

Features

- ☆ Flat vacuum pad.
- ☆ Suitable for transferring flat objects.
- ☆ When lifting force is parallel to the surface of objects, it is recommended.

Applications

- ◇ Household appliances
- ◇ Electronic components
- ◇ Glass
- ◇ Plywood
- ◇ Flat steel plate
- ◇ Plastic plate



How to Order

SF40 N – 18F EH – KE1820–A16 – BH–G1/8

① Model		② Material (Shore hardness)		③ Connection thread	
SF15	φ 15	N	NBR(55°)	18–F	G1/8 Female thread (SF20,25,30,40,50,75,90)
SF20	φ 20	S	Silicone(50°)	18–FA	G1/8 Female thread (SF40)
SF25	φ 25	WS	White silicone(50°)	5 × 18F	G1/8 Female thread (SF40,SF50)
SF30	φ 30	CS	Conductive(Special mat'l)(50°)	14–F	G1/4 Female thread (SF75,90)
SF40	φ 40	PU	Poly urethane(60°)*	38–F	G3/8 Female thread (SF75,90)
SF50	φ 50			12–F	G1/2 Female thread (SF75,90,110,150,200)
				34–F	G3/4 Female thread (SF75,90,110,150,200)
				M5–M	M5 Female thread (SF15)
				M5/18–MF	M5 Female thread and G1/8 Male thread (SF20,25,30)
				M5/18–MFL	M5 Female thread and G1/8 Male thread (SF20,25,30)
				5 × M5F	5 × M5 Female thread (SF20,25,30)
				18–M	G1/8 Male thread (SF50)
				14–M	G1/4 Male thread (SF40,50)
				38–M	G3/8 Male thread (SF50)

*Only for PU material

④ Valve	
EH	Vacuum efficiency valve (SF20,25,30,40,50)
EB	Cone valve(SF20,25,30,40,50,75,90,110,150)
–	No



Accessories

KE1820–A16 BH–G1/8

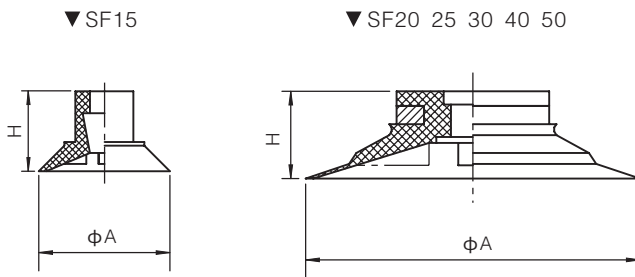
⑤ Spring plunger		⑥ Ball Joint	
Model	Buffer stroke(mm)		
KE510–A12, KE510–Y–A12	10	–	
KE520–A12, KE20–Y–A12	20		
KI506–R–A8, KI506–B–A8, KI506–E–A8, KI506–S–A8	06		
KI510–R–A8, KI510–B–A8, KI510–E–A8, KI510–S–A8	10		
KI525–R–A8, KI525–B–A8, KI525–E–A8, KI525–S–A8	25		
KI507–V–A10	7		
KI515–V–A10	15		
KI520–V–A10	20		
KE1810–A16, KE1810–L–A14, KE1810–V–A16	10		BH–G1/8
KE1820–A16, KE1820–L–A14, KE1820–V–A16	20		
KE1830–A16, KE1830–L–A14, KE1830–V–A16	30		
KE1850–A16, KE1850–L–A14, KE1850–V–A16*	50		
KI1810–A16, KI1810–L–A16, KI1810–V–A16	10		
KI1820, KI1820–L–A16, KI1820–V–A16*	20		
KI1830–A16, KI1830–L–A16, KI1830–V–A16	30		
KI1850–A16, KI1850–L–A16, KI1850–V–A16*	50		
KE1210–L–A20, KE1210–A20	10	BH–G1/2	
KE1220–L–A20, KE1220–A20	20		
KE1230–L–A20, KE1230–A20	30		
KE1250–L–A20, KE1250–A20	50		
KI1210–L–A20, KI1210–A18, KI1210–A22	10		
KI1220–L–A20, KI1220–A18, KI1220–A22	20		
KI1230–L–A20, KI1230–A18, KI1230–A22	30		
KI1250–L–A20, KI1250–A18, KI1250–A22	50		

*Not available with ball joint.

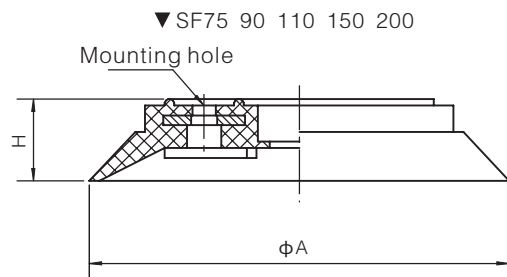
Recommended(Max.)lifting force(N)

Model	Volume cm ³	Vertical lifting force(N) 			Parallel lifting force(N) 		
		-20kPa	-60kPa	-90kPa	-20kPa	-60kPa	-90kPa
SF15	0.037	3.25	8.4	11	3.45	6.48	7.5
SF20	1	6	15	18.7	5	7.95	8.45
SF25	1.1	9.2	19.3	24.9	7.95	8.95	10
SF30	2	13	24.8	30.8	11	15.98	20
SF40	4.8	20	40	50	15	25	29.5
SF50	10	37	74	96	24	40	50
SF75	20	80	201	272	60	110	140
SF90	50	99.8	272.8	365.8	86.8	156.5	193.5
SF110	70	141	418.5	562	140	24.8	299.7
SF150	160	300	845	1098	250	600	800
SF200	460	749	1899.5	2702	375.5	949.8	1347.8
SF300	820	1598	4293	6398	1323	3008	4665

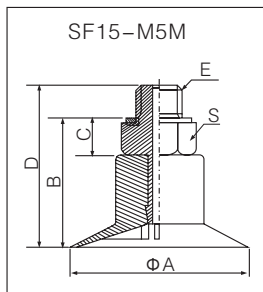
Dimensions (mm)



Model	ΦA	H
SF15	16.5	11
SF20	22	8
SF25	27	9
SF30	32	10
SF40	42	13
SF50	53	17.5

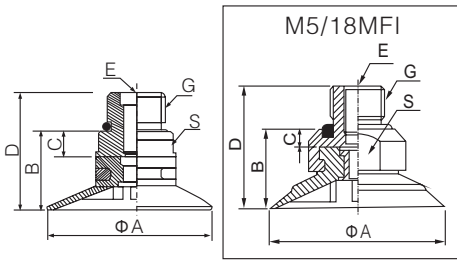


Model	ΦA	H	Mounting hole
SF75	77	13	4-Φ6.5 Circle diameter Φ35
SF90	92	12.5	4-Φ6.5 Circle diameter Φ35
SF110	112	20	8-Φ6 Circle diameter Φ55
SF150	152	26	8-Φ6 Circle diameter Φ70
SF200	200	41	-



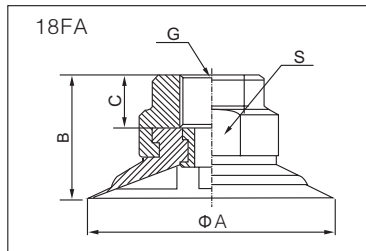
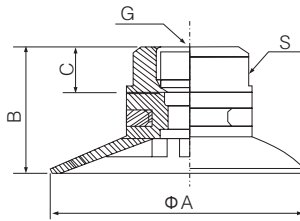
Male(female)thread connection(mm)

Model	ΦA	B	C	D	E	G	S
SF15-M5M	16.5	11	5	19.5	M5	-	S7



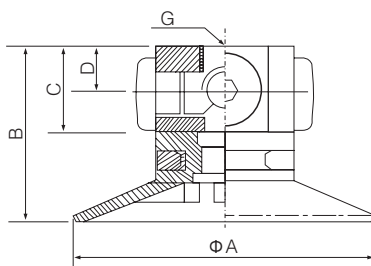
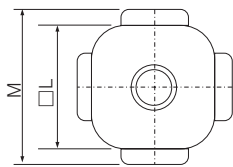
Male(female)thread connection(mm)

Model	ΦA	B	C	D	E	G	S
SF20-M5/18MF	22	9.5	1.5	15.5	M5	G1/8	S12
SF20-M5/18MFI	22	11	3	18	M5	G1/8	S16
SF25-M5/18MF	27	10.5	1.5	16.5	M5	G1/8	S12
SF25-M5/18MFI	27	12	3	19	M5	G1/8	S16
SF30-M5/18MF	32	11.5	1.5	17.5	M5	G1/8	S12
SF30-M5/18MFI	32	13	3	20	M5	G1/8	S16
SF40-18M	42	18	5	25	-	G1/8	S17
SF40-14M	42	19	6	28	-	G1/4	S17
SF50-14M	53	22.5	6	32.5	-	G1/4	S24
SF50-38M	53	23.5	6	33.5	-	G3/8	S24



Female thread connection(mm)

Model	ΦA	B	C	G	S
SF20-18F	22	16	8	G1/8	S15
SF25-18F	27	17	8	G1/8	S15
SF30-18F	32	18	8	G1/8	S15
SF40-18F	43	21	8	G1/4	S17
SF40-18FI	42	22	9	G1/8	S21
SF50-18F	53	26.5	9	G1/8	S21

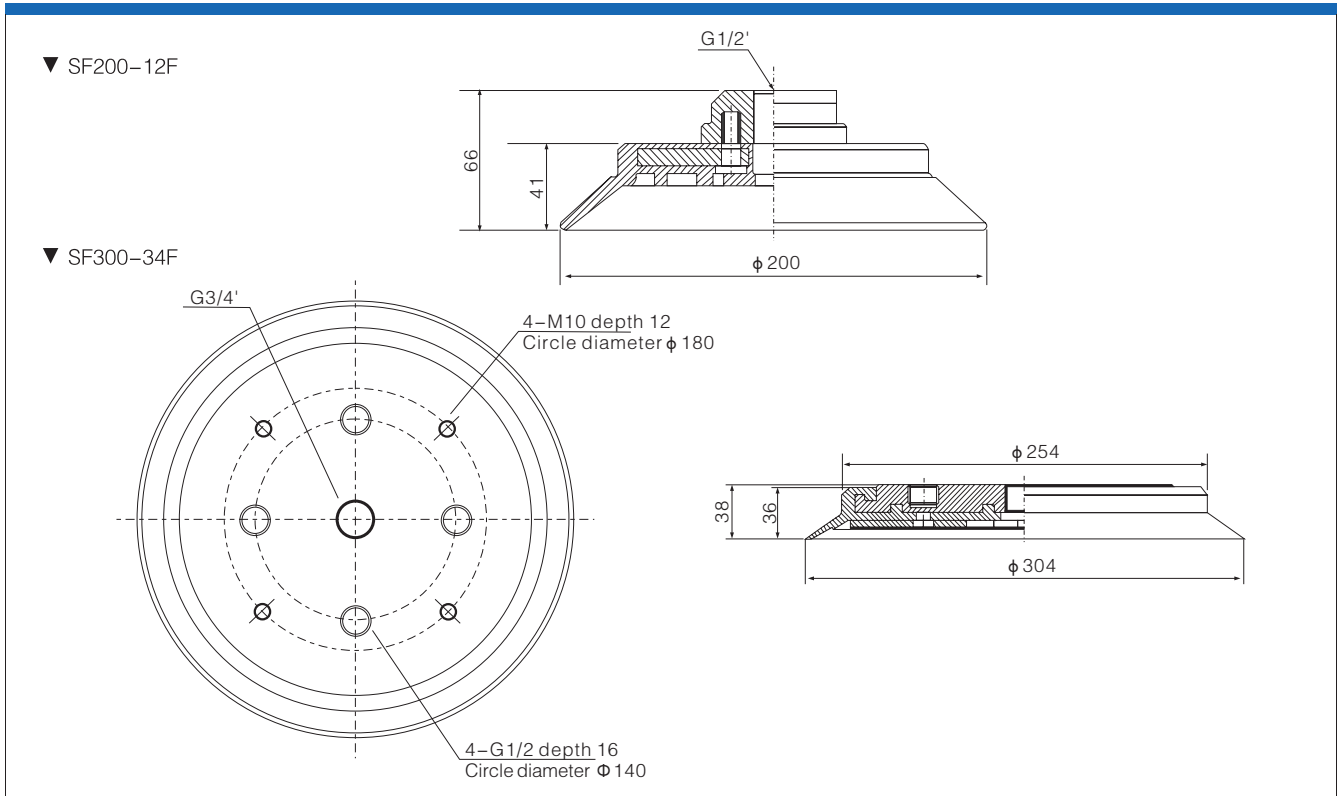


Female thread connection x5(mm)

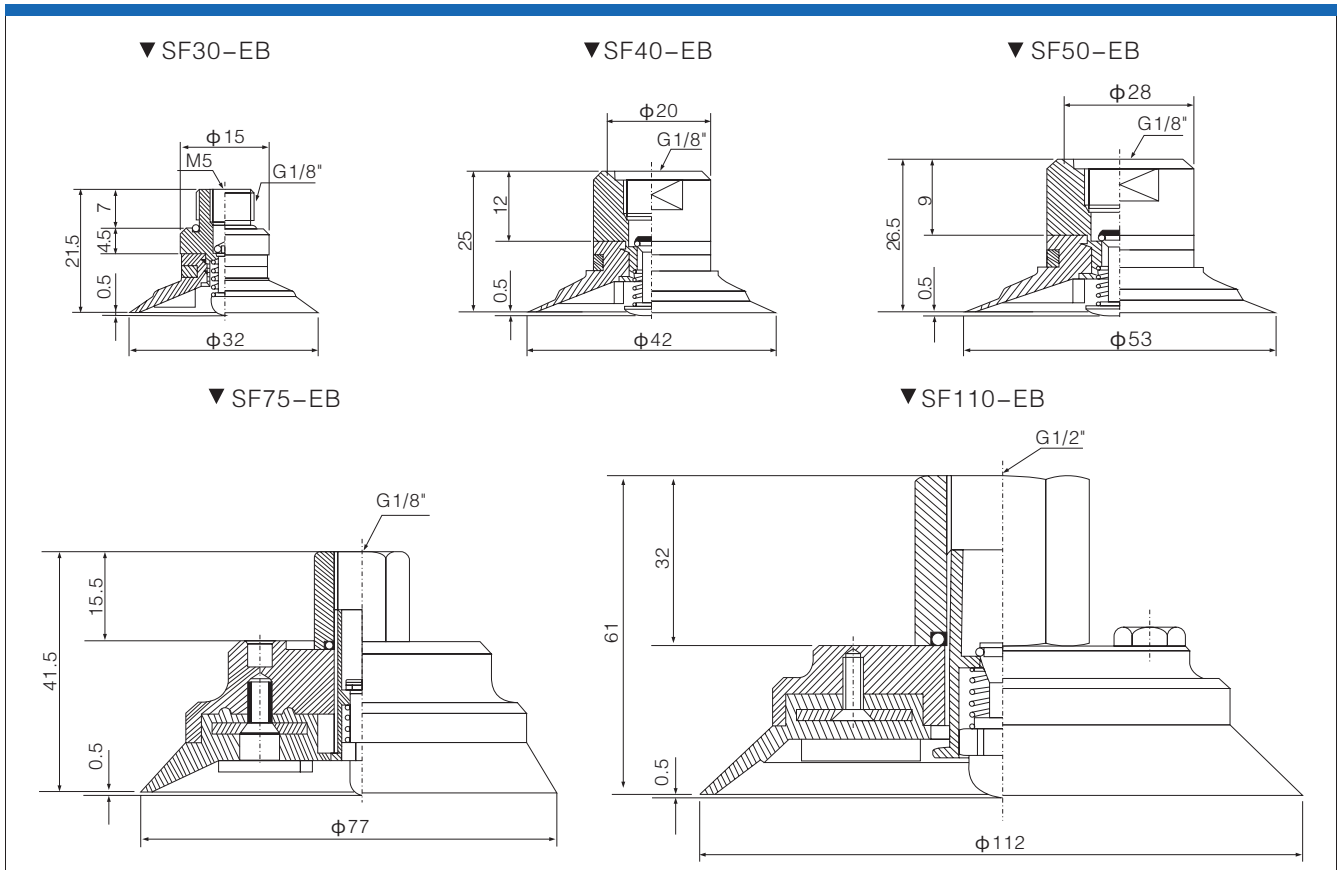
Model	ΦA	B	C	D	G	□L	M
SF20-5 × M5F	22	17	9	5	M5 × 5	15	22
SF25-5 × M5F	27	18	9	5	M5 × 5	15	22
SF30-5 × M5F	32	19	9	5	G1/8 × 5	15	22
SF40-5 × 18F	42	31	18	10	G1/8 × 5	22	30
SF50-5 × 18F	53	35.5	18	10	G1/8 × 5	28	36

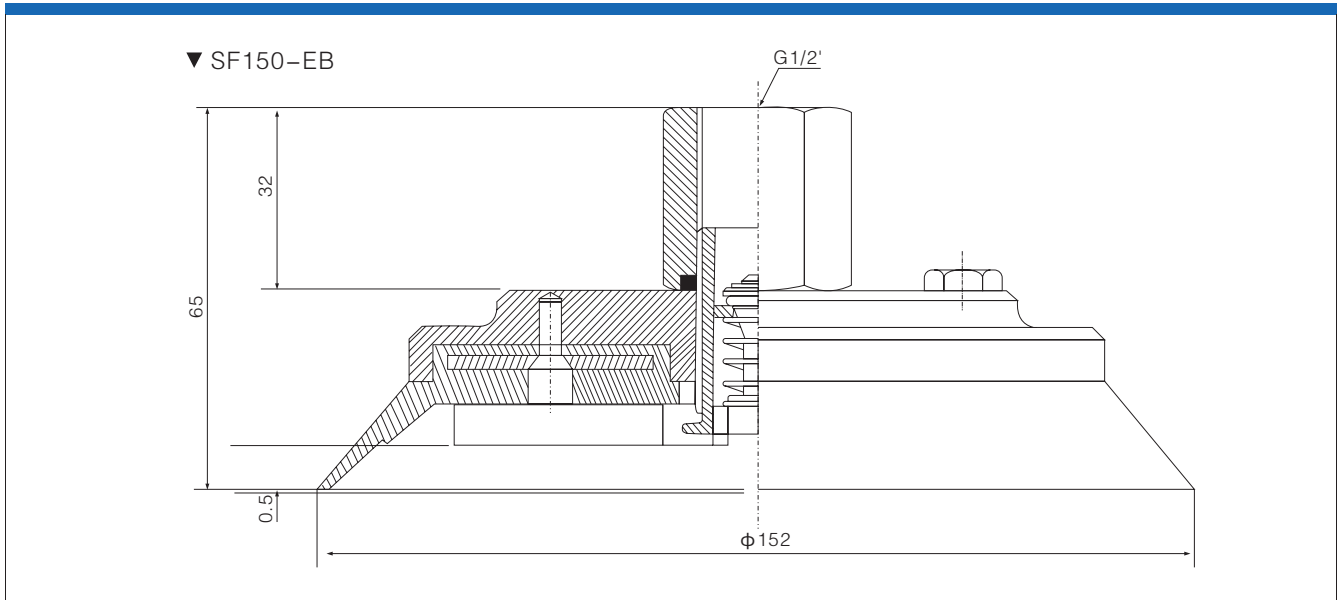
Female thread connection(mm)

Model	ΦA	B	C	D	G
SF75-18F	77	8	26	18	G1/8
SF75-14F	77	8	26	18	G1/4
SF75-38F	77	8	26	18	G3/8
SF75-12F	77	8	26	18	G1/2
SF90-18F	92	7.5	25.5	18	G1/8
SF90-14F	92	7.5	25.5	18	G1/4
SF90-38F	92	7.5	25.5	18	G3/8
SF90-12F	92	7.5	25.5	18	G1/2
SF110-12F	112	14	29	15	G1/2
SF150-12F	152	18	33	14	G1/2



Cone valve Dimensions

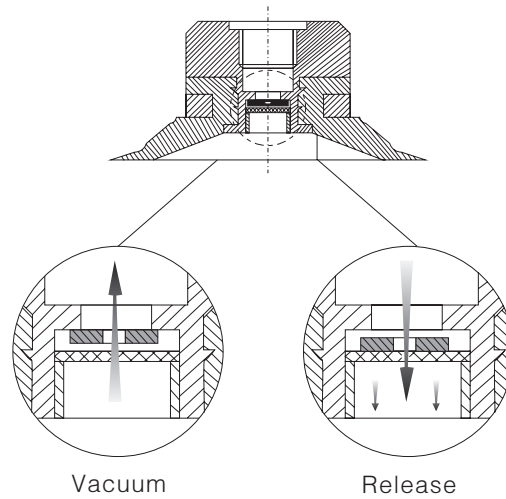




Accessories

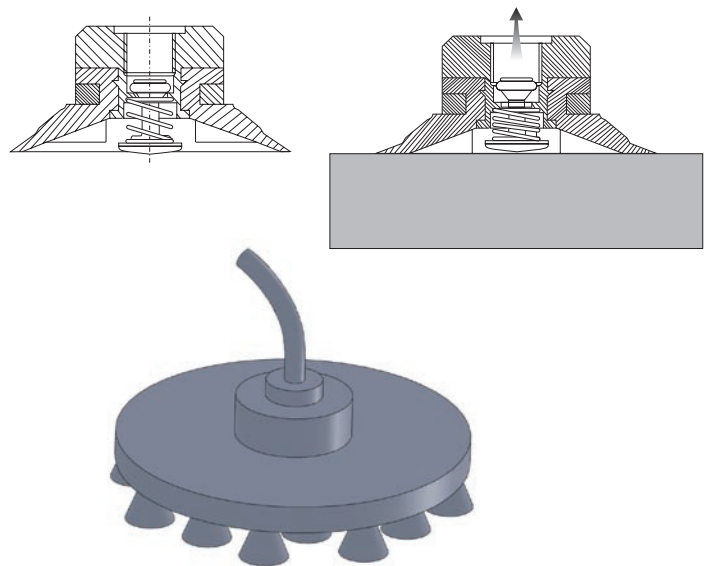
Vacuum Efficiency valve (EH)

It can compensate the level differences of the lifting objects. When the shape, dimension and location of the lifting object is not the same, the valve can work as an absorber. When the vacuum pad is not in contact with the object, the vacuum efficiency valve fitting can reduce leakage minimally.



Cone Valve (EB)

When the vacuum pad is not in contact with the object, the valve closes the opening in the fitting. It prevents vacuum leakage. When the vacuum pad contacts with the object, the valve first opens, then vacuum is created in the pad.





Features

- ☆ Standard flat vacuum pad.
- ☆ Suitable for concave and convex objects.
- ☆ Suitable for flat and smooth surface objects.
- ☆ Suitable for a little bending objects.

Applications

- ◇ Steel plate
- ◇ paper box packaging
- ◇ Small semiconductor material

How to Order

SU30 N 18M – EH – KI1810–A16 – BH–G1/8

① Model		② Material (Shore hardness)		③ Connection thread			
SU1.5X	φ1.5	SU10	φ10	N	NBR(55°)	M2.5–M	M2.5 Male thread (SU2,SU3)
SU2	φ2	SU15	φ15	S	Silicone(50°)	M5–M	M5 Male thread (SU2,SU3,SU4,SU6,SU8,SU10,SU15)
SU2X	φ2	SU20	φ20	WS	White silicone(50°)	18–M	G1/8 Male thread (SU40)
SU3	φ3	SU25	φ25	CS	Conductive(Special mat'l)(50°)	14–M	G1/4 Male thread (SU40,SU50)
SU4	φ4	SU30	φ30			38–M	G3/8 Male thread (SU50)
SU4X	φ4	SU40	φ40			M5/18–MF	M5 Female thread and G1/8 Male thread (SU20,SU25,SU30)
SU6	φ6	SU50	φ50			M5/18–MFI*	M5 Female thread and G1/8 Male thread (SU20,SU25,SU30)
SU8	φ8	SU80	φ80			5xM5F	5 × M5 Female thread (SU20,SU25,SU30)
						18–F	G1/8 Female thread (SU30,SU40,SU50,SU80)
						5x18F	5 × G1/8 Female thread (SU40,SU50)
						8	φ8 Inner hole (SU80)
						18–FA*	G1/8 Female thread (SU40)

④ Cone Valve	
EH	Vacuum efficiency valve (SU20,SU25,SU30,SU40,SU50)
-	No

*Refer to the fittings for vacuum pads on page166–169.
Remark:SU40 SU50 fittings are including mesh filter.
Only for silicone material.

Accessories

KI1810–A14 BH–G1/8

⑤ Spring plunger		⑥ Ball Joint	
Model	Buffer stroke(mm)		
KE510–A12, KE510–Y–A12	10	-	
KE520–A12, KE20–Y–A12	20		
KI506–R–A8, KI506–B–A8, KI506–E–A8, KI506–S–A8	06		
KI510–R–A8, KI510–B–A8, KI510–E–A8, KI510–S–A8	10		
KI525–R–A8, KI525–B–A8, KI525–E–A8, KI525–S–A8	25		
KI507–V–A10	7		
KI515–V–A10	15		
KI520–V–A10	20		
KE1810–A16, KE1810–L–A14, KE1810–V–A16	10		BH–G1/8
KE1820–A16, KE1820–L–A14, KE1820–V–A16	20		
KE1830–A16, KE1830–L–A14, KE1830–V–A16	30		
KE1850–A16, KE1850–L–A14, KE1850–V–A16*	50		
KI1810–A16, KI1810–L–A16, KI1810–V–A16	10		
KI1820, KI1820–L–A16, KI1820–V–A16*	20		
KI1830–A16, KI1830–L–A16, KI1830–V–A16	30		
KI1850–A16, KI1850–L–A16, KI1850–V–A16*	50		

*Not available with ball joint.