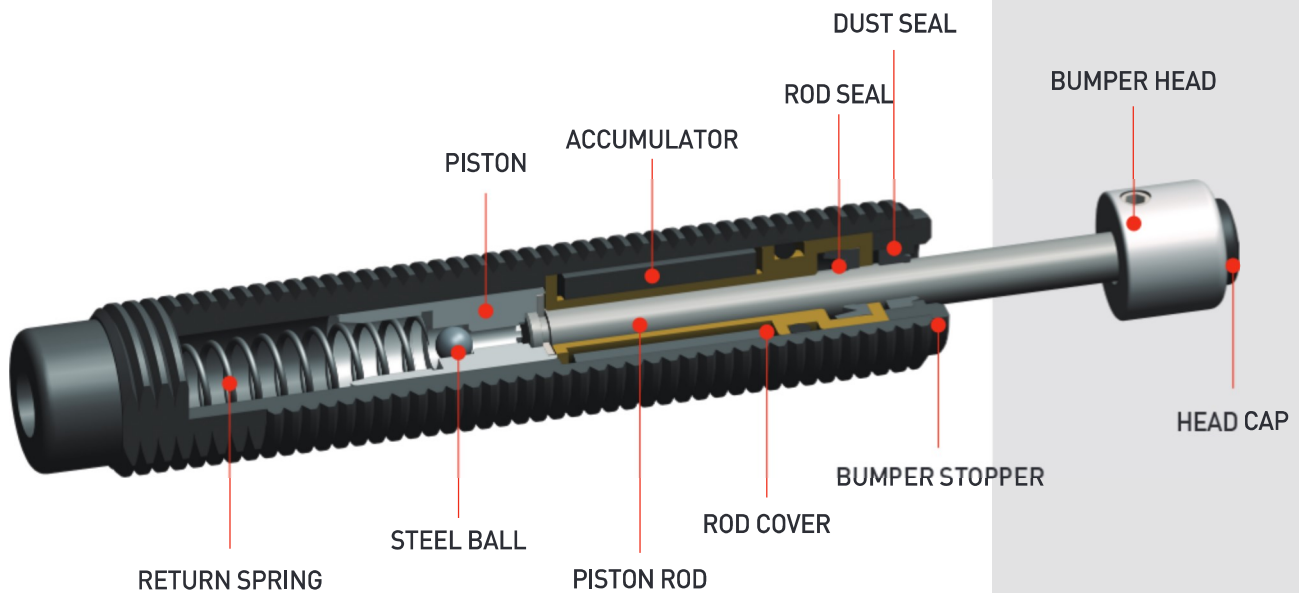


KMA/KMS Accessories Installation

NAME	Installation	Remark
Lock Nut		<p>Installation is simply done by fastening Lock Nut. This is basic installation.</p>
Stop Collar + Lock Nut		<p>Stop Collar guarantees accurate stopping and positioning and protects "Bottoming out" of Piston.</p>
Side Load Adapter + Lock Nut		<p>When the shock absorber has to be installed in rotation application with short distance, Side load adapter prevent "one-side wearing".</p>
Flange Mount		<p>Use Square Flange or Rectangular Flange in order to fix shock Absorber conveniently.</p>
Clamp Mount		<p>Clamp mount is used in horizontal installation usually and specially if the shock absorber is long.</p>

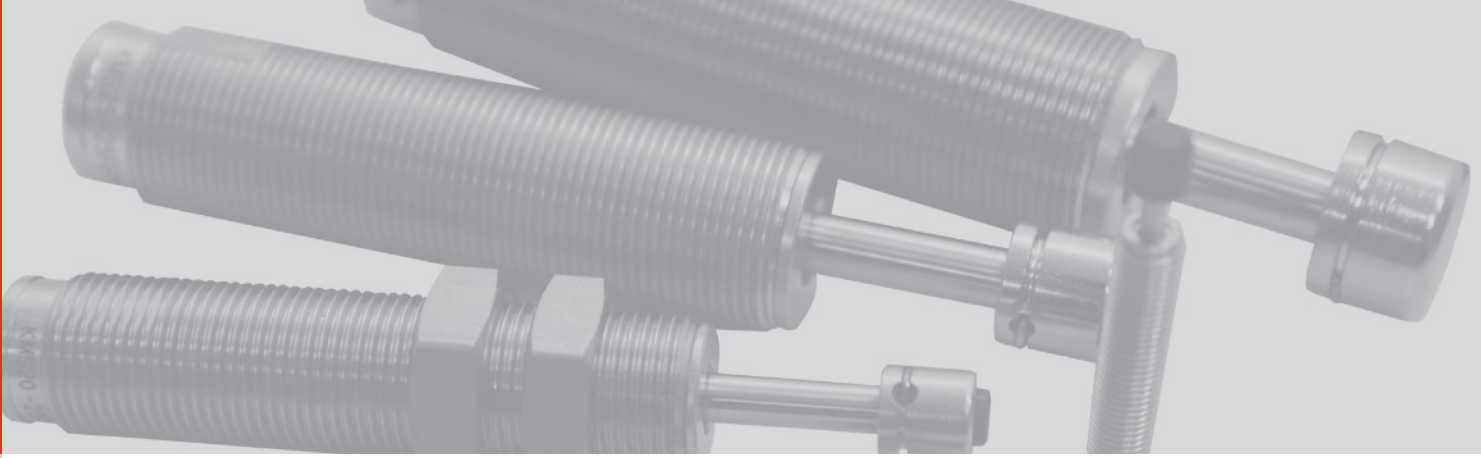


KMS series are self adjusting Shock Absorber adapted new slot metering type to provide higher energy absorption capacity and wide range of effective weight

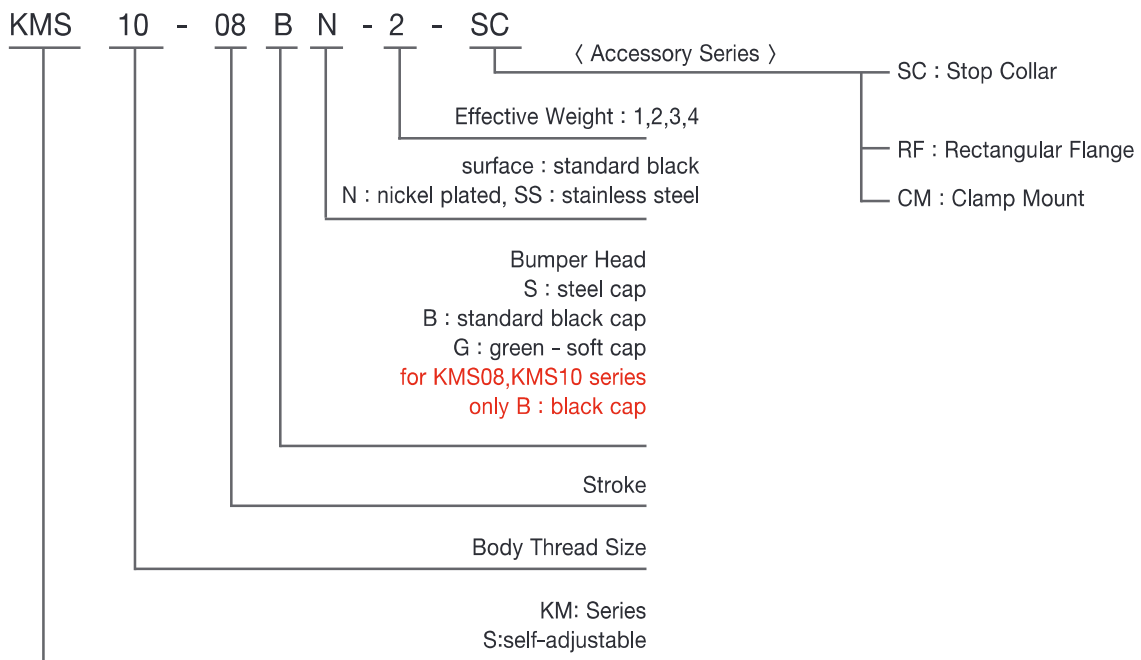


Properties

- KMS non-adjustable shock absorber offer broad range of damping characteristic
- New KMS Series offer higher energy capacity based on a new technology developed by KOBA
- The body of KMS is designed as one unit, solid and root up the Bottom out problem
- KOBA's orifice design of the shock tube provides best deceleration and most efficient energy absorption.
- KMS Series are manufactured according ISO quality standards.
- All shock absorber offer highest flexibility by using different kind of bumper heads, steel, black or green (soft)
- Material of the piston rod is special hardened stainless steel providing highest life cycle rate.
- New developed piston offers precise movement with low friction for extra long life span.
- positive stop integrated in the housing



KMS Series Ordering Information



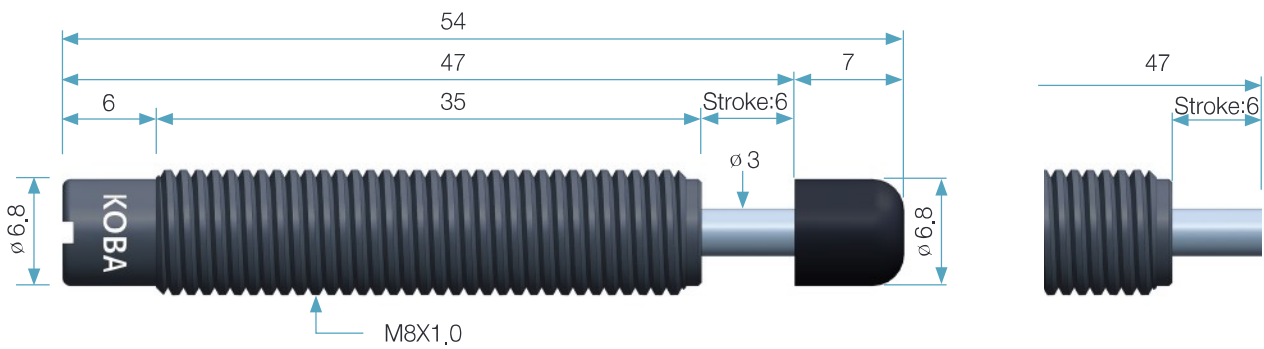
Accessory Series Charts

Accessories	Stop Collar	Rectangular Flange	Clamp Mount
Model	SC	RF	CM
KMS 08-06	•		•
KMS 10-08	•		•
KMS 12-10	•		•
KMS 14-15	•		•
-20	•		•
KMS 20-20	•		•
-30	•		•
-50	•		•
KMS 25-25	•		•
-40	•		•
-50	•		•
-80	•		•
KMS 36-25	•	•	•
-50	•	•	•
-80	•	•	•

KMS 08 - 06(B) Engineering Data

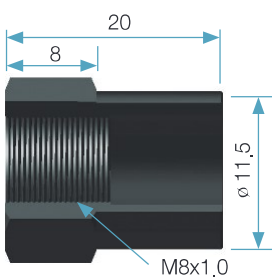
Model	Stroke (mm)	Max_Energy / Cycle (Nm) E_T	Max_Energy / Hour (Nm/h) $E_T C$	Effective Weight (kg)			Recoil Force (N)		Weight (g)
				1	2	3	Ext.	Comp.	
KMS08-06(B)	6	5	8,000	0,8-2,8	2,5-12,3	10-111	2,2	5,8	10

(unit : mm)



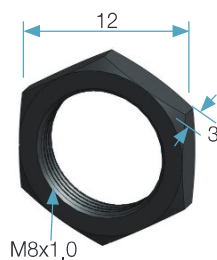
Accessory (unit : mm)

Stop Collar



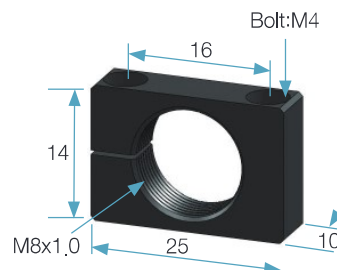
SC08

Lock Nut

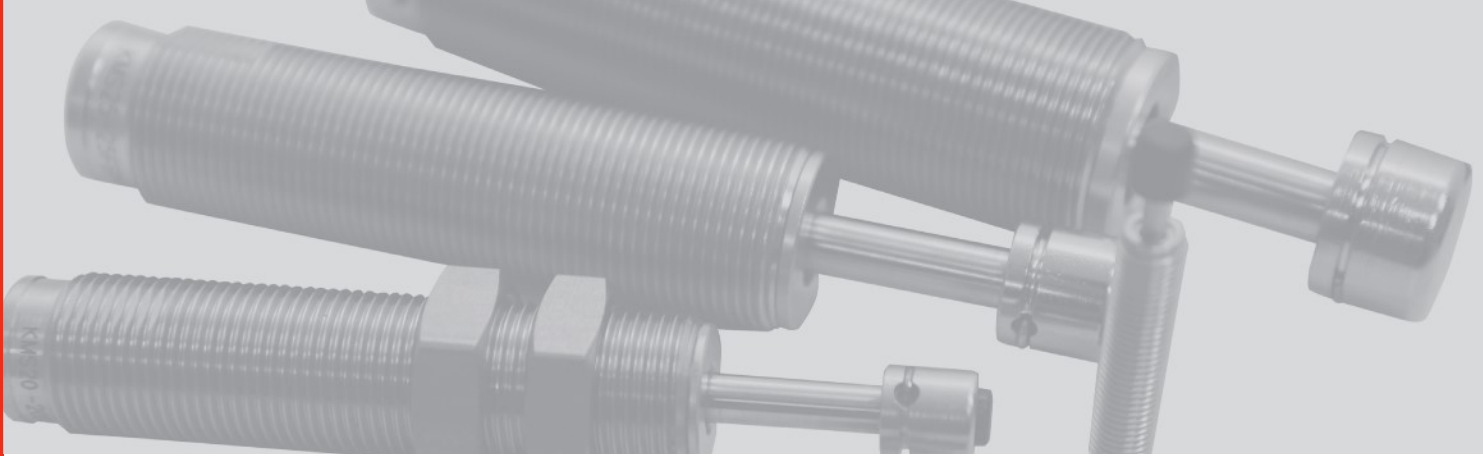


LN08

Clamp Mount



CM08

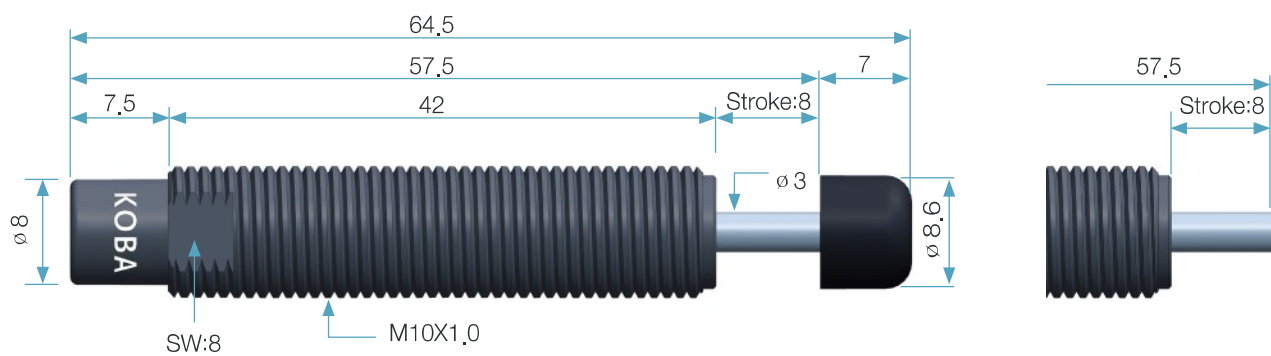


KMS 10 - 08(B)

Engineering Data

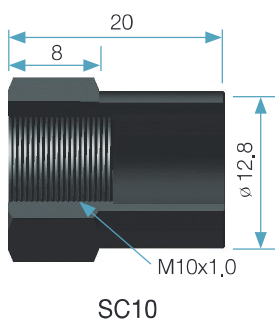
Model	Stroke (mm) S	Max,Energy / Cycle (Nm) E _T	Max,Energy /Hour (Nm/h) E _T C	Effective Weight (kg)			Recoil Force (N)		Weight (g)
				1	2	3	Ext.	Comp.	
KMS10-08(B)	8	11	14,500	1,8-6.1	5,5-27	22-244	2,5	6,9	15,5

(unit : mm)

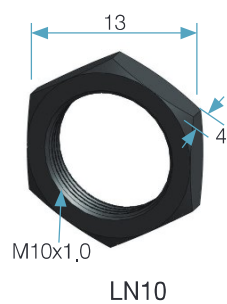


Accessory (unit : mm)

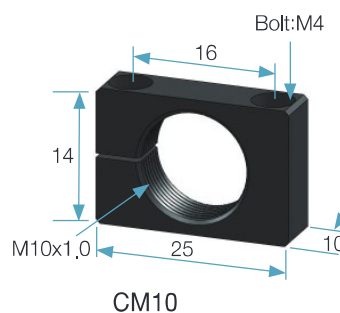
Stop Collar



Lock Nut



Clamp Mount

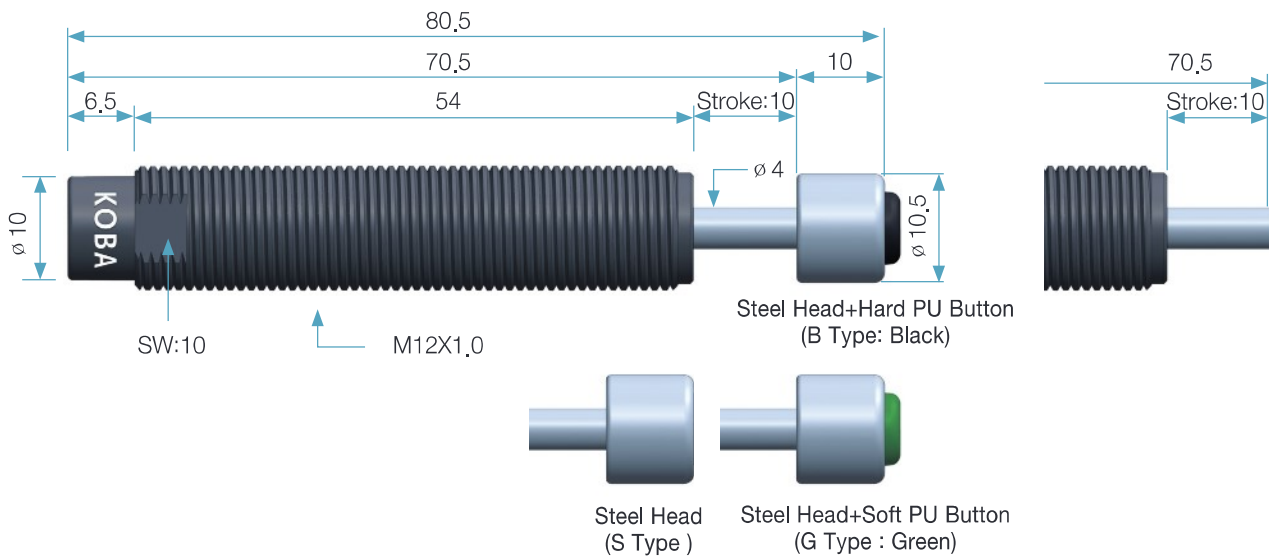


KMS 12 - 10(B)

Engineering Data

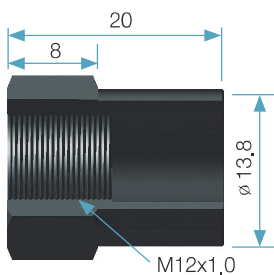
Model	Stroke (mm) S	Max_Energy / Cycle (Nm) E _T	Max_Energy / Hour (Nm/h) E _T C	Effective Weight (kg)			Recoil Force (N)		Weight (g)
				1	2	3	Ext.	Comp.	
KMS12-10(B)	10	18	34,000	2,9-10	9-44	36-400	3,7	9,6	23

(unit : mm)



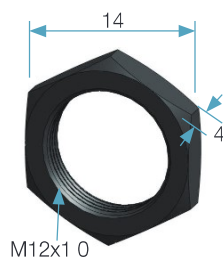
Accessory (unit : mm)

Stop Collar



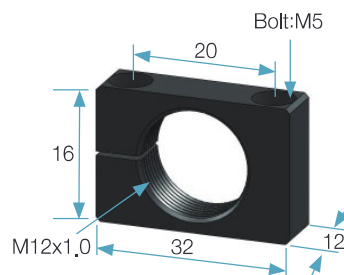
SC12

Lock Nut

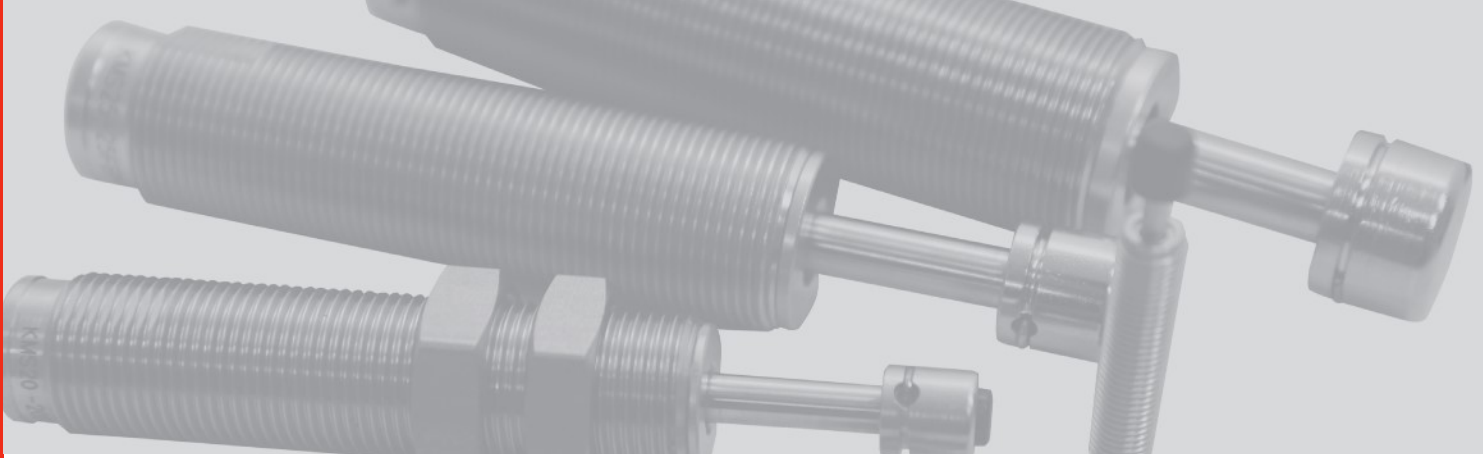


LN12

Clamp Mount

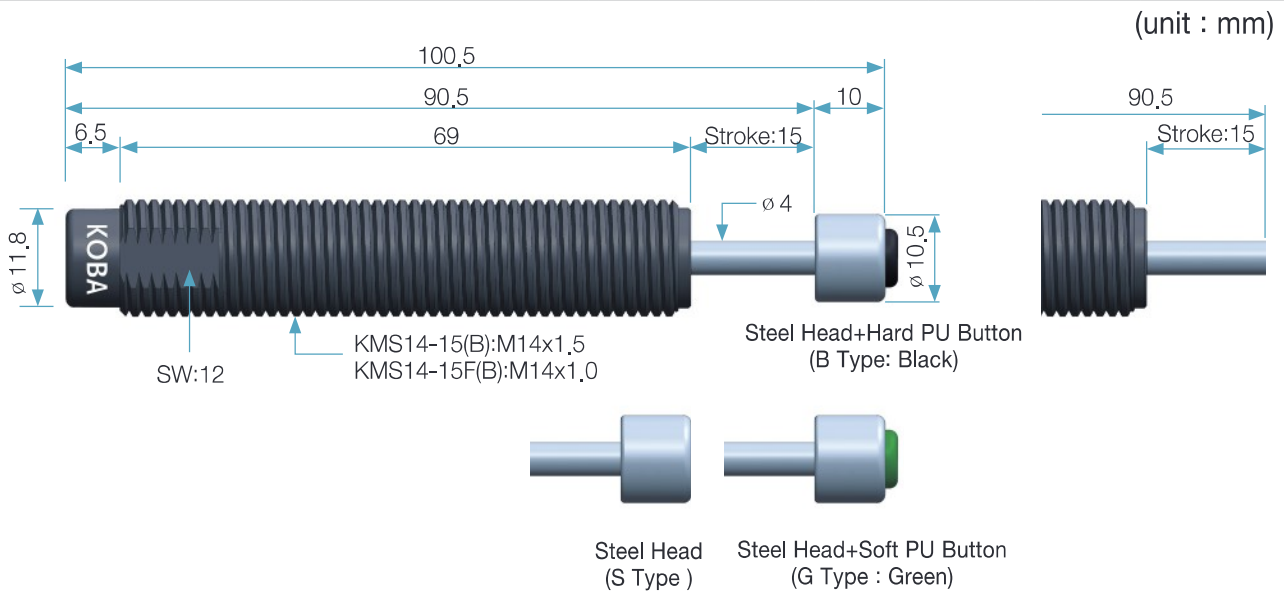


CM12



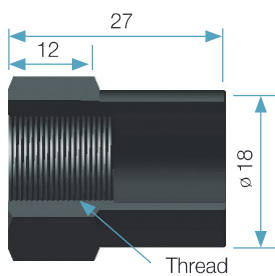
KMS 14 Series Engineering Data

Model	Stroke (mm) S	Max. Energy / Cycle (Nm) E _T	Max. Energy / Hour (Nm/h) E _T C	Effective Weight (kg)			Recoil Force (N)		Weight (g)
				1	2	3	Ext.	Comp.	
KMS14-15(B) -15F(B)	15	34	51,000	5-18	17-84	68-755	3,8	13,3	43



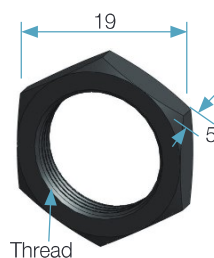
Accessory (unit : mm)

Stop Collar



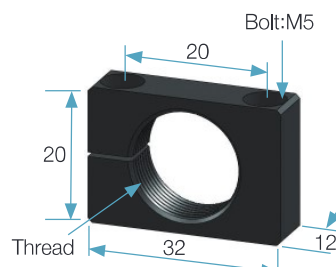
SC14/SC14F

Lock Nut



LN14/LN14F

Clamp Mount



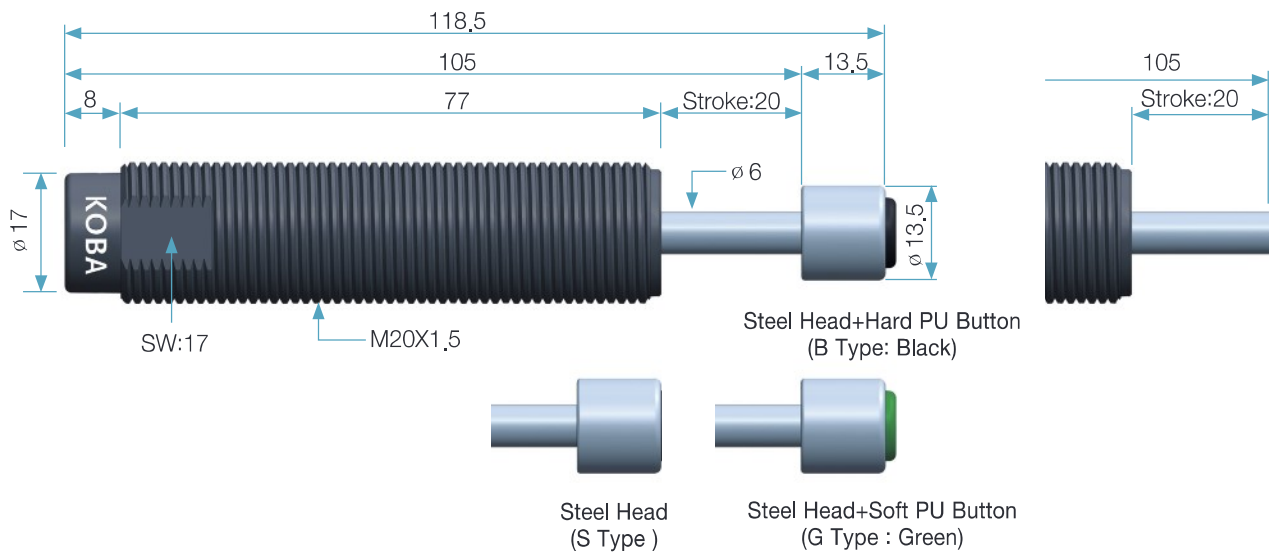
CM14/CM14F

KMS 20-20(B)

Engineering Data

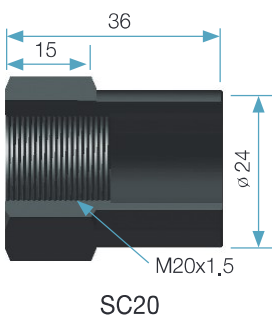
Model	Stroke (mm) S	Max_Energy / Cycle (Nm) E _T	Max_Energy /Hour (Nm/h) E _T C	Effective Weight (kg)			Recoil Force (N)		Weight (g)
				1	2	3	Ext.	Comp.	
KMS20-20(B)	20	105	55,000	13-39	36-210	173-2,333	8,2	23	140

(unit : mm)

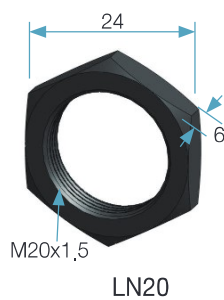


Accessory (unit : mm)

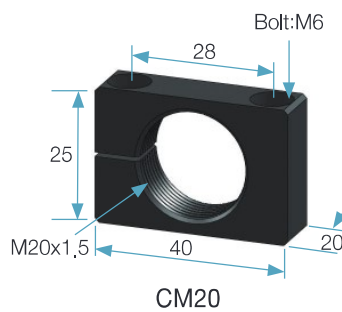
Stop Collar

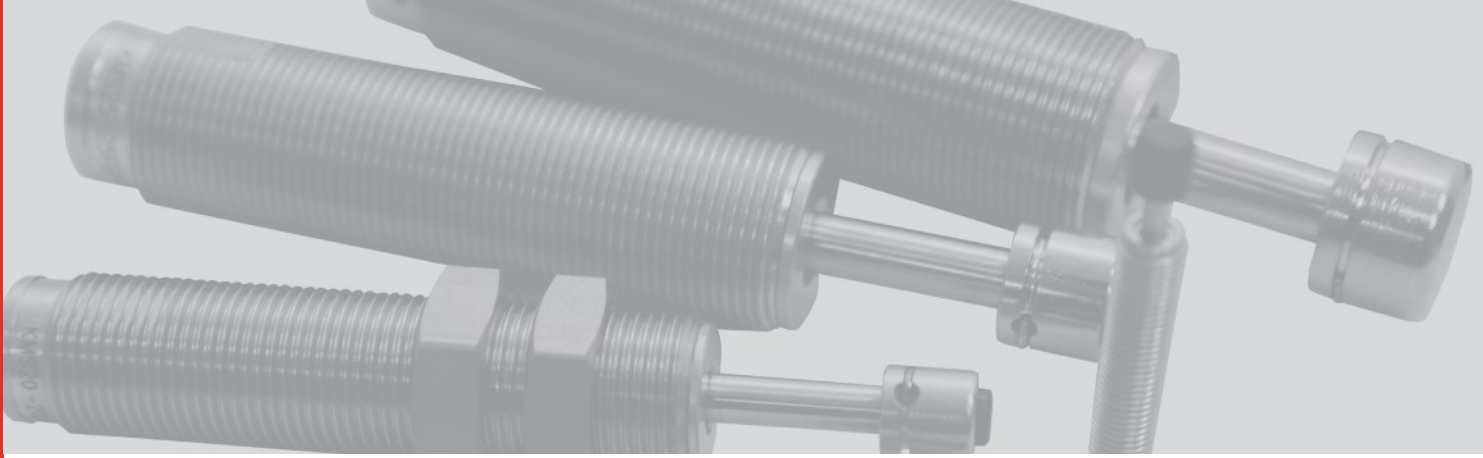


Lock Nut



Clamp Mount

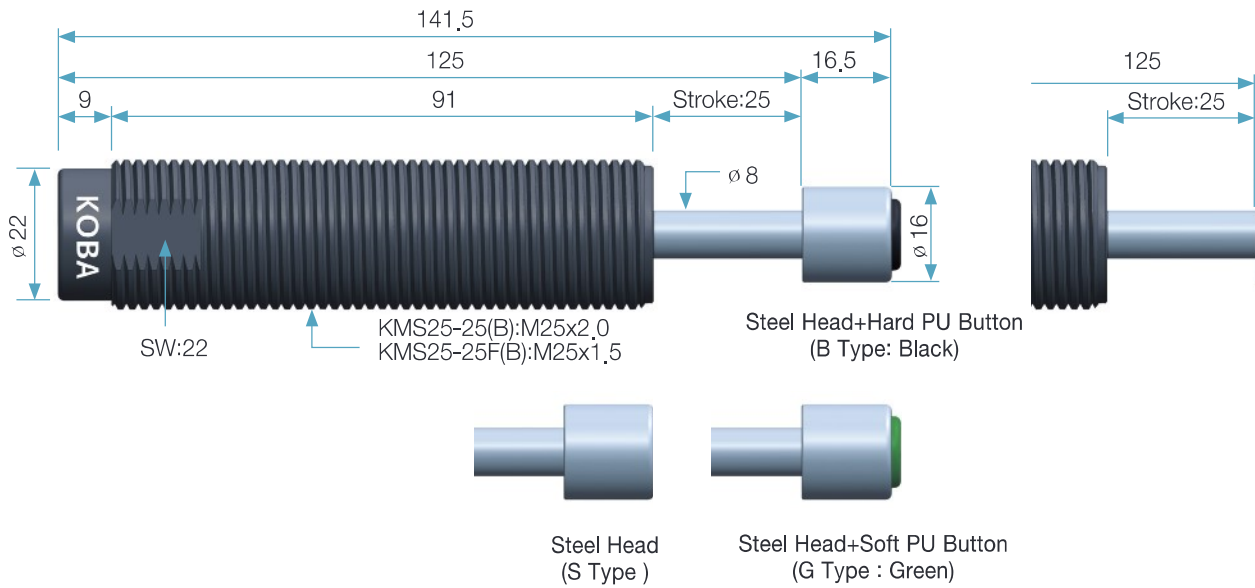




KMS 25 Series Engineering Data

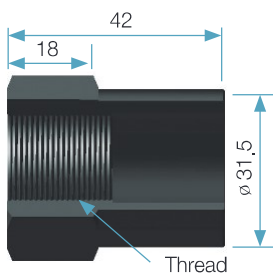
Model	Stroke (mm) S	Max. Energy / Cycle (Nm) E _T	Max. Energy / Hour (Nm/h) E _T C	Effective Weight (Kg)			Recoil Force (N)		Weight (g)
				1	2	3	Ext.	Comp.	
KMS25-25(B) -25F(B)	25	226	69,000	28-85	78-452	373-5,022	11	29	265

(unit : mm)



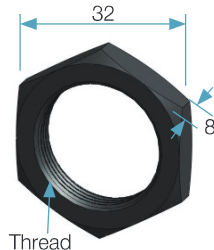
Accessory (unit : mm)

Stop Collar



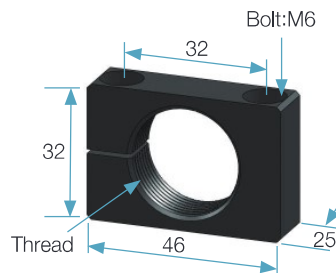
SC25/SC25F

Lock Nut



LN25/LN25F

Clamp Mount



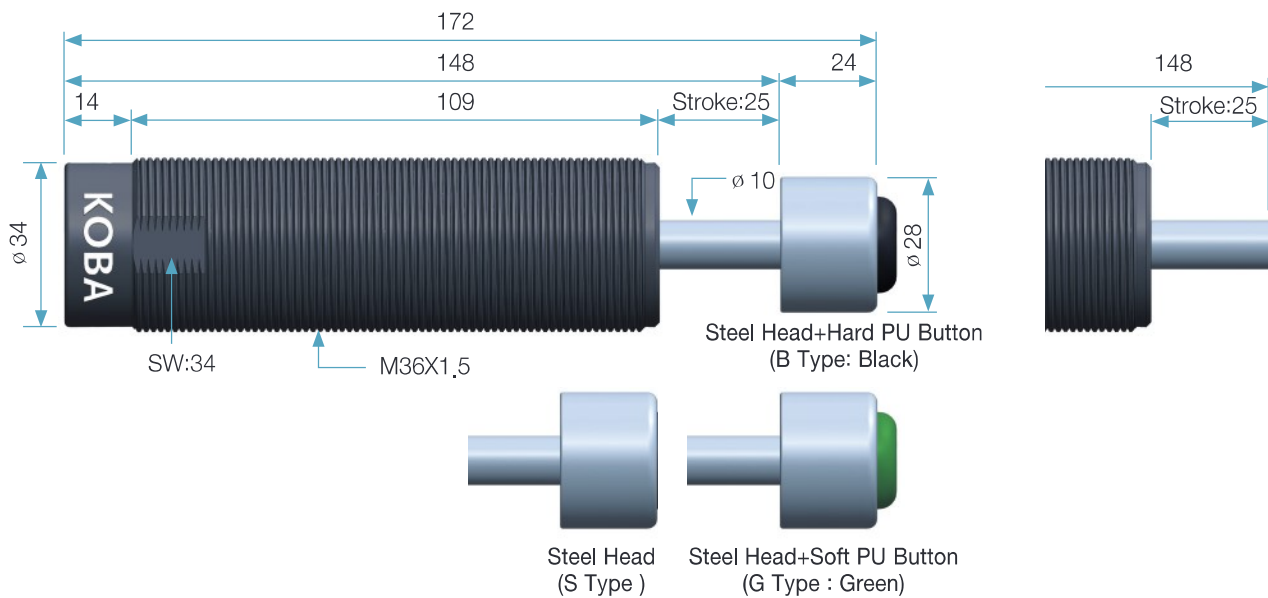
CM25/CM25F

KMS 36 - 25(B)

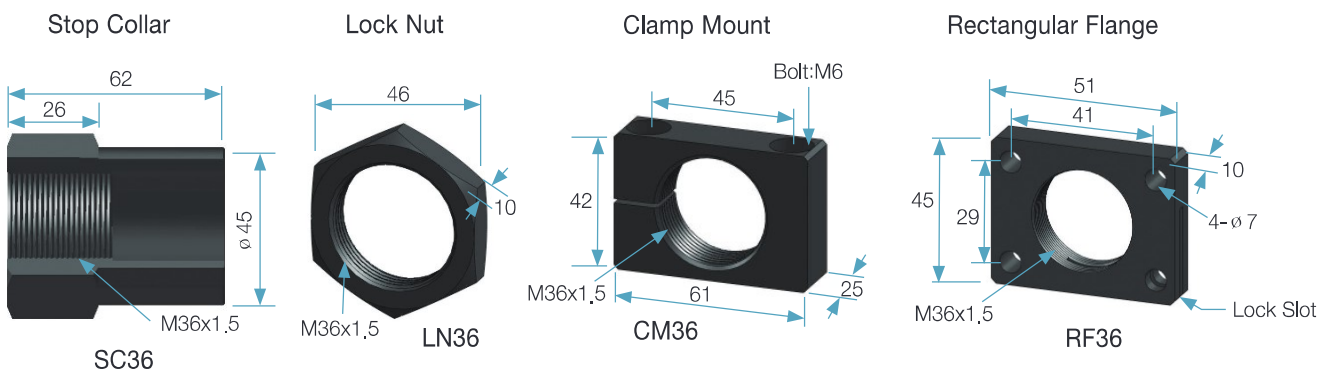
Engineering Data

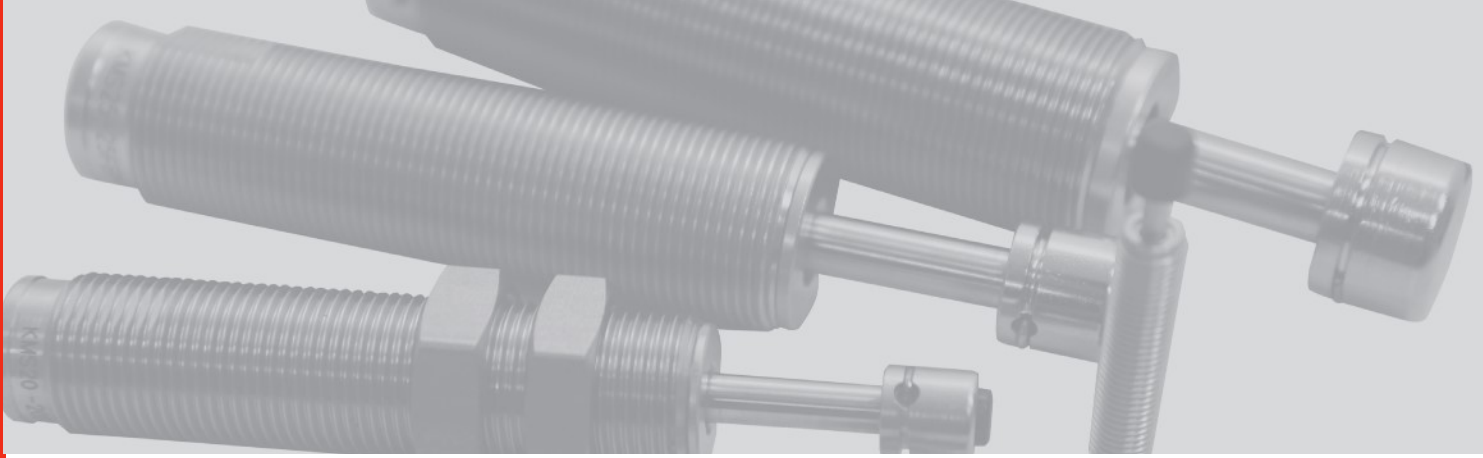
Model	Stroke (mm) S	Max_Energy / Cycle (Nm) E _T	Max_Energy /Hour (Nm/h) E _T C	Effective Weight (kg)			Recoil Force (N)		Weight (g)
				1	2	3	Ext.	Comp.	
KMS36-25(B)	25	490	115,000	61-185	170-500	435-10,888	25	64,3	758

(unit : mm)



Accessory (unit : mm)



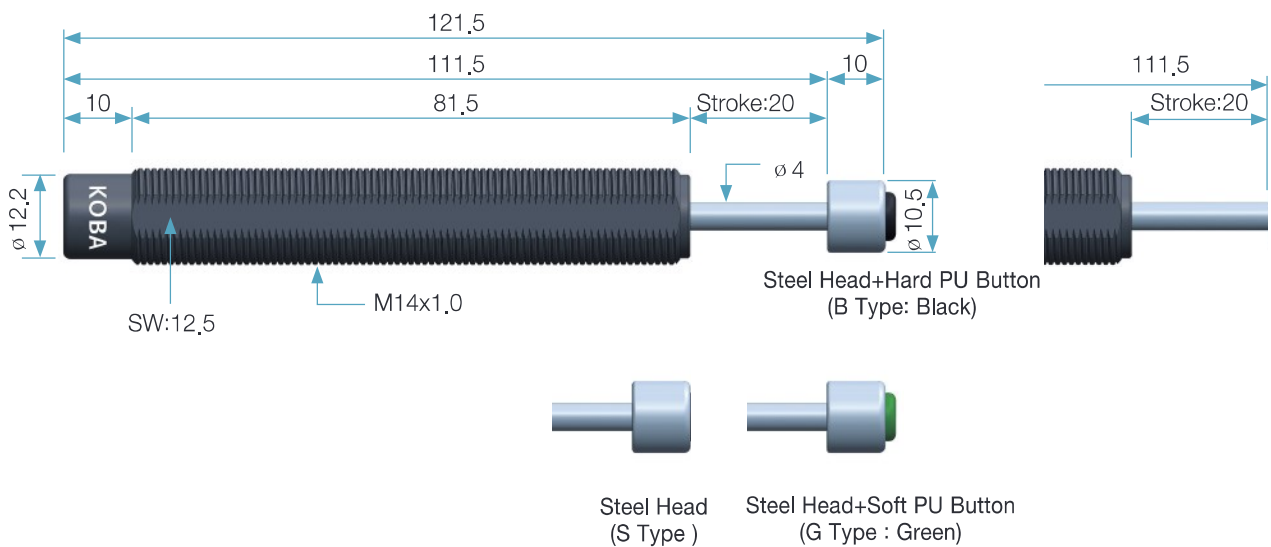


■ KMS LONG STROKE TYPE

KMS 14 - 20(B) Engineering Data

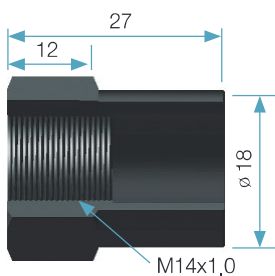
Model	Stroke (mm) S	Max. Energy / Cycle (Nm) E _T	Max. Energy / Hour (Nm/h) E _T C	Effective Weight (kg)			Recoil Force (N)		Weight (g)
				1	2	3	Ext.	Comp.	
KMS14-20(B)	20	13	45,500	2-7	6.5-32	26-288	3.6	13.9	71

(unit : mm)



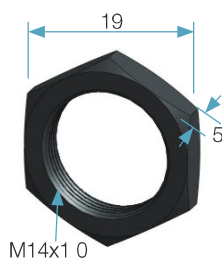
Accessory (unit : mm)

Stop Collar



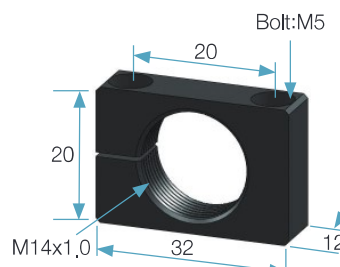
SC14F

Lock Nut



LN14F

Clamp Mount

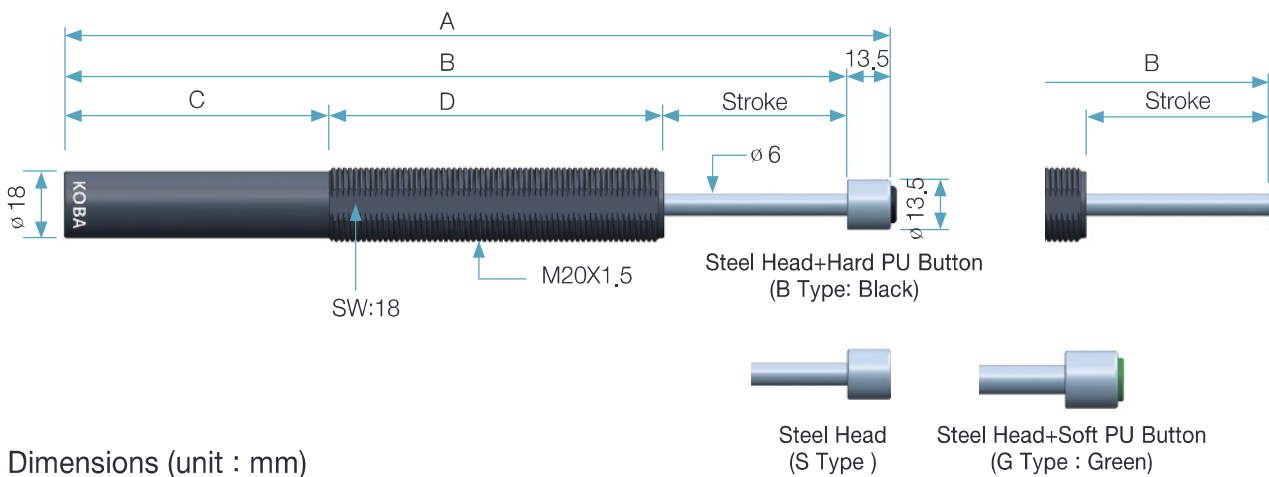


CM14F

KMS 20 Series Engineering Data

Model	Stroke (mm) S	Max_Energy / Cycle (Nm) E _T	Max_Energy /Hour (Nm/h) E _T C	Effective Weight (kg)			Recoil Force (N)		Weight (g)
				1	2	3	Ext.	Comp.	
KMS20-30(B)	30	52	31,100	85-28	26-128	104-1,155	6,3	16,8	188
-50(B)	50	82	37,800	13-45	41-202	164-1,822	7,8	16,6	268,6

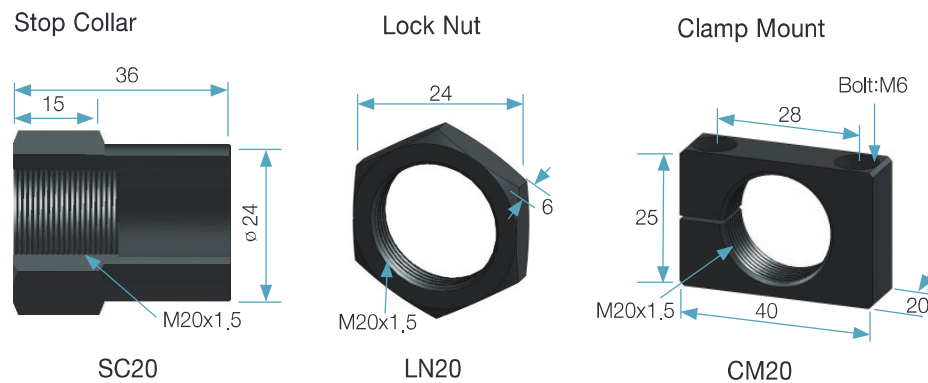
(unit : mm)

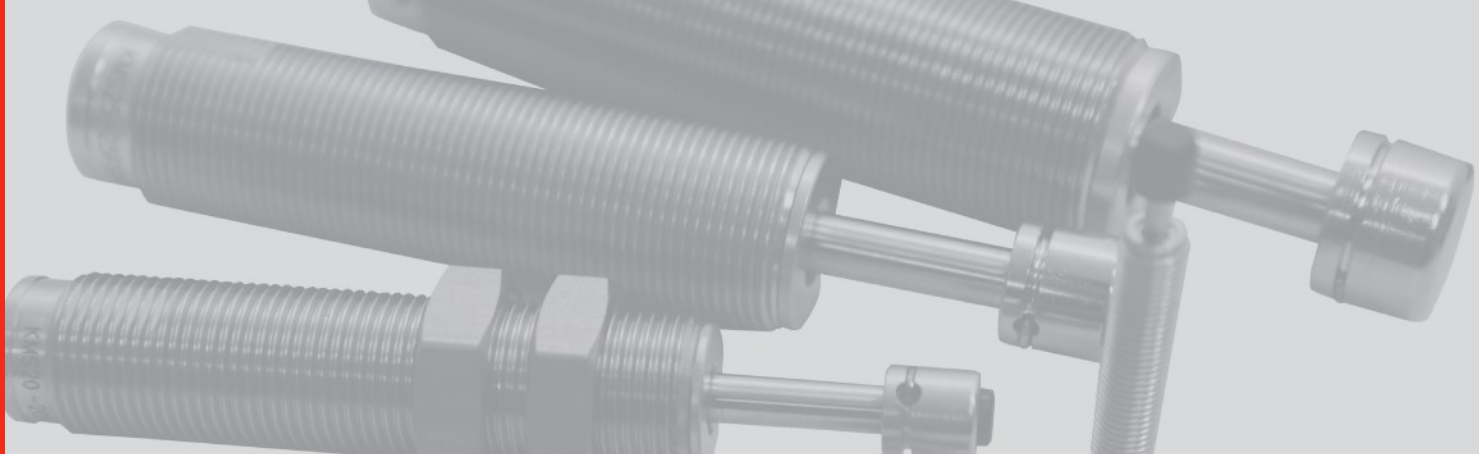


Dimensions (unit : mm)

Model	St	A	B	C	D
KMS20-30(B)	30	144,5	131	11	90
-50(B)	50	227,5	214	72,5	91,5

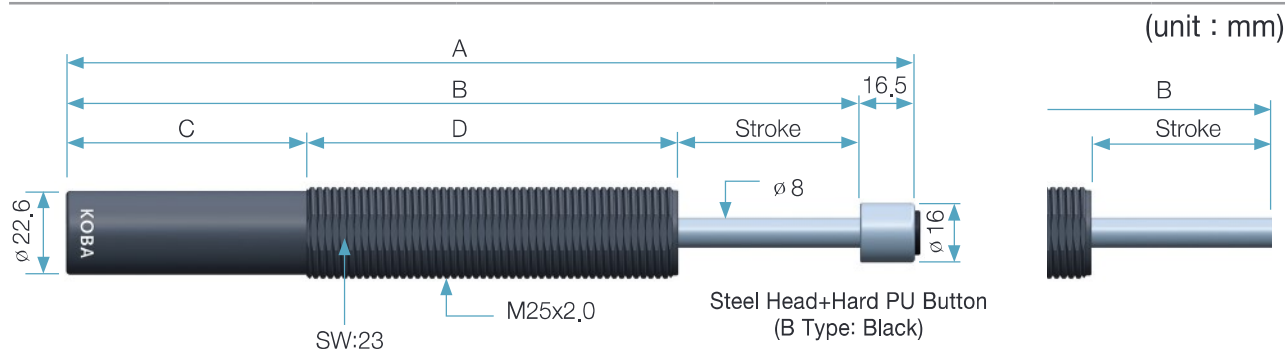
Accessory (unit : mm)





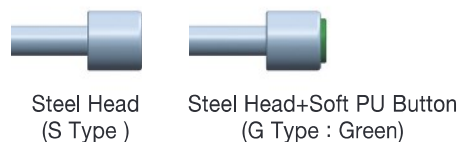
KMS 25 Series Engineering Data

Model	Stroke (mm) S	Max_Energy / Cycle (Nm) E _T	Max_Energy /Hour (Nm/h) E _T C	Effective Weight (Kg)			Recoil Force (N)		Weight (g)
				1	2	3	Ext.	Comp.	
KMS25-40(B)	40	110	94,000	18-60	55-271	220-2,444	13.7	30.9	342.5
-50(B)	50	120	41,000	19-66	60-296	240-2,666	13.9	30.5	457.5
-80(B)	80	160	54,200	26-88	80-395	320-3,555	14.9	29.8	577.5



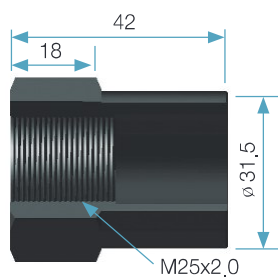
Dimensions (unit : mm)

Model	St	Thread	A	B	C	D
KMS25-40(B)	40	M25x2,0	174,5	158	12	106
-50(B)	50	M25x2,0	234,5	218	66	102
-80(B)	80	M25x2,0	328,5	312	90	142



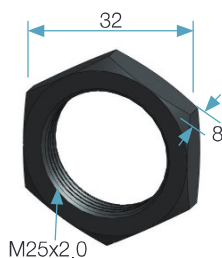
Accessory (unit : mm)

Stop Collar



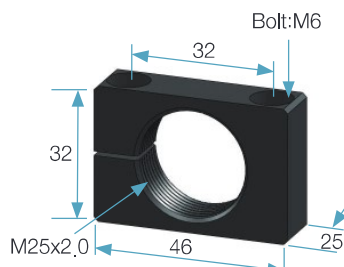
SC25

Lock Nut



LN25

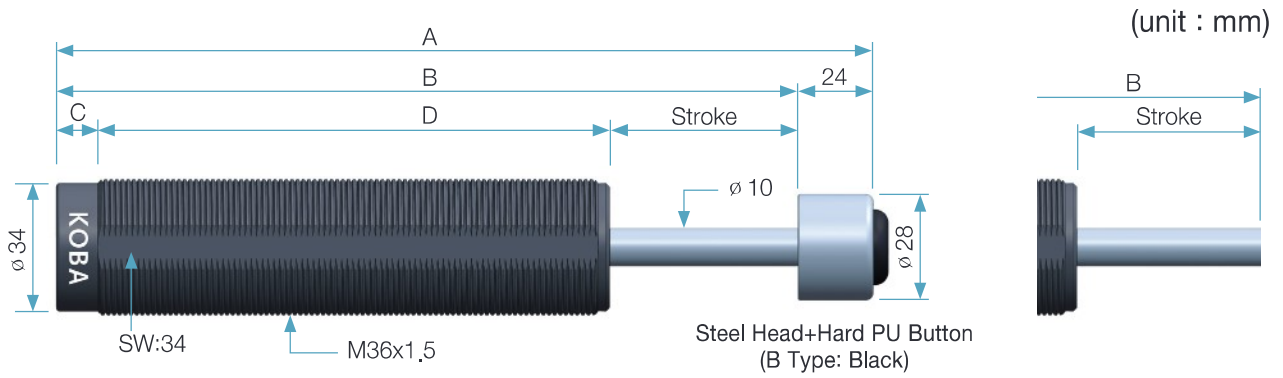
Clamp Mount



CM25

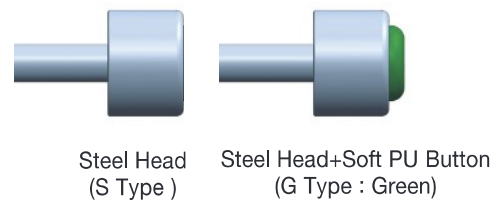
KMS 36 Series Engineering Data

Model	Stroke (mm) S	Max_Energy / Cycle (Nm) E _T	Max_Energy / Hour (Nm/h) E _T C	Effective Weight (kg)			Recoil Force (N)		Weight (g)
				1	2	3	Ext.	Comp.	
KMS36-50(B)	50	220	162,000	35-121	110-543	440-4,888	24,4	44,6	994
-80(B)	80	340	232,800	55-188	170-839	680-7,555	25,4	45,6	1,280

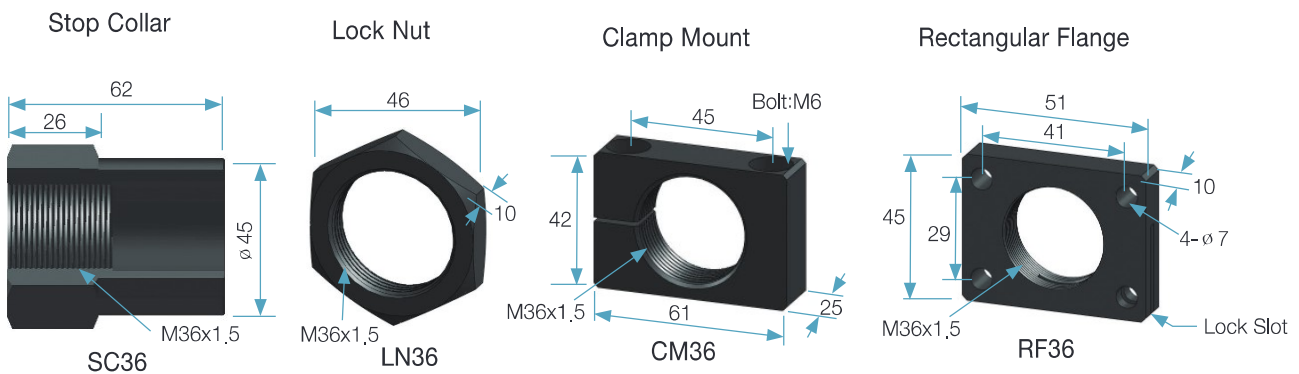


Dimensions (unit : mm)

Model	St	A	B	C	D
KMS36-50(B)	50	221	197	11	136
-80(B)	80	352	328	11	237



Accessory (unit : mm)

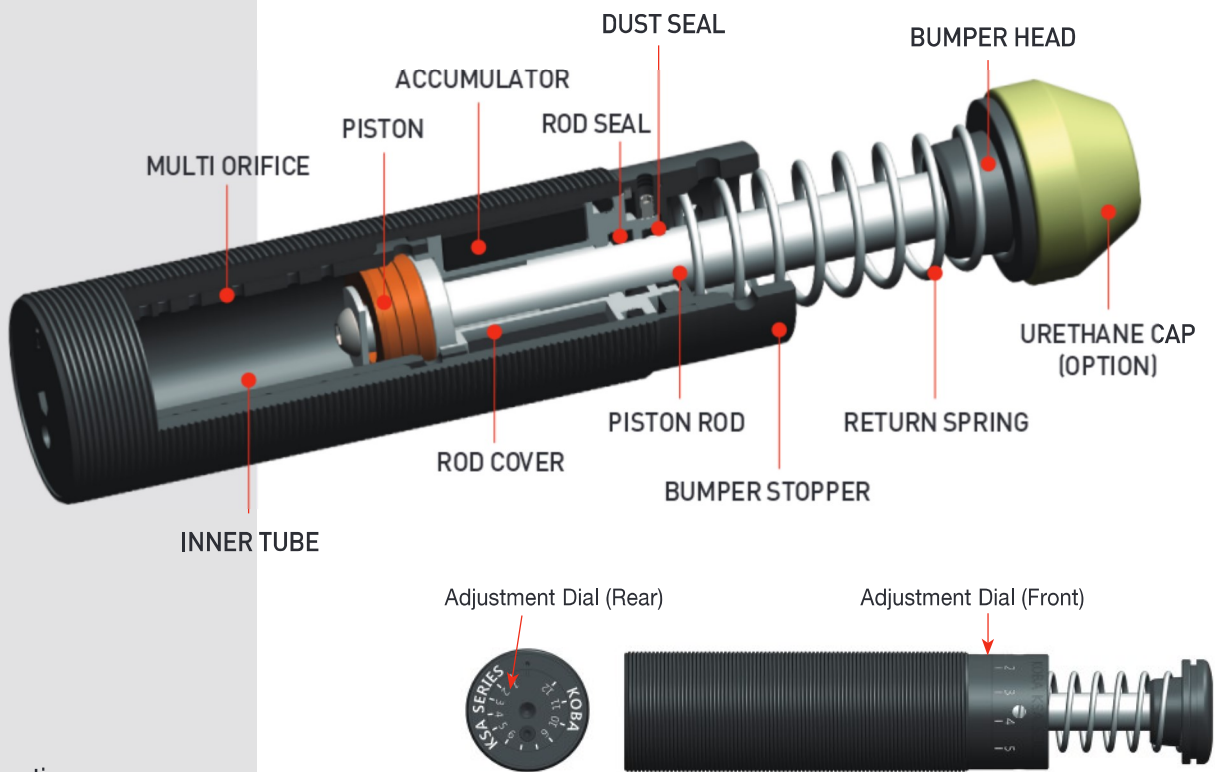


KSA Series

KOBA
Best Energy Absorption



KSA - adjustable high energy series

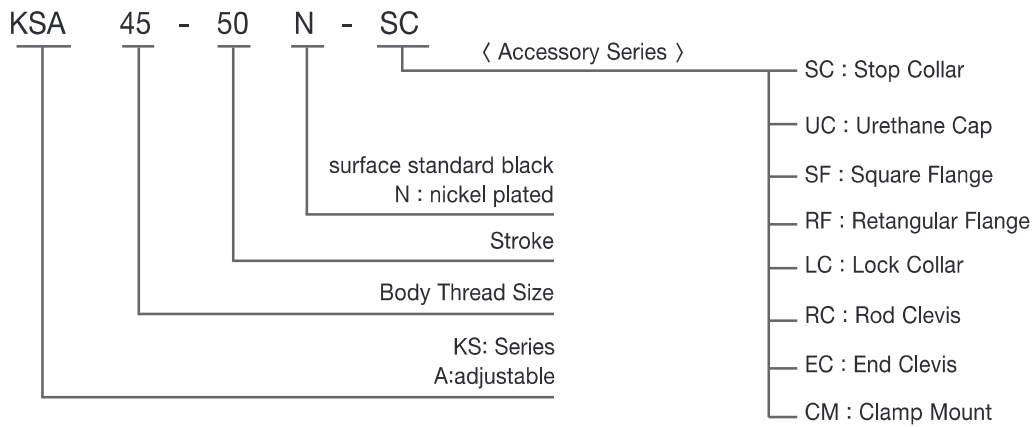


properties

- New designed full body structure for highest energy capacity
- both sided adjustment
- Fully threaded body for more flexibility of installation
- Piston Rod special heat treated, Rod Cover, double lip seal and dust whipper
- Body black zinc plated for highest corrosion resistance up to 320 hours salt spray test
- Urethane Cap for soft impact and low noise,
- impact velocity 0,3~5,0 m/s
- Standard temperature range -10~80 °C
- option -40 ~120 °C
- Application : Robotic, linear movement technology, emergency stop, turntable and corner composer,



KSA Series Ordering Information



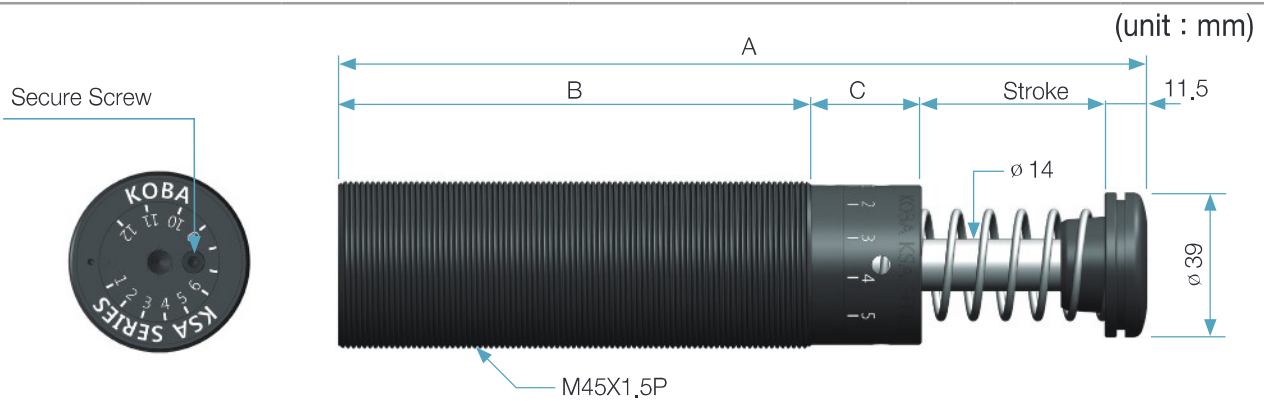
Accessory Series Charts

Accessories	Urethane Cap	Square Flange	Rectangular Flange	Lock Collar	Stop Collar	Rod Clevis	End Clevis	Clamp Mount
Model	UC	SF	RF	LC	SC	RC	EC	CM
KSA 45 Series	•	•	•	•	•	•	•	•
KSA 64 Series	•	•	•	•	•	•	•	•
KSA 85 Series	•	•		•	•	•	•	•



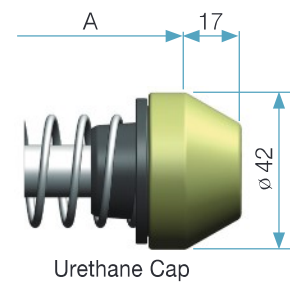
KSA 45 Series Engineering Data

Model	Stroke (mm) S	Max. Energy / Cycle (Nm) E _T	Max. Energy / Hour (Nm/h) E _T C	Effective Weight (kg) We	Recoil Force (N)		Weight (kg)
					Ext.	Comp.	
KSA45-25	25	650	195,000	50-13,354	49.7	82.8	1.13
-50	50	1,300	260,000	99-26,700	45.6	84	1.3
-75	75	2,000	300,000	148-39,060	44.3	86.3	1.52

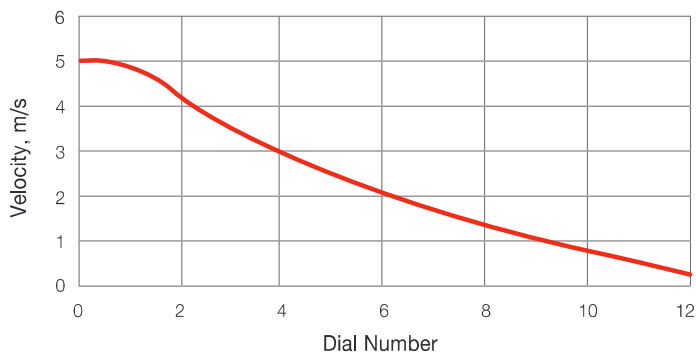


Dimensions (unit : mm)

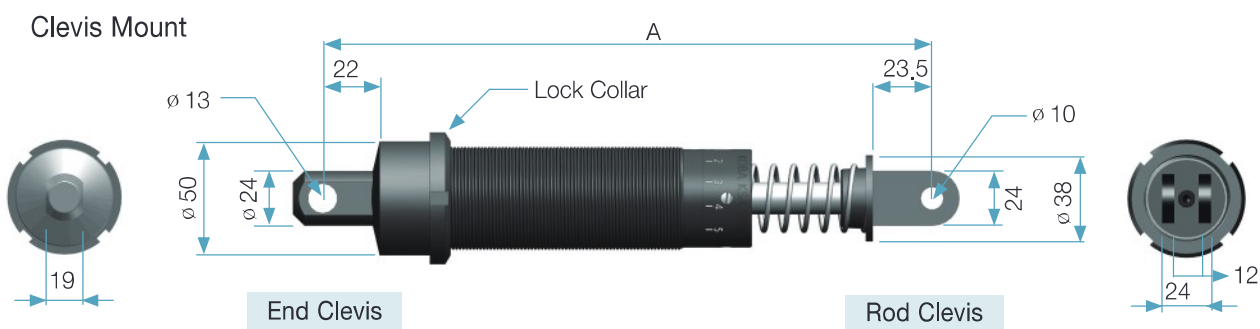
Model	St	A	B	C
KSA45-25	25	159.5	93	30
-50	50	220.5	129	30
-75	75	292.5	168.5	37.5



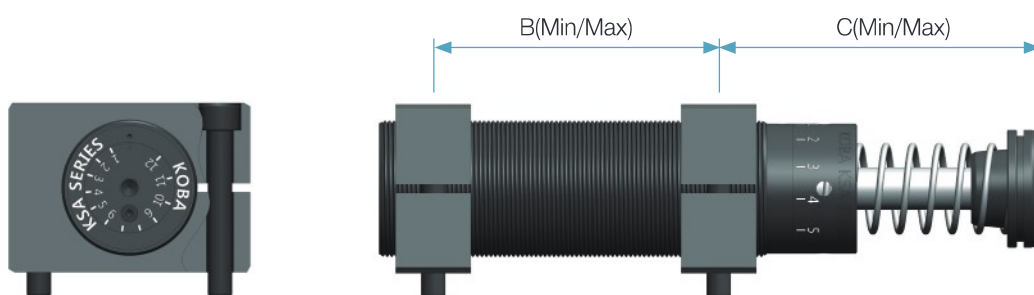
Adjustment Diagram



Accessory (unit : mm)

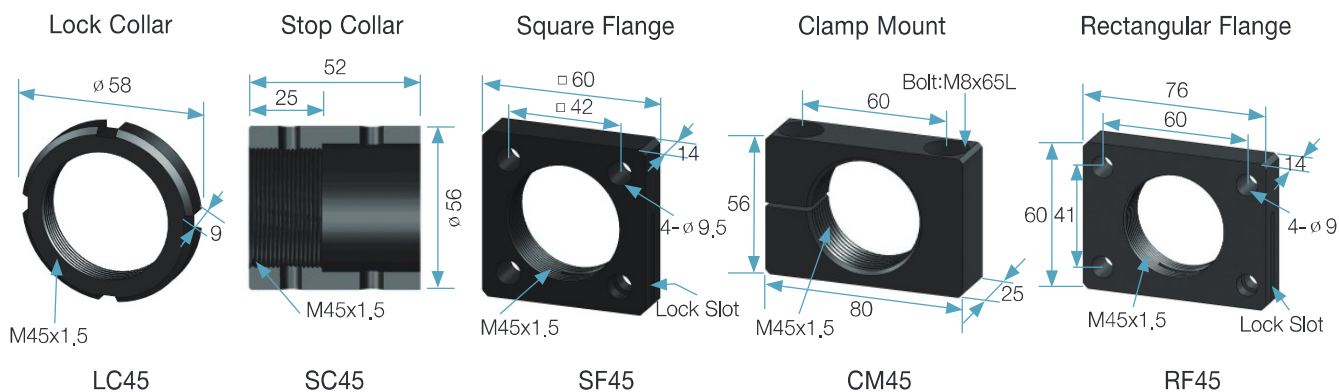


Clamp Mount



Dimensions (unit : mm)

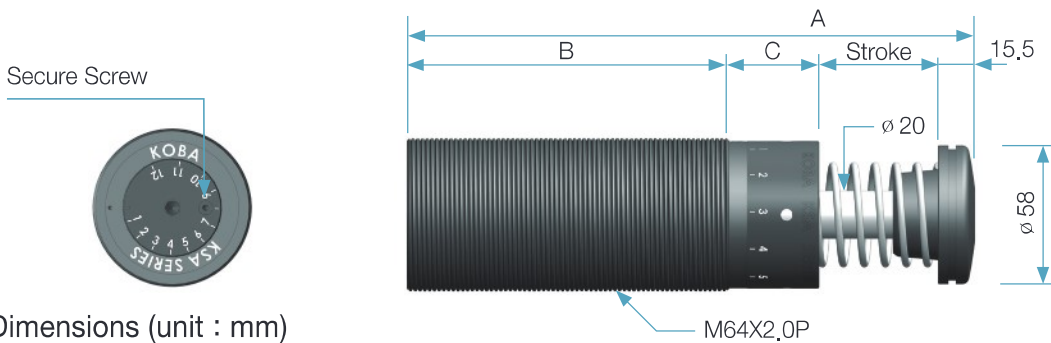
Model	KSA45-25	KSA45-50	KSA45-75
A	210	271	343
B(Min/Max)	25/68	25/104	25/143,5
C(Min/Max)	79,5/100,5	104/143,5	129/170,75





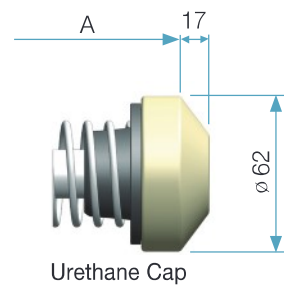
KSA 64 Series Engineering Data

Model	Stroke (mm) S	Max_Energy / Cycle (Nm) E _T	Max_Energy / Hour (Nm/h) E _T C	Effective Weight (kg) We	Recoil Force (N)		Weight (kg)
					Ext.	Comp.	
KSA64-25	25	1,250	152,000	92-24,400	61,8	110	2,9
-50	50	2,500	248,000	185-48,800	60,8	133,2	3,3
-75	75	3,750	265,000	277-73,240	61,4	148,3	3,8
-100	100	5,000	360,000	370-97,650	59,4	160,1	4
-125	125	6,250	413,000	462-122,000	57,1	160,4	7,7
-150	150	7,500	450,000	555-146,480	51	166,8	8,9

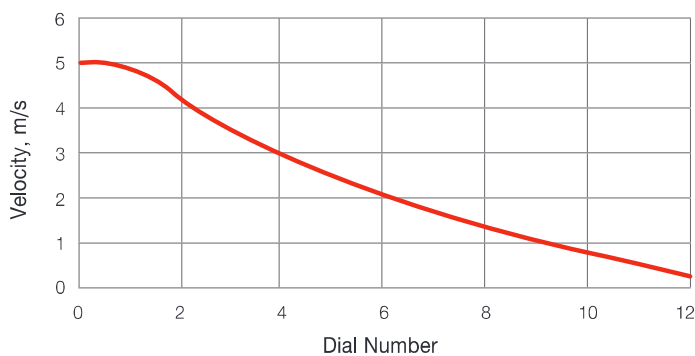


Dimensions (unit : mm)

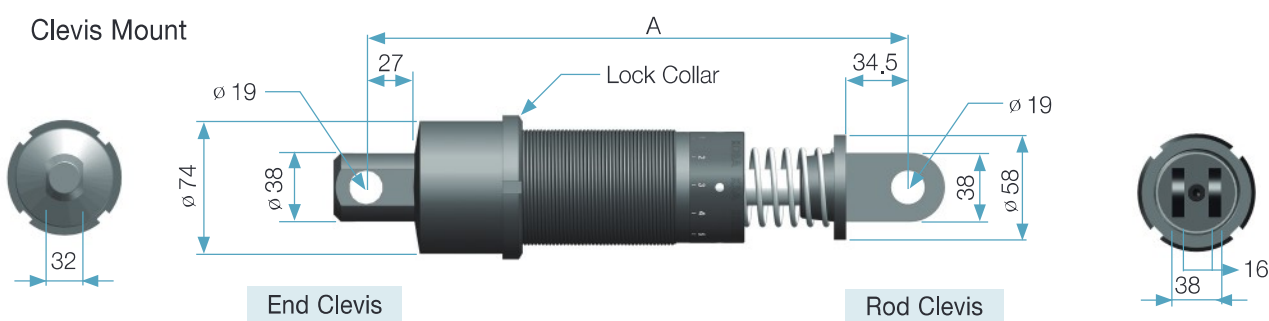
Model	St	A	B	C
KSA64-25	25	176	97,5	38
-50	50	239	135,5	38
-75	75	309	173,5	45
-100	100	375	214,5	45
-125	125	452	256,5	55
-150	150	518,5	294,5	58,5



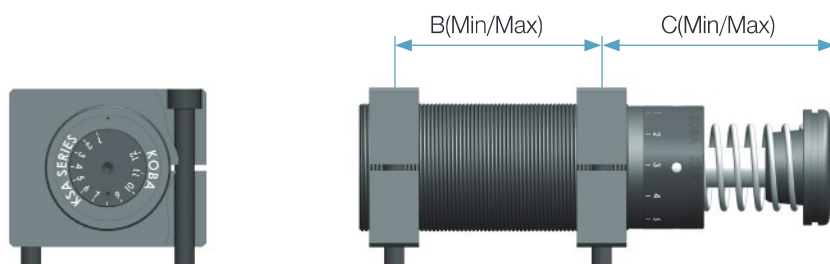
Adjustment Diagram



Accessory (unit : mm)

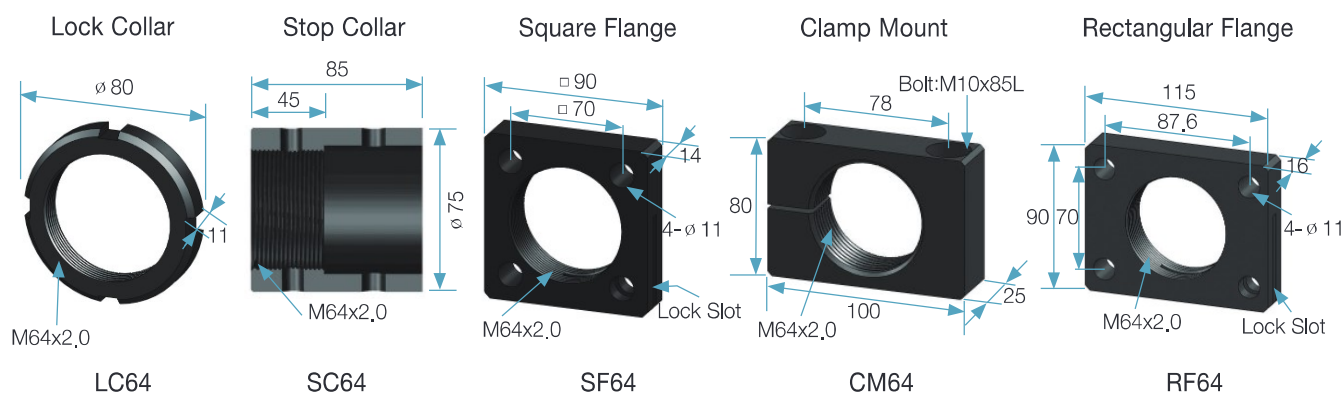


Clamp Mount



Dimensions (unit : mm)

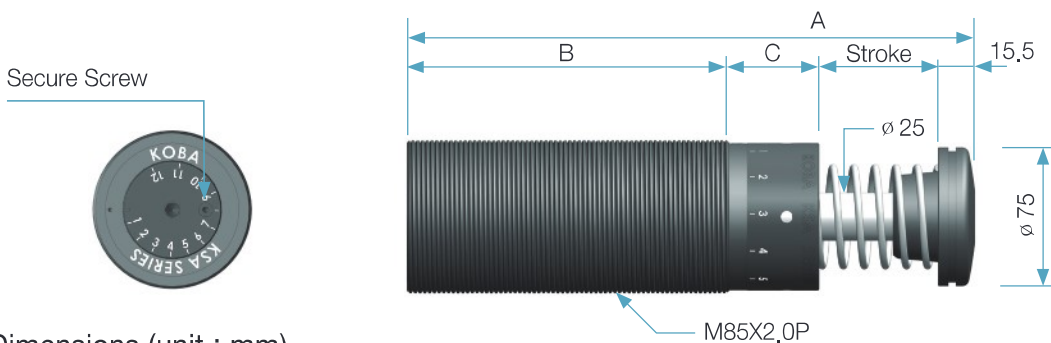
Model	KSA64-25	KSA64-50	KSA64-75	KSA64-100	KSA64-125	KSA64-150
A	244	307	377	442	520	-
B(Min/Max)	25/72,5	25/110,5	25/148,5	25/189,5	25/231,5	25/269,5
C(Min/Max)	92,5/116,25	117,5/160,25	149,5/211,25	174,5/256,75	209,5/312,75	238/360,25





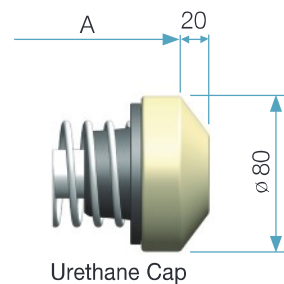
KSA 85 Series Engineering Data

Model	Stroke (mm) S	Max. Energy / Cycle (Nm) E _T	Max. Energy / Hour (Nm/h) E _T C	Effective Weight (kg) We	Recoil Force (N)		Weight (kg)
					Ext.	Comp.	
KSA85-25	25	2,000	330,000	148-39,600	132	245,8	12,2
-50	50	4,000	462,000	296-78,100	131,6	271,7	14,4
-75	75	6,000	680,000	444-117,200	130	325,1	17
-100	100	8,000	825,000	591-156,300	125,4	327,7	20
-125	125	10,000	859,000	740-195,300	126,6	343,3	23,6
-150	150	12,000	901,000	930-220,300	126,6	386,7	28

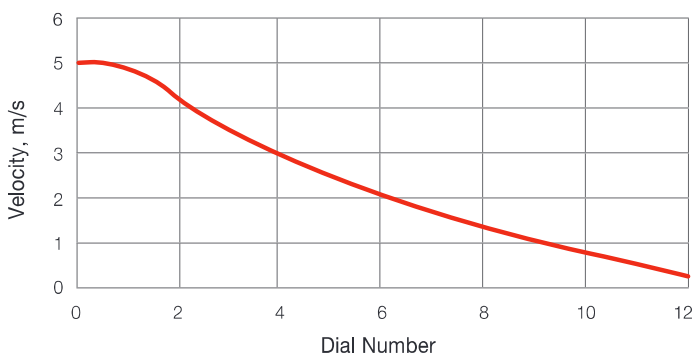


Dimensions (unit : mm)

Model	St	A	B	C
KSA85-25	25	189,5	109	40
-50	50	251	145,5	40
-75	75	314,5	180	44
-100	100	384,5	217	52
-125	125	452,5	256	56
-150	150	513,5	292	56

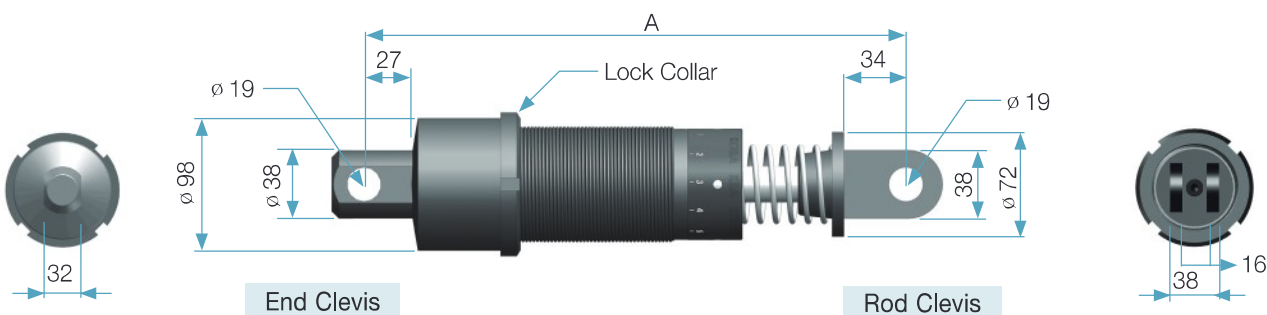


Adjustment Diagram

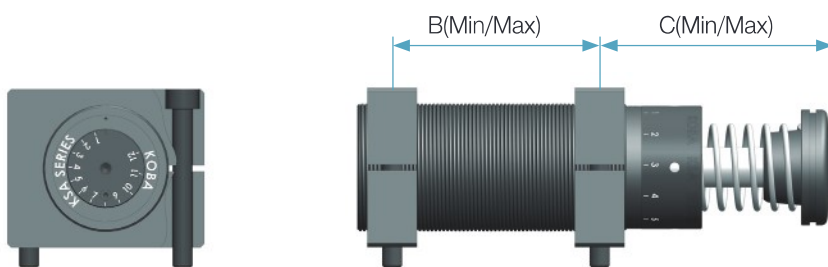


Accessory (unit : mm)

Clevis Mount



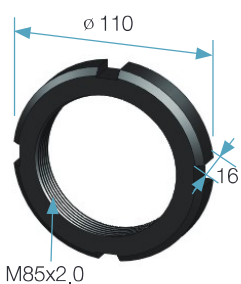
Clamp Mount



Dimensions (unit : mm)

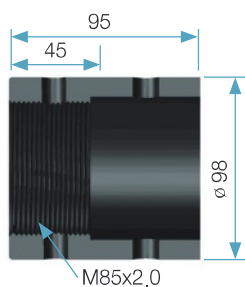
Model	KSA85-25	KSA85-50	KSA85-75	KSA85-100	KSA85-125	KSA85-150
A	256	316	381	451	519	-
B(Min/Max)	25/79	25/114	25/150	25/187	25/226	25/262
C(Min/Max)	95,5/120	120,5/162,5	149/209,5	182,5/261	211,5/309,5	236,5/352,5

Lock Collar



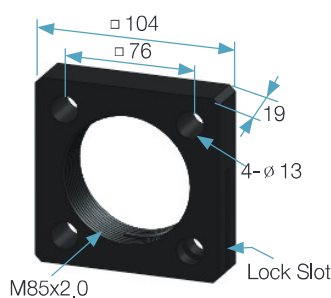
LC85

Stop Collar



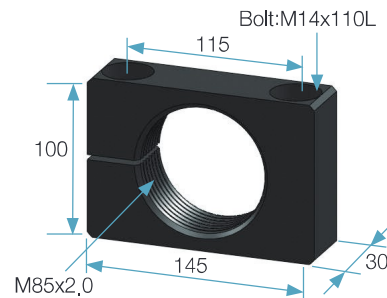
SC85

Square Flange



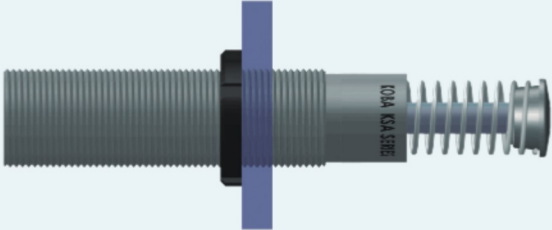
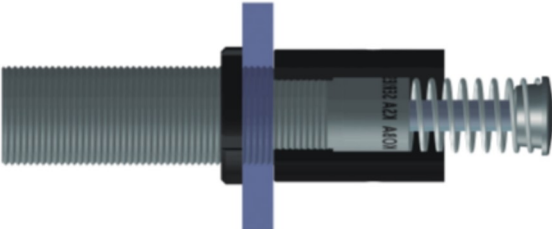
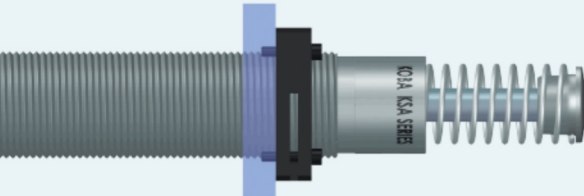
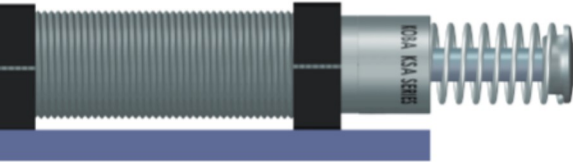
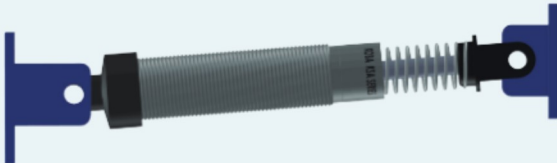
SF85

Clamp Mount



CM85

KSA Accessories Installation

NAME	Example / Description	
Lock Collar		<p>mounting by locking 1 or 2 lock collar with recommended torque</p>
Stop Collar + Lock Collar		<p>Stop Collar will be adjusted to max needed stroke, Locked by 1 or 2 lock collar.</p>
Flange Mount		<p>Square Flange or Rectangular Flange to mount Shock Absorber in through bores.</p>
Clamp Mount		<p>Clamp Mount is used to mount Shock Absorber on the floor.</p>
Clevis Mount		<p>Clevis mount - needed to connect moving load directly with the Shock Absorber</p>

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※The specifications in catalog are subject to change without notice in order to improve performance