

# KPA/KUPA series



### Features

- Able to adjust impact absorbed range with dampening adjustable dial(360°) according to impact velocity.
- Rapid returning piston rod by specially designed spring for next cycle.
- Surface of outer tube and piston rod plate with chrome that prohibits corrosion and scratches for a longer life.
- Available attachment to any position.
- Shock Absorber allows higher productivity by increasing acceleration velocity.
- Saves production costs by extending the equipment life.
- Improves working efficiency by decreasing noise in factory.
- Maintains better quality to prevent damage of goods.

### How to Order

KUPA 1210 -    

①                      ②                      ③                      ④

#### ① Cap

KPA	Without cap (Only M12, M14, M16, M20, M25, M27)
KUPA	With cap (M12, M14, M16, M20, M25, M27 Standard have urethane cap.) (M36, M42, M64, M85 Standard have a steel cap. Urethane cap is option part.)

#### ③ Finishing

Nil	Black oxide coating
N	Nickel plating

#### ④ Option

Nil	Lock nut M08~M36 (Basic : include 2ea) Lock nut M42~M85 (Basic : include 1ea)
S	Stop collar (Only M14~M85)
F	Square flange (Only M36,M42,M64,M85)
R	Rectangular flange (Only M36, M42, M64)
U	Urethane cap (Only M36,M42,M64,M85)

#### ② Outer diameter & Stroke

1210	M12XP1.0	10mm	4225	M42XP1.5	25mm
1410	M14XP1.5	10mm	4250		50mm
1612	M16XP1.5	12mm	4275		75mm
2015	M20XP1.5	15mm	64050	M64XP2.0	50mm
2525	M25XP1.5	25mm	64100		100mm
*2725	M27XP3.0	25mm	64150	M64XP2.0	150mm
	M27XP1.5	25mm	8550		50mm
3035	M30XP1.5	35mm	8590	M85XP2.0	90mm
3625	M36XP1.5	25mm	85125		125mm
3650		50mm	85165		165mm

※ 2725 has two screw sizes.  
M27xP3.0 = KPA,KUPA2725  
M27xP1.5 = KPS(without cap),KUPS(with cap)2725

### Specifications

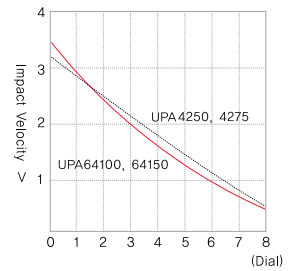
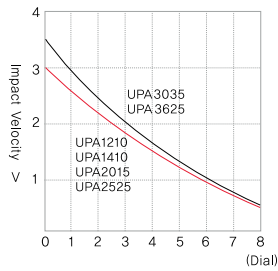
Model	Total energy [Max] (Nm)	Total energy per hour [Max] (Nm/h)	Effective weight [Max~Min] (kg)	Shock force [Max] (N)	Return force [Min~Max] (N)	Weight (g)	Model	Total energy [Max] (Nm)	Total energy per hour [Max] (Nm/h)	Effective weight [Max~Min] (kg)	Shock force [Max] (N)	Return force [Min~Max] (N)	Weight (g)
KPA1210	13	19,000	0.3~70	600	4~10	45	KUPA3035	170	80,000	15~1,950	5,000	30~60	600
KUPA1210	13	19,000	0.3~70	600	4~10	50	KUPA3625	180	90,000	17~2,450	6,000	40~75	680
KPA1410	15	24,500	0.3~90	680	5~11	55	KUPA3650	350	110,000	34~4,900	6,000	25~60	780
KUPA1410	15	24,500	0.3~90	680	5~11	65	KUPA4225	250	130,000	25~7,000	2,400	50~85	1,000
KPA1612	20	30,000	1.3~200	1,000	7~14	110	KUPA4250	500	157,500	45~10,000	2,400	35~75	1,300
KUPA1612	20	30,000	1.3~200	1,000	7~14	125	KUPA4275	750	195,000	55~10,500	2,400	35~100	1,600
KPA2015	25	35,000	1.3~220	1,160	8~15	135	KUPA64050	1,250	245,000	70~16,000	3,300	80~165	3,500
KUPA2015	25	35,000	1.3~220	1,160	8~15	150	KUPA64100	2,550	335,000	115~19,000	3,300	75~210	4,700
KPA2525	70	70,000	9.8~1,300	3,800	15~45	340	KUPA64150	3,750	370,000	130~26,500	3,300	95~360	6,100
KUPA2525	70	70,000	9.8~1,300	3,800	15~45	390	KUPA8550	2,400	384,000	180~34,000	66,000	140~200	6,300
KPA2725	70	70,000	9.8~1,300	3,800	15~45	340	KUPA8590	4,100	656,000	210~40,000	66,000	100~210	7,300
KPS2725	70	70,000	9.8~1,300	3,800	15~45	450	KUPA85125	5,800	945,000	220~45,000	66,000	90~210	8,900
KUPA2725	70	70,000	9.8~1,300	3,800	15~45	390	KUPA85165	7,100	1,150,000	290~50,000	66,000	90~400	10,900
KUPS2725	70	70,000	9.8~1,300	3,800	15~45	500	Max. impact velocity		≤ 3.5 m/sec				
							Ambient temperature		-10~60℃				

※ Includes lock nut (2pcs).

**How to Use**

- Tighten the dial for dampening adjustment with wrench after optimal value is selected.
- Confirm whether the effective weight is in optimal range.
- Can decrease the noise 3~7dB by inserting Urethane cap to rod end button.
- Total energy per hour made out based on atmosphere temperature of 20°C

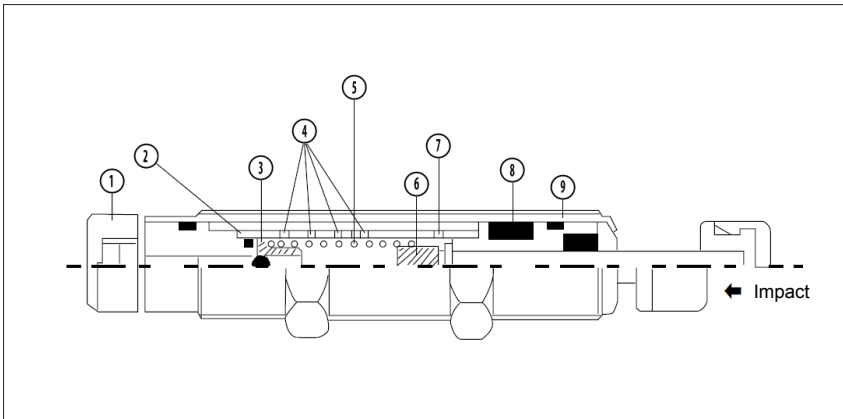
**Adjustment Dial of Shock Absorber**



- To achieve the optimal shock absorber range

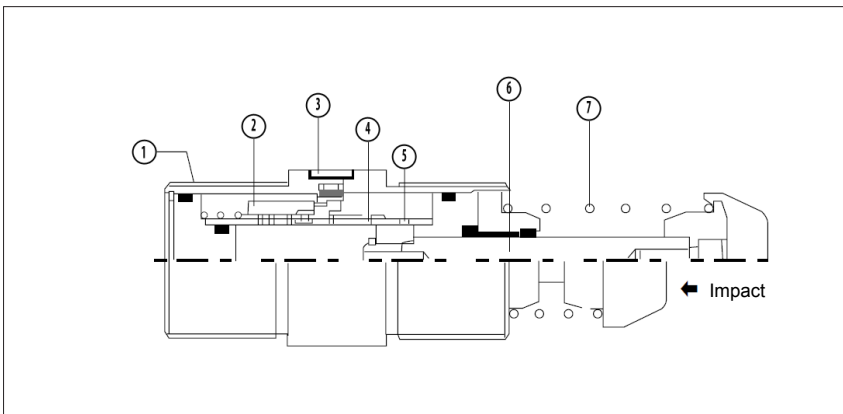
1. Mount the Shock Absorber.
2. Set adjustment to "0". If this is too soft, adjust to the next number in sequence until the desired shock absorber range is obtained.
3. Tighten the dial with provided wrench.

**Structure (Small)**



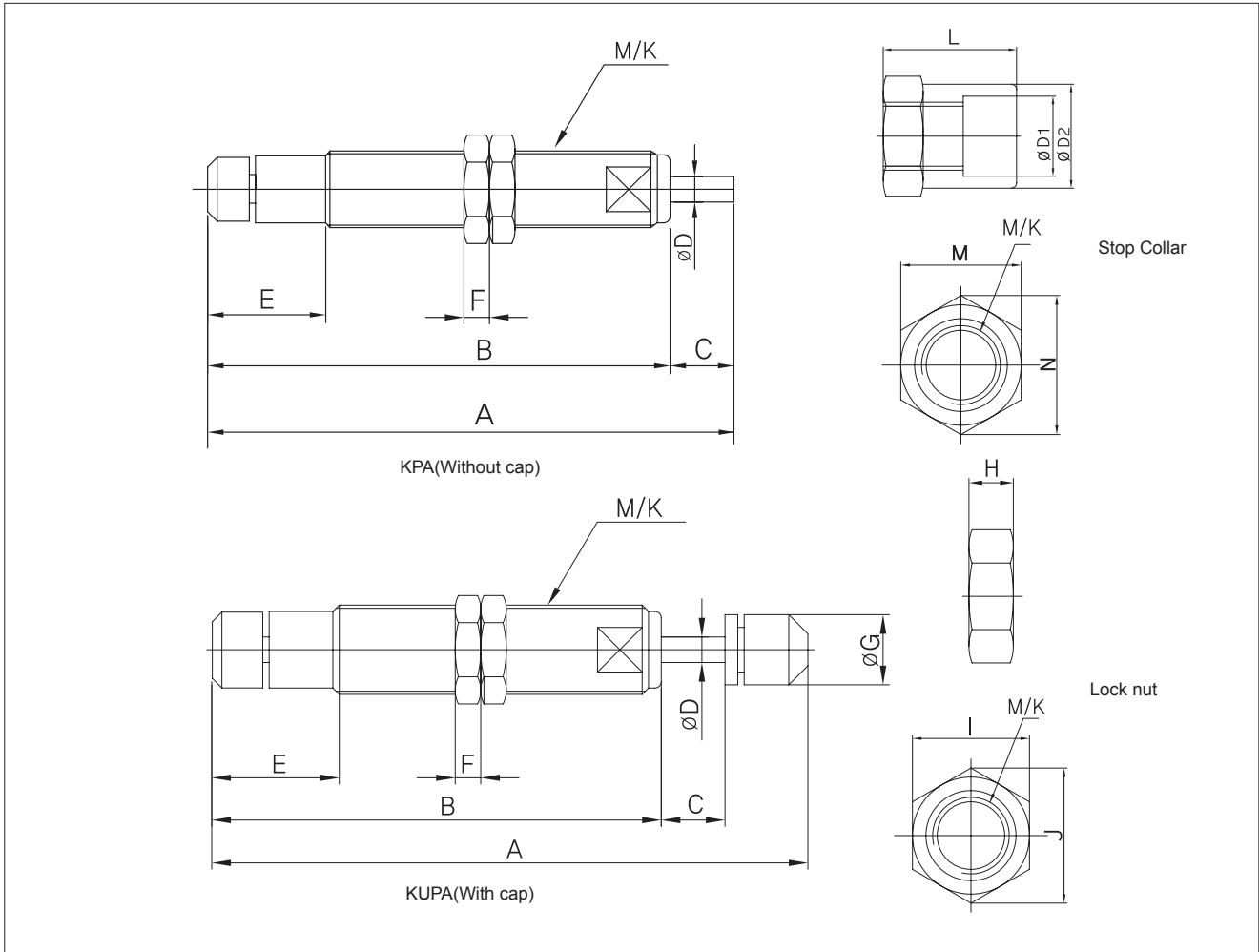
Part no.	Parts	Material
1	Adjustment dial	Carbon steel tube, SM45C
2	Inner tube	Carbon steel tube, STKM13C
3	Check valve	-
4	Orifice hole	-
5	Return spring	HSWR72A
6	Piston	Brass extruding tube, C2700BE
7	Oil return hole	-
8	Accumulator	-
9	Outer tube	Carbon steel tube, STKM13C

**Structure (Large)**



Part no.	Parts	Material
1	Outer tube	Carbon steel tube, STKM13C
2	Accumulator	-
3	Adjustment dial	Carbon steel tube, SM45C
4	Inner tube	Carbon steel tube, STKM13C
5	Oil return hole	-
6	Piston	Brass extruding tube, C2700BE
7	Return spring	HSWR72A

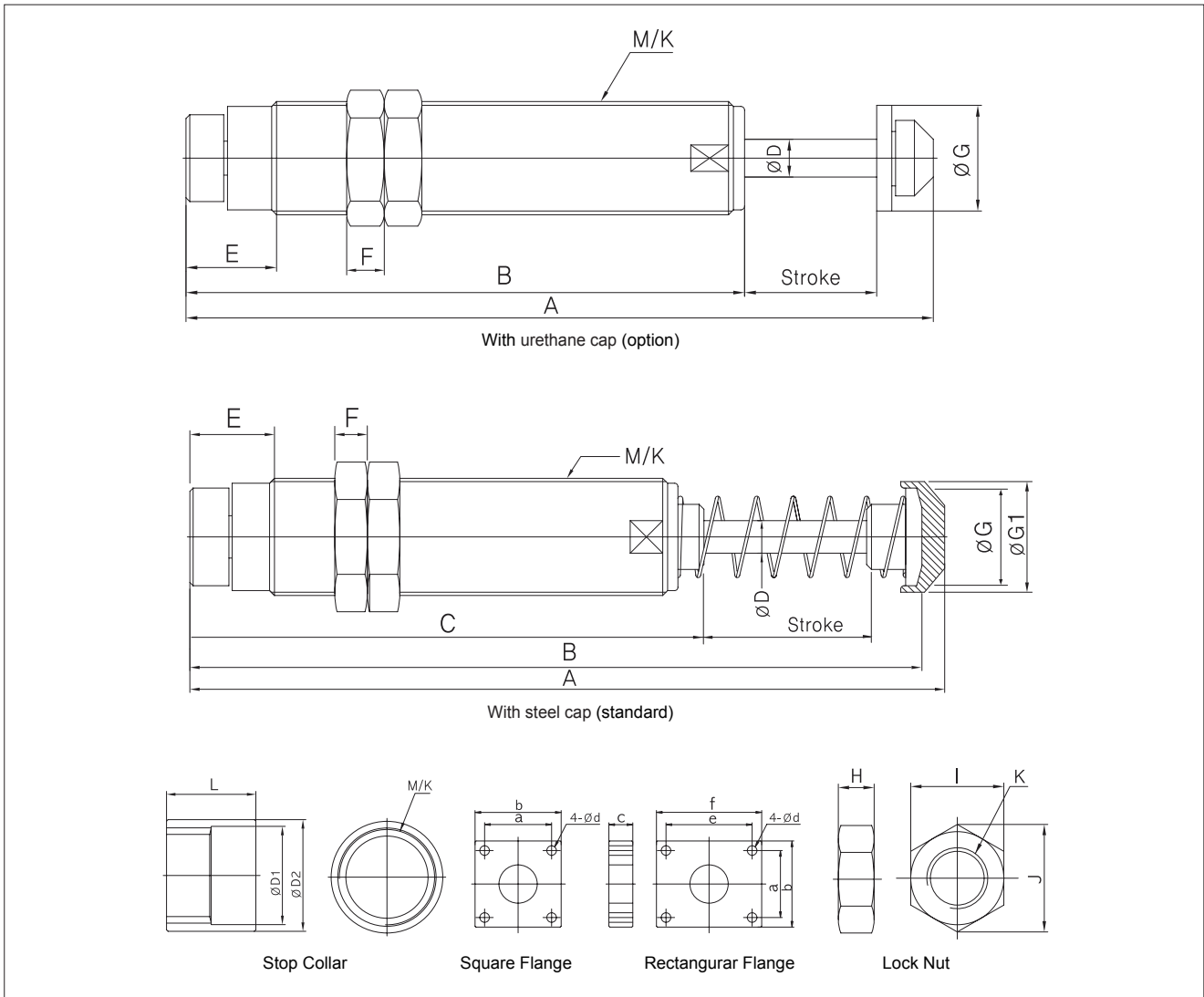
**Dimensions-Adjustable Type(Standard)**



Unit:mm

Model	Stroke	A	B	C	ØD	E	F	ØG	H	I	J	M	N	ØD1	ØD2	L	M/K
KPA1210	10	74	64	10	4	16.5	4	-	4	14	16.1	14	16	12.5	14	20	M12×1.0P
KUPA1210	10	87	64	10	4	16.5	4	10.7	4	14	16.1	14	16	12.5	14	20	M12×1.0P
KPA1410	10	78	68	10	4	18	4	-	4	19	21.9	19	21.6	15	18	26	M14×1.5P
KUPA1410	10	91	68	10	4	18	4	12	4	19	21.9	19	21.6	15	18	26	M14×1.5P
KPA1612	12	103	91	12	4	21	6	-	6	22	25.4	19	21.9	16.5	19	27	M16×1.5P
KUPA1612	12	116	91	12	4	21	6	14	6	22	25.4	19	21.9	16.5	19	27	M16×1.5P
KPA2015	15	113	98	15	6	21.5	6	-	6	24	27.7	24	27.7	20.5	23	35	M20×1.5P
KUPA2015	15	128	98	15	6	21.5	6	18	6	24	27.7	24	27.7	20.5	23	35	M20×1.5P
KPA2525	25	152	127	25	8	23	8	-	8	32	37	32	37	26	31	40	M25×1.5P
KUPA2525	25	168	127	25	8	23	8	22	8	32	37	32	37	26	31	40	M25×1.5P
KPA2725	25	152	127	25	8	23	8	-	8	32	37	32	37	28	31	40	M27×3.0P
KPS2725	25	168	127	25	8	23	8	22	8	32	37	32	37	28	31	40	M27×1.5P
KUPA2725	25	152	127	25	8	23	8	-	8	32	37	32	37	28	31	40	M27×3.0P
KUPS2725	25	168	127	25	8	23	8	22	8	32	37	32	37	28	31	40	M27×1.5P

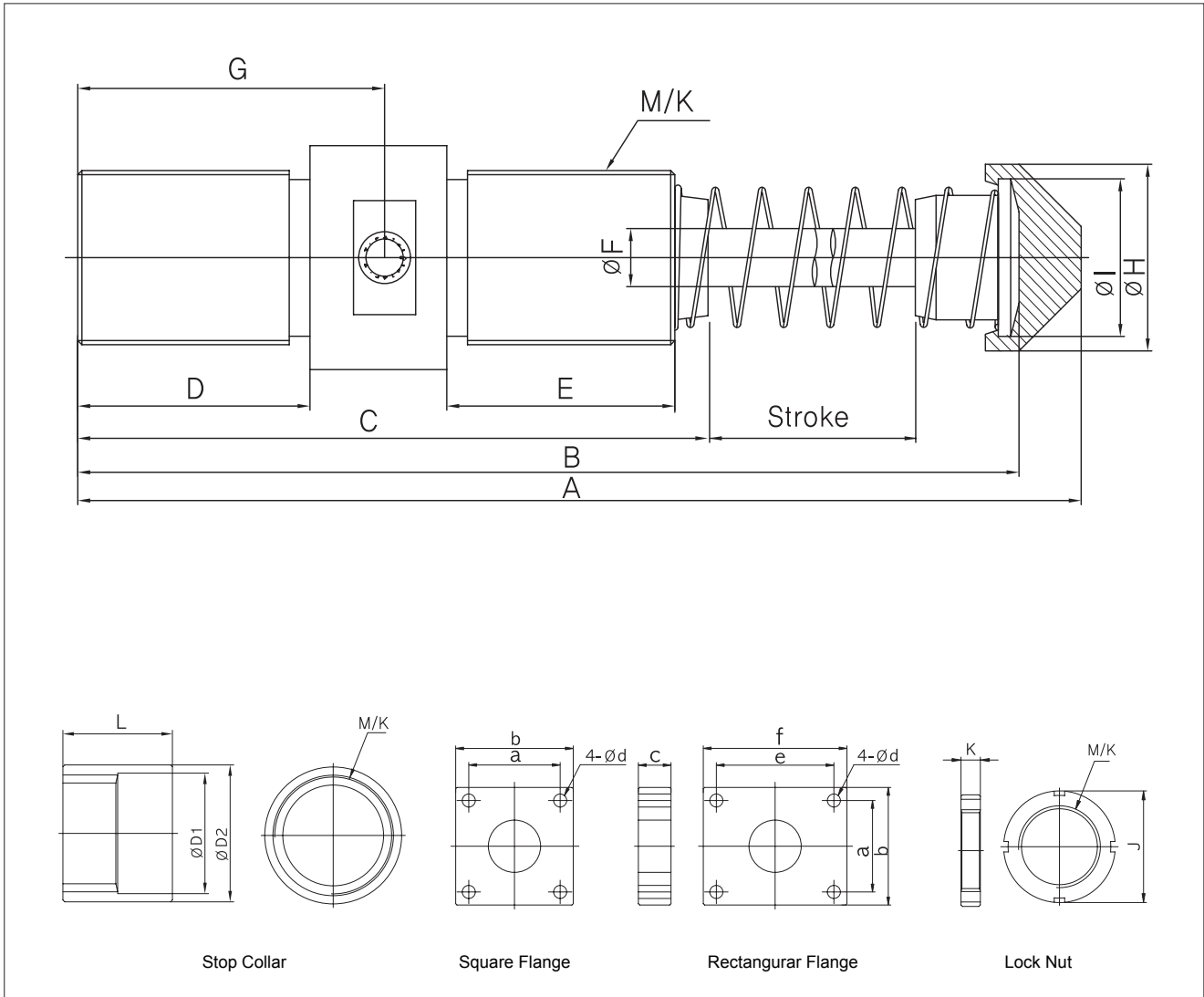
**Dimensions-Adjustable Type (Medium)**



Unit:mm

Model	Stroke	A	B	C	ØD	E	F	ØG	ØG1	M/K
KUPA3035	35	201	148	-	10	22.5	10	28	-	M30×1.5P
KUPA3625	25	182	174	132	10	25.5	10	30	34	M36×1.5P
KUPA3650	50	232	224	157	10	25.5	10	30	34	M36×1.5P

**Dimensions-Adjustable Type (Large)**



Unit:mm

Model	Stroke	A	B	C	D	E	ØF	G	ØH	ØI	M/K
KUPA4225	25	167	152	102	33	29	14	50	45	38	M42×1.5P
KUPA4250	50	217	202	127	45	42	14	62	45	38	M42×1.5P
KUPA4275	75	267	252	152	56	55	14	75	45	38	M42×1.5P
KUPA6450	50	242	225	150	50	49	20	68.5	57	50	M64×2.0P
KUPA64100	100	342	325	200	75	74	20	96.5	57	50	M64×2.0P
KUPA64150	150	472	455	250	76	75	20	143	57	50	M64×2.0P
KUPA8550	50	260	240	155	50	50	22	71.5	80	70	M85×2.0P
KUPA8590	90	340	320	195	70	70	22	91.5	80	70	M85×2.0P
KUPA85125	125	415	395	230	70	70	22	109	80	70	M85×2.0P
KUPA85165	165	510	490	270	70	70	22	129	80	70	M85×2.0P

Unit:mm

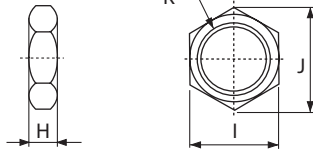
Lock Nut Stop Collar Square Flange Rectangular Flange	J	K	ØD1	ØD2	L	a	b	c	d	e	f	M/K
KUPA42	54	10	44	58	48	41.5	60	12	9	60.5	80	M42×1.5P
KUPA64	74	13	66	75	60	70	90	14	10	-	-	M64×2.0P
KUPA85	100	18	88	100	80	76	102	19	14	-	-	M85×2.0P

**Dimensions-Accessories**

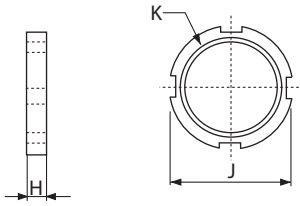
**Lock Nut (Standard)**

Material: Carbon steel

Standard & Medium  
(M12~M36)



Large  
(M42~M85)



※ M08~M36 include Lock Nut(2pcs)  
※ M42~M85 include Lock Nut(1pc)

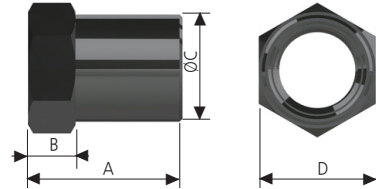
Unit:mm

Part no.	H	I	J	K
LOCK NUT 12	4	14	16	M12XP1.0
LOCK NUT 14	4	17	19.6	M14XP1.5
LOCK NUT 16	6	22	25.4	M16XP1.5
LOCK NUT 20	6	24	27.7	M20XP1.5
LOCK NUT 25	8	32	37	M25XP1.5
LOCK NUT 27	8	32	37	M27XP3.0
LOCK NUT 30	10	36	41.1	M30XP1.5
LOCK NUT 36	10	46	53.1	M36XP1.5
LOCK NUT 42	10	-	54	M42XP1.5
LOCK NUT 64	13	-	74	M64XP2.0
LOCK NUT 85	18	-	100	M85XP2.0

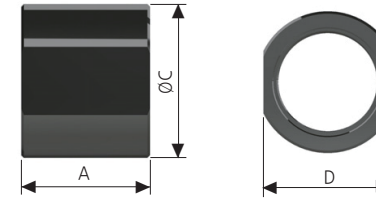
**Stop Collar**

Material: Carbon steel

Standard & Medium  
(M14~M27)



Large  
(M36~M85)



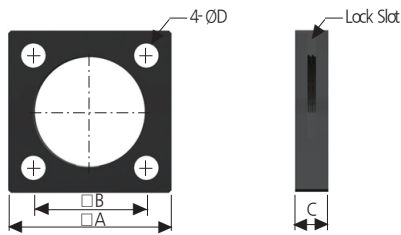
※ Only for M14~M27, M36~M85

Unit:mm

Part no.	A	B	ØC	D	M
STOP COLLAR 12	20	8	14	14	M12×1.0P
STOP COLLAR 14	26	8	18	19	M14×1.5P
STOP COLLAR 16	27	10	19	19	M16×1.5P
STOP COLLAR 20	35	10	23	24	M20×1.5P
STOP COLLAR 25	40	12	31	32	M25×1.5P
STOP COLLAR 27	40	12	31	32	M27×1.5P
	40	12	31	32	M27×3.0P
STOP COLLAR 36	60	-	45	42	M36×1.5P
STOP COLLAR 42	48	-	58	52	M42×1.5P
STOP COLLAR 64	60	-	75	71	M64×2.0P
STOP COLLAR 85	80	-	100	95	M85×2.0P

**Square Flange**

Material: Carbon steel



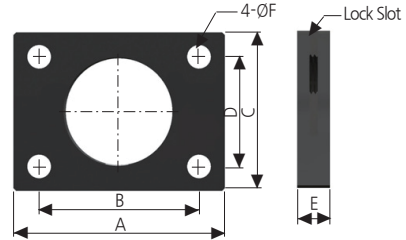
※ Only for M36, M42, M64, M85.

Unit:mm

Part no.	A	B	C	ØD	M
S/F 36	45	32	9	6	M36×1.5P
S/F 42	60	41.5	12	9	M42×1.5P
S/F 64	90	70	14	10	M64×2.0P
S/F 85	102	76	19	14	M85×2.0P

**Rectangular Flange**

Material: Carbon steel



※ Only for M36, M42, M64.

Unit:mm

Part no.	A	B	C	D	E	ØF	M
R/F 36	58.8	41.3	45	32	9	6	M36×1.5P
R/F 42	80	60.5	60	41.5	12	9	M42×1.5P