

Think Safety!

JOKWANG

Cat. No. GC-100 Vol.2



-  ASME Section VIII - UV Stamp
-  ASME Section I - V Stamp
-  Certificate of NBBI Safety Valve Capacity
-  ISO 9001 Certificate
-  ISO 14001 Certificate
-  OHSAS 18001 Certificate
-  Manufacturer Approved by Korea Occupational Safety & Health Agency
-  Certificate of Korea Gas Safety Corporation
-  Certificate of Korea Electric Power Corporation
-  C-SEL China Special Equipment License
-  Type Approval from DNV • GL - Norway/Germany
-  Type Approval from LR - United Kingdom
-  Type Approval from BV - France
-  Type Approval from KR - Korea
-  Type Approval from CCS - China
- Maintenance Company Approved by Five Biggest Korea Coal Thermal Power Plant



INTRODUCTION OF COMPANY

Since its establishment in 1968, JOKWANG I.L.I CO., LTD. with its JK trademark has put every effort in pioneering and specializing as one of the leading valve manufacturing companies. Its devotion has concentrated especially in the area of safety relief valve, pressure reducing valve, stop valve and steam trap.

With almost half a century of experience, we have earned over a good reputation for quality, reliability, reasonable price and excellent performance.

We determined to contribute to serve your need for your heat control and energy saving effort through our precision design, strict testing, and precision processing. Your kind inquiries would be much appreciated, and we will do our best to give you our business suggestions on them, which can be competitive in your market. In closing, we promise for our continuous endeavor, for more research, and for development work to pay back your positive supports and encouragement.





COMPANY HISTORY

- Nov. 1968 Founded Jokwang Industries Company in Busan, Korea
- May. 1987 Acquired K.S(Korean Industrial Standard) Mark
- Apr. 1989 Acquired Type approval from KR(Korea)
- Dec. 1992 Technical Collaboration with VENN in Japan
- Dec. 1998 Acquired ISO 9001 Certificate
- Dec. 1999 Changed Company name to Jokwang I.L.I Co., Ltd.
- Oct. 2000 Moved to Noksan Industrial Complex in Busan, Korea
- Nov. 2003 Acquired Type approval from DNV(Norway)
- Mar. 2004 Acquired Type approval from BV(France)
- Apr. 2004 Acquired KEPIC Certificate
- Jun. 2004 Acquired Type approval from LR(UK)
- May. 2006 Acquired Safety Relief Valve ASME "UV" Stamp
- Nov. 2006 Patent registered for Pilot-Operated Safety Valve
- May. 2010 Acquired Type approval from GL(Germany)
- Apr. 2011 Acquired Safety Relief Valve ASME "UV" Stamp(Up to 6,000psig)
- Dec. 2011 Awarded Export Tower of 3 Mil. U.S Dollar
- Dec. 2011 Acquired Type approval from CCS(China)
- Dec. 2011 Acquired ISO 4001 Certificate
- Mar. 2012 Acquired OHSAS18001 Certificate
- Mar. 2013 Acquired Pilot type Safety Relief Valve ASME "UV"Stamp
- Jun. 2014 Acquired Safety Relief Valve ASME "V"Stamp
- Jun. 2015 Acquired Safety Relief Valve C-Sel(China)
- Jan. 2016 Moved to Sanmak Complex in Yangsan, Korea
- May. 2016 Renewed ASME "UV"Stamp
- Sep. 2016 Renewed ASME "V"Stamp
- Mar. 2017 Acquired Maintenance Company Approved by Five Biggest Korea Coal Thermal Power Plant



Certificate



Quality System Certificate

- 'V' Stamp of ASME Section I
- 'UV' Stamp of ASME Section VIII
- Certificate of NBBI Safety Valve Capacity
- SO 9001 Certificate
- ISO 14001 Certificate
- OHSAS 18001 Certificate
- C-SEL China Special Equipment License
- Acquired Maintenance Company Approved by Five Biggest Korea Coal Thermal Power Plant

Type Approval

- LR - Lloyd's Register
- BV - Bureau Veritas
- KR - Korean Register
- CCS - China Classification Society
- DNV·GL - Det norske Veritas·Germanischer Veritas



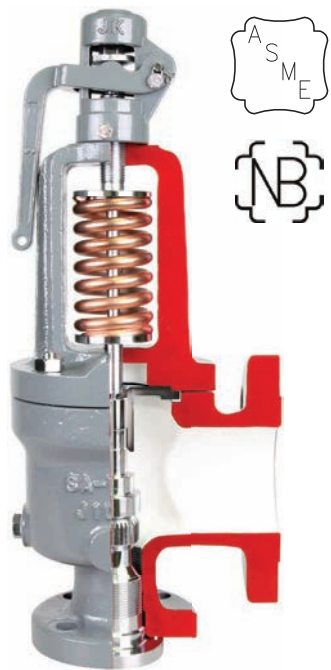
PRODUCT

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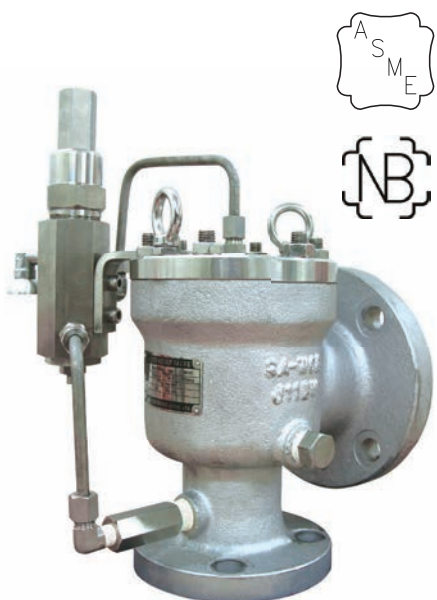
Safety Relief Valve - UV & V Stamp



JSV-FF100

Code	ASME Section VIII "UV" Stamp
Type	Conventional, Bellows
Applicable Fluid	Steam, Air/Gas, Liquid
Applicable Pressure	0.1~41.3MPa(15~6000psig)
Applicable Temperature	-196 ~ 537°C
Size	3/4"X1" ~ 14"X18"
Orifice	D(0.11 in ²) ~ Y(76.078 in ²)
Connection	ASME 150LB ~ 2500LB
Material ^{*1)}	Body : Carbon Steel(Standard) Trim : Stainless Steel(Standard)

**1) Material could be changeable upon request.*

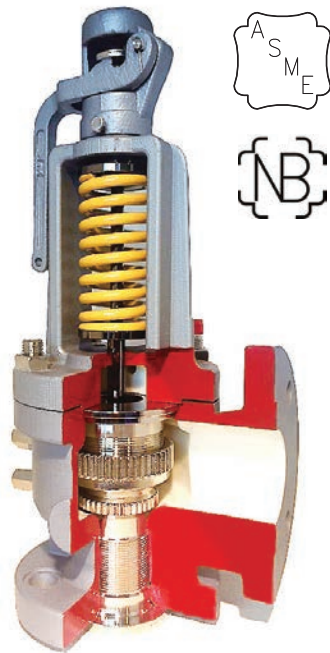


JSV-PF100

Code	ASME Section VIII "UV" Stamp
Type	Pilot(Modulating & Snap Acting)
Applicable Fluid	Steam, Air/Gas, Liquid
Applicable Pressure	0.1~42.5MPa(15~6170psig)
Applicable Temperature	-45~260°C. Option(-253~ -46°C)
Size	1"X2" ~ 20"X24"
Orifice	D(0.15 in ²) ~ B2(227 in ²)
Connection	ASME 150LB ~ 2500LB
Material ^{*1)}	Body : Carbon Steel(Standard) Trim : Stainless Steel(Standard)

**1) Material could be changeable upon request.*

Safety Relief Valve - UV & V Stamp



JSV-FF200

Code	ASME Section I "V & UV" Stamp
Type	Conventional
Applicable Fluid	Steam
Applicable Pressure	0.1~34.6MPa(15~5020psig)
Applicable Temperature	-120 ~ 640°C
Size	1"X2" ~ 8"X12"
Orifice	F(0.439 in ²) ~ Y(76.08 in ²)
Connection	ASME 300LB ~ 2500LB
Material^{*1)}	Body : Carbon Steel(Standard) Trim : Stainless Steel(Standard)

*1) Material could be changeable upon request.



JSV-FT100

Code	ASME Section VIII "UV" Stamp
Type	Conventional, Piston Balanced
Applicable Fluid	Steam, Air/Gas, Liquid
Applicable Pressure	0.1~31.02MPa(15~4500psig)
Applicable Temperature	-196 ~ 538°C
Size	1/2"X1" ~ 1"X1"
Orifice	D(0.11 in ²)
Connection	NPT or PT
Material^{*1)}	Base : Stainless Steel(Standard) Bonnet : Carbon Steel(Standard) Trim : Stainless Steel(Standard)

*1) Material could be changeable upon request.



Safety Relief Valve

JSV-LT12



Type
Low Lift Type

Applicable Fluid
Steam, Air/Gas, Liquid

Applicable Pressure
0.03~1.07MPa(0.35~11.0kgf/cm²)

Applicable Temperature
Max. 220°C

Size
15A~50A

Connection
PT

Material
Body : Brass
Trim : Brass

JSV-HT41/HT51



Type
High Lift Type

Applicable Fluid
Steam, Air/Gas, Liquid

Applicable Pressure
0.05~4.9MPa(0.5~50.0Kgf/cm²)

Applicable Temperature
Max. 220°C

Size
15A~50A

Connection
PT

Material
Bonnet : Bronze
Body : Stainless Steel
Trim : Stainless Steel

JSV-FF11/21/41/51



Type
Full Bore Conventional Type A

Applicable Fluid
Steam, Air/Gas, Liquid

Applicable Pressure
0.03~4.9MPa(0.35~50.0kgf/cm²)

Applicable Temperature
Max. 400°C

Size
15A~350A

Connection
Inlet : JIS 10K, 20K, 30K Outlet : 10K

Material
Body : Cast Iron, Carbon Steel
Bronze, Stainless Steel
Trim : Stainless Steel

JSV-BF31



Type
Full Bore Bellows Type

Applicable Fluid
Steam, Air/Gas, Liquid

Applicable Pressure
0.03~2.15MPa(0.35~22.0Kgf/cm²)

Applicable Temperature
Max. 400°C

Size
20A~200A

Connection
Inlet : JIS 10K, 20K Outlet : 10K

Material
Body : Carbon Steel, Stainless Steel
Trim : Stainless Steel

Safety Relief Valve

JSV-FT11



Type
Full Bore Type

Applicable Fluid
Steam

Applicable Pressure
0.09~0.98MPa(1~10.0Kgf/cm²)

Applicable Temperature
Max. 220°C

Size
20A~200A

Connection
Inlet : PT, Outlet : KS PF(PT is available)

Material
Body : Ductile Iron
Trim : Stainless Steel

JRV-FF12/FF21P



Applicable Fluid
Air/Gas, Liquid

Working Pressure
Max 1.56MPa(16.0Kgf/cm²)

Applicable Pressure
0.04~1.17MPa(0.5~12.0Kgf/cm²)

Applicable Temperature
Max. 150°C

Size
15A~150A

Connection
JIS 10K, 20K

Material
Cast Iron, Carbon Steel
Bronze, Stainless Steel

Primary Pressure Regulating Valve

Cryogenic Safety Relief Valve & Control Valve

JSV-PF11



Applicable Fluid
LNG/LPG

Applicable Pressure
0.025~0.25MPa(0.25~2.55kgf/cm²)

Applicable Temperature
-196~125°C

Size
25A~250A

Connection
ASME Flange Type

Material
Stainless Steel

JSV-CF21



Applicable Fluid
LNG/LPG

Applicable Pressure
0.1~0.3MPa(1.0~3.05kgf/cm²)

Applicable Temperature
-196~125°C

Size
25A~80A

Connection
ASME Flange Type

Material
Stainless Steel

JCV-CF11



Applicable Fluid
LNG/LPG

Applicable Pressure
0.1~0.5MPa(0.1~5.09kgf/cm²)

Applicable Temperature
-196~80°C

Size
25A~200A

Connection
ASME Flange Type

Material
Stainless Steel



Pressure Reducing Valve

JRV-ST11



Applicable Fluid
Steam

Applicable Pressure
Inlet : 0.98MPa(10.0Kgf/cm²)
Outlet : 0.02~0.39MPa(0.2~4.0Kgf/cm²)

Max. Reducing ratio
20 : 1

Applicable Temperature
Max. 184°C

Size
15A~40A

Connection
PT

Material
Cast Iron

JRV-ST17



Applicable Fluid
Air/Gas, Liquid

Applicable Pressure
Inlet : 0.98MPa(10.0Kgf/cm²)
Outlet : 0.03~0.39MPa(0.35~4.0Kgf/cm²)

Max. Reducing ratio
10 : 1

Applicable Temperature
Max. 80°C

Size
15A~40A

Connection
PT

Material
Cast Iron

JRV-SF14/SF24D



Applicable Fluid
Air/Gas, Liquid

Applicable Pressure
Inlet : 1.96MPa(20.0Kgf/cm²)
Outlet : 0.05~1.18MPa(0.5~12.0Kgf/cm²)

Max. Reducing ratio
10 : 1

Applicable Temperature
Max. 80°C

Size
15A~150A

Connection
JIS 10K, 20K

Material
Cast Iron, Bronze, Cast steel

JRV-SF12/SF24P



Applicable Fluid
Air/Gas, Liquid

Applicable Pressure
Inlet : 1.96MPa(20.0Kgf/cm²)
Outlet : 0.05~1.18MPa(0.5~12.0Kgf/cm²)

Max. Reducing ratio
10 : 1

Applicable Temperature
Max. 150°C

Size
15A~150A

Connection
JIS 10K, 20K

Material
Cast Iron, Bronze, Cast steel

JRV-SF16/SF21



Applicable Fluid
Steam

Applicable Pressure
Inlet : 1.96MPa(20.0Kgf/cm²)
Outlet : 0.03~1.56MPa(0.35~16.0Kgf/cm²)

Max. Reducing ratio
20 : 1

Applicable Temperature
Max. 300°C

Size
15A~200A

Connection
JIS 10K, 20K

Material
Cast Iron, Carbon Steel

JRV-SF31



Applicable Fluid
Air/Gas, Liquid

Applicable Pressure
Inlet : 2.94MPa(30.0Kgf/cm²)
Outlet : 0.05~1.47MPa(0.5~15.0Kgf/cm²)

Max. Reducing ratio
10 : 1

Applicable Temperature
Max. 80°C

Size
15A~40A

Connection
JIS 10K, 20K, 30K

Material
Carbon Steel

Steam Trap

JTR-FT12/FF12



Type
Ball Float

Applicable Fluid
Steam

Applicable Pressure
0.44, 0.98, 1.37MPa(4.5, 10.0, 14.0Kgf/cm²)

Applicable Temperature
Max. 220°C

Size
15A~50A

Connection
PT, JIS 10K, 16K

Material
Cast Iron, Carbon Steel

JTR-DT22/DF21



Type
Thermodynamic Disc

Applicable Fluid
Steam

Applicable Pressure
0.03~1.56MPa(0.35~16.0Kgf/cm²)

Applicable Temperature
Max. 220°C

Size
15A~50A

Connection
PT, JIS 10K, 16K

Material
Cast Iron, Ductile Iron

JTR-DT31



Type
Thermodynamic Disc

Applicable Fluid
Steam

Applicable Pressure
0.03~2.94MPa(0.35~30.0Kgf/cm²)

Applicable Temperature
Max. 400°C

Size
8A, 10A

Connection
PT

Material
Stainless Steel

JTR-DT41/DF41



Type
Thermodynamic Disc

Applicable Fluid
Steam

Applicable Pressure
Max. 4.11MPa(42.0Kgf/cm²)

Applicable Temperature
Max. 400°C

Size
15A~50A

Connection
PT, JIS 10K, 16K, 20K

Material
Stainless Steel

Steam Trap

JTR-DS70/DF70



Type
Thermodynamic Disc

Applicable Fluid
Steam

Applicable Pressure
Max. 6.37MPa(65.0Kgf/cm²)

Applicable Temperature
Max. 525°C

Size
15A~25A

Connection
SW, AMSE 600LB, 900LB

Material
Alloy Steel(A182-F22)

Air Vent

JAV-FF11



Type
Ball Float

Applicable Fluid
Water, Oil

Applicable Pressure
Max. 1.56MPa(16.0Kgf/cm²)

Applicable Temperature
Max. 220°C

Size
15A~25A

Connection
JIS 10K, 16K, 20K

Material
Carbon Steel



Temp. Control Valve

JTC-DF12



Type
Direct Acting

Applicable Fluid
Steam, Hot Water, Oil

Applicable Pressure
0.05~0.98MPa(0.5~10.0Kgf/cm²)

Applicable Temperature
Max. 220°C

Adjustable Temperature
40~110°C

Size
15A~40A

Connection
JIS 5K, 10K, 16K

Material
Cast Iron, Bronze, Carbon Steel

JTC-PF16



Type
Pilot Acting

Applicable Fluid
Steam, Hot Water, Oil

Applicable Pressure
0.05~0.98MPa(0.5~10.0Kgf/cm²)

Applicable Temperature
Max. 220°C

Adjustable Temperature
40~110°C

Size
15A~200A

Connection
JIS 10K, 16K

Material
Cast Iron, Bronze, Carbon Steel

Temp. Control Valve

JTC-DF13



Type
Bellows

Applicable Fluid
Steam, Hot Water, Oil

Applicable Pressure
0.05~1.59MPa(0.5~16.0Kgf/cm²)

Applicable Temperature
Max. 220°C

Adjustable Temperature
40~110°C

Size
15A~40A

Connection
JIS 5K, 10K, 16K

Material
Cast Iron, Bronze, Carbon Steel

Globe Valve

JGL-FT11/FF11/FF21



Applicable Fluid
Steam, Hot Water, Oil

Applicable Pressure
Max. 1.96MPa(20.0Kgf/cm²)

Applicable Temperature
Max. 250°C

Size
15A~50A

Connection
PT, JIS 10K, 20K

Material
Cast Iron

Strainer

JST-YT11/YT12/YT42



Applicable Fluid
Gas/Air, Liquid

Applicable Pressure
Max. 1.96MPa(20.0Kgf/cm²)

Applicable Temperature
Max. 250°C

Size
15A~50A

Connection
PT

Material
Cast Iron, Bronze, Stainless Steel

JST-YF11/YF21



Applicable Fluid
Gas/Air, Liquid

Applicable Pressure
Max. 1.96MPa(20.0Kgf/cm²)

Applicable Temperature
Max. 300°C

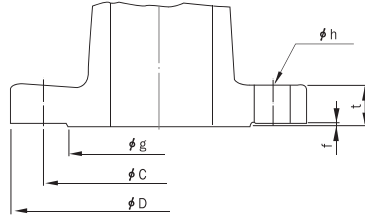
Size
15A~350A

Connection
JIS 10K, 20K, 30K

Material
Cast Iron, Bronze, Carbon Steel, Stainless Steel

Engineering Data

■ BASIC DIMENSIONS OF PIPE FLANGES KS B 1511:2007(JIS B 2220 : 2004)



● Basic dimensions of 10kgf/cm² pipe flanges

Unit : mm

Nominal dia.	Outside dia. of steel pipe applicable to	Outside dia. of flange (D)	Detailed Dimensions of Flange				Bolt holes			Nominal size of bolt
			t		f	Dia-meter (g)	Pitch circle Dia.(c)	No.	Dia-meter (h)	
			Steel or malleable cast iron	Cast iron						
10	10	90	12	14	14	46	65	4	15	M 12
15	15	95	12	16	16	51	70	4	15	M 12
20	20	100	14	18	18	56	75	4	15	M 12
25	25	125	14	18	18	67	90	4	19	M 16
32	32	135	16	20	20	76	100	4	19	M 16
40	40	140	16	20	20	81	105	4	19	M 16
50	50	155	16	20	20	96	120	4	19	M 16
65	65	175	18	22	22	116	140	4	19	M 16
80	80	185	18	22	22	126	150	8	19	M 16
(90)	(90)	195	18	22	22	136	160	8	19	M 16
100	100	210	18	24	24	151	175	8	19	M 16
125	125	250	20	24	24	182	210	8	23	M 20
150	150	280	22	26	26	212	240	8	23	M 20
200	200	330	22	26	26	262	290	12	23	M 20
250	250	400	24	30	30	324	355	12	25	M 22
300	300	445	24	32	32	368	400	16	25	M 22
350	350	490	26	34	34	413	445	16	25	M 22
400	400	560	28	36	36	475	510	16	27	M 24
450	450	620	30	38	38	530	565	20	27	M 24
500	500	675	30	40	40	585	620	20	27	M 24

● Basic dimensions of 16kgf/cm² pipe flanges

Unit : mm

Nominal dia.	Outside dia. of steel pipe applicable to	Outside dia. of flange (D)	Detailed Dimensions of Flange				Bolt holes			Nominal size of bolt
			t		f	Dia-meter (g)	Pitch circle Dia.(c)	No.	Dia-meter (h)	
			Steel or malleable cast iron	Cast iron						
10	17.3	90	12	-	1	46	65	4	15	M 12
15	21.7	95	12	-	1	51	70	4	15	M 12
20	27.2	100	14	-	1	56	75	4	15	M 12
25	34.0	125	14	-	1	67	90	4	19	M 16
32	42.7	135	16	-	2	76	100	4	19	M 16
40	48.6	140	16	-	2	81	105	4	19	M 16
50	60.5	155	16	20	2	96	120	8	19	M 16
65	76.3	175	18	22	2	116	140	8	19	M 16
80	89.1	200	20	24	2	132	160	8	23	M 20
90	101.6	210	20	24	2	145	170	8	23	M 20
100	114.3	225	22	26	2	160	185	8	23	M 20
125	139.8	270	22	26	2	195	225	8	25	M 22
150	165.2	305	24	28	2	230	260	12	25	M 22
200	216.3	350	26	30	2	275	305	12	25	M 22
250	267.4	430	28	34	2	345	380	12	27	M 24
300	318.5	480	30	36	3	395	430	16	27	M 24
350	355.6	540	34	38	3	440	480	16	33	M 30
400	406.4	605	38	42	3	495	540	16	33	M 30
450	457.2	675	40	46	3	560	605	20	33	M 30
500	508.0	730	42	50	3	615	660	20	33	M 30

● Basic dimensions of 20kgf/cm² pipe flanges

Unit : mm

Nominal dia.	Outside dia. of steel pipe applicable to	Detailed Dimensions of Flange				Bolt holes			Nominal size of bolt
		Outside dia. (D)	t	f	Dia-meter (g)	Pitch circle Dia.(c)	No.	Dia-meter (h)	
10	17.3	90	14	1	46	65	4	15	M 12
15	21.7	95	14	1	51	70	4	15	M 12
20	27.2	100	16	1	56	75	4	15	M 12
25	34.0	125	16	1	67	90	4	19	M 16
32	42.7	135	18	2	76	100	4	19	M 16
40	48.6	140	18	2	81	105	4	19	M 16
50	60.5	155	18	2	96	120	8	19	M 16
65	76.3	175	20	2	116	140	8	19	M 16
80	89.1	200	22	2	132	160	8	23	M 20
90	101.6	210	24	2	145	170	8	23	M 20
100	114.3	225	24	2	160	185	8	23	M 20
125	139.8	270	26	2	195	225	8	25	M 22
150	165.2	305	28	2	230	260	12	25	M 22
200	216.3	350	30	2	275	305	12	25	M 22
250	267.4	430	34	2	345	380	12	27	M 24
300	318.6	480	36	3	395	430	16	27	M 24
350	355.6	540	40	3	440	480	16	33	M 30
400	406.4	605	46	3	495	540	16	33	M 30
450	457.2	675	48	3	560	605	20	33	M 30
500	508.0	730	50	3	615	660	20	33	M 30

● Basic dimensions of 30kgf/cm² pipe flanges

Unit : mm

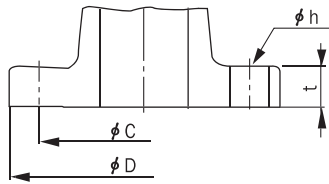
Nominal dia.	Outside dia. of steel pipe applicable to	Detailed Dimensions of Flange				Bolt holes			Nominal size of bolt
		Outside dia. (D)	t	f	Dia-meter (g)	Pitch circle Dia.(c)	No.	Dia-meter (h)	
10	17.3	110	16	1	52	75	4	19	M 16
15	21.7	115	18	1	55	80	4	19	M 16
20	27.2	120	18	1	60	85	4	19	M 16
25	34.0	130	20	1	70	95	4	19	M 16
32	42.7	140	22	2	80	105	4	19	M 16
40	48.6	160	22	2	90	120	4	23	M 20
50	60.5	165	22	2	105	130	8	19	M 16
65	76.3	200	26	2	130	160	8	23	M 20
80	89.1	210	28	2	140	170	8	23	M 20
90	101.6	230	30	2	150	185	8	25	M 22
100	114.3	240	32	2	160	195	8	25	M 22
125	139.8	275	36	2	195	230	8	25	M 22
150	165.2	325	38	2	235	275	12	27	M 24
200	216.3	370	42	2	280	320	12	27	M 24
250	267.4	450	48	2	345	390	12	33	M 30
300	318.5	515	52	2	405	450	16	33	M 30
350	355.6	560	54	2	450	495	16	33	M 30
400	406.4	630	60	2	510	560	16	33	M 36



Engineering Data

■ Pipe Flanges and Flanged Fittings(ASME B16.5)

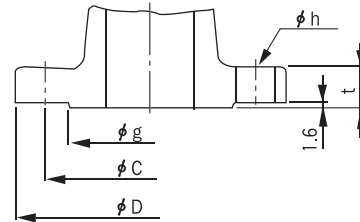
● ASME CLASS 150



Unit : mm

Nominal dia.	Detailed Dimensions of Flange			Bolt holes			bolt size	
	in	mm	D	t	g	Circle dia. c		No
1/2	15	3.50(89)	0.44(11.2)	1.38(35)	2.38(60.5)	4	0.62(16)	1/2
3/4	20	3.88(98)	0.50(12.7)	1.69(43)	2.75(70.0)	4	0.62(16)	1/2
1	25	4.25(108)	0.56(14.3)	2.00(51)	3.12(79.5)	4	0.62(16)	1/2
1 1/4	32	4.62(117)	0.59(15.0)	2.50(64)	3.50(89.0)	4	0.62(16)	1/2
1 1/2	40	5.00(127)	0.69(17.5)	2.88(73)	3.88(98.5)	4	0.62(16)	1/2
2	50	6.00(152)	0.75(19.1)	3.62(92)	4.75(120.5)	4	0.75(19)	5/8
2 1/2	65	7.00(178)	0.88(22.3)	4.12(105)	5.50(139.5)	4	0.75(19)	5/8
3	80	7.50(191)	0.94(23.9)	5.00(127)	6.00(152.5)	4	0.75(19)	5/8
3 1/2	90	8.50(216)	0.94(23.9)	5.50(140)	7.00(178.0)	8	0.75(19)	5/8
4	100	9.00(229)	0.94(23.9)	6.19(157)	7.50(190.5)	8	0.75(19)	5/8
5	125	10.00(254)	0.94(23.9)	7.31(186)	8.50(216.0)	8	0.88(22)	3/4
6	150	11.00(279)	1.00(25.4)	8.50(216)	9.50(241.5)	8	0.88(22)	3/4
8	200	13.50(343)	1.12(28.6)	10.62(270)	11.75(298.5)	8	0.88(22)	3/4
10	250	16.00(406)	1.19(30.2)	12.75(324)	14.25(362.0)	12	1.00(25)	7/8
12	300	19.00(483)	1.25(31.8)	15.00(381)	17.00(432.0)	12	1.00(25)	7/8
14	350	21.00(533)	1.38(35.0)	16.25(413)	18.75(476.0)	12	1.12(29)	1
16	400	23.50(597)	1.44(36.6)	18.50(470)	21.25(539.5)	16	1.12(29)	1

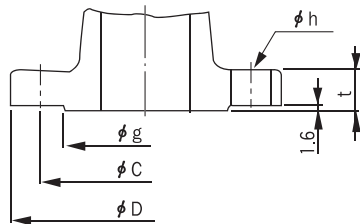
● ASME CLASS 300



Unit : mm

Nominal dia.	Detailed Dimensions of Flange			Bolt holes			bolt size	
	in	mm	D	t	g	Circle dia. c		No
1/2	15	3.75(95)	0.56(14.2)	1.38(35)	2.62(66.5)	4	0.62(16)	1/2
3/4	20	4.62(117)	0.62(15.7)	1.69(43)	3.25(82.5)	4	0.75(19)	5/8
1	25	4.88(124)	0.69(17.5)	2.00(51)	3.50(89.9)	4	0.75(19)	5/8
1 1/4	32	5.25(133)	0.75(19.1)	2.50(64)	3.88(98.5)	4	0.75(19)	5/8
1 1/2	40	6.12(156)	0.81(20.6)	2.88(73)	4.50(114.5)	4	0.88(22)	3/4
2	50	6.50(165)	0.88(22.4)	3.62(92)	5.00(127.0)	8	0.75(19)	5/8
2 1/2	65	7.50(191)	1.00(25.4)	4.12(105)	5.88(149.4)	8	0.88(22)	3/4
3	80	8.25(210)	1.12(28.4)	5.00(127)	6.02(168.1)	8	0.88(22)	3/4
3 1/2	90	9.00(229)	1.19(30.2)	5.50(140)	7.25(184.2)	8	0.88(22)	3/4
4	100	10.00(254)	1.25(31.8)	6.19(157)	7.88(200.2)	8	0.88(22)	3/4
5	125	11.00(279)	1.38(35.1)	7.31(186)	9.25(235.0)	8	0.88(22)	3/4
6	150	12.50(318)	1.44(36.6)	8.50(216)	10.62(269.7)	12	0.88(22)	3/4
8	200	15.00(381)	1.62(41.1)	10.62(270)	13.00(330.2)	12	1.02(25)	7/8
10	250	17.50(445)	1.88(47.8)	12.75(324)	15.25(387.3)	16	1.12(29)	1
12	300	20.50(521)	2.00(50.8)	15.00(381)	17.75(450.9)	16	1.25(32)	1 1/8
14	350	23.00(584)	2.12(53.8)	16.25(413)	16.25(413.4)	20	1.25(32)	1 1/8
16	400	25.50(648)	2.25(57.2)	18.50(470)	22.50(571.5)	20	1.25(32)	1 1/4

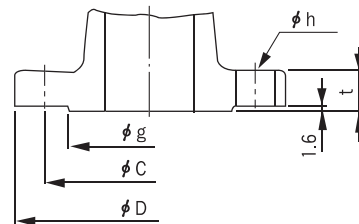
● ASME CLASS 600



Unit : mm

Nominal dia.	Detailed Dimensions of Flange			Bolt holes			bolt size	
	in	mm	D	t	g	Circle dia. c		No
1/2	15	3.75(95)	0.56(14.2)	1.38(35)	2.62(66.5)	4	0.62(16)	1/2
3/4	20	4.62(117)	0.62(15.7)	1.69(43)	3.25(82.5)	4	0.75(19)	5/8
1	25	4.88(124)	0.69(17.5)	2.00(51)	3.50(88.9)	4	0.75(19)	5/8
1 1/4	32	5.25(133)	0.81(20.6)	2.50(64)	3.88(98.5)	4	0.75(19)	5/8
1 1/2	40	6.12(156)	0.88(22.4)	2.88(73)	4.50(114.5)	4	0.88(22)	3/4
2	50	6.50(165)	1.00(25.4)	3.62(92)	5.00(127.0)	8	0.75(19)	5/8
2 1/2	65	7.50(191)	1.12(28.4)	4.12(105)	5.88(149.4)	8	0.88(22)	3/4
3	80	8.25(210)	1.25(31.8)	5.00(127)	6.62(168.1)	8	0.88(22)	3/4
3 1/2	90	9.00(229)	1.38(35.0)	5.50(140)	7.25(184.2)	8	1.02(25)	7/8
4	100	10.75(273)	1.50(38.1)	6.19(157)	8.46(215.0)	8	1.02(25)	7/8
5	125	12.99(330)	1.75(44.5)	7.31(186)	10.51(266.9)	8	1.12(28)	1
6	150	14.02(356)	1.88(47.8)	8.50(216)	11.50(292.1)	12	1.12(28)	1
8	200	16.50(419)	2.19(55.6)	10.62(270)	12.57(319.3)	12	1.25(32)	1 1/8
10	250	20.00(508)	2.50(63.5)	12.75(324)	17.00(431.8)	16	1.38(35)	1 1/4
12	300	22.01(559)	2.62(66.5)	15.00(381)	19.25(489.0)	20	1.38(35)	1 1/4
14	350	23.74(603)	2.75(69.9)	16.25(413)	20.75(527.0)	20	1.53(39)	1 3/8
16	400	27.01(686)	3.00(76.2)	18.50(470)	23.75(603.3)	20	1.65(42)	1 1/2

● ASME CLASS 900



Unit : mm

Nominal dia.	Detailed Dimensions of Flange			Bolt holes			bolt size	
	in	mm	D	t	g	Circle dia. c		No
1/2	15	4.76(121)	0.88(22.4)	1.37(34.9)	3.25(82.6)	4	0.86(22)	3/4
3/4	20	5.87(130)	1.00(25.4)	1.69(42.9)	3.50(88.9)	4	0.86(22)	3/4
1	25	5.87(149)	1.12(28.4)	2.00(50.8)	4.00(101.6)	4	1.02(25)	7/8
1 1/4	32	6.269(159)	1.12(28.4)	2.50(63.5)	4.38(111.3)	4	1.02(25)	7/8
1 1/2	40	7.01(078)	1.25(31.8)	2.87(73.0)	4.88(124.0)	4	1.14(29)	1
2	50	8.50(216)	1.50(38.1)	3.63(92.1)	6.50(165.1)	8	1.02(25)	7/8
2 1/2	65	9.61(244)	1.62(41.1)	4.13(104.8)	7.50(190.5)	8	1.14(29)	1
3	80	9.49(241)	1.50(38.1)	5.00(127.0)	7.50(190.5)	8	1.02(25)	7/8
3 1/2	90	-	-	-	-	-	-	-
4	100	11.50(292)	1.75(44.5)	6.19(157.2)	9.25(235.0)	8	1.26(32)	1 1/8
5	125	13.74(349)	2.00(50.8)	7.31(185.7)	11.00(279.4)	8	1.38(35)	1 1/4
6	150	15.00(381)	2.19(55.6)	8.50(215.9)	12.50(317.5)	12	1.26(32)	1 1/8
8	200	18.50(470)	2.50(63.5)	10.63(269.9)	15.50(393.7)	12	1.54(39)	1 3/8
10	250	21.50(546)	2.75(69.9)	12.75(323.8)	18.50(469.9)	16	1.54(39)	1 3/8
12	300	24.02(610)	3.12(79.2)	15.00(381)	21.00(533.4)	20	1.54(39)	1 3/8
14	350	25.24(641)	3.38(85.9)	16.25(412.8)	22.00(558.8)	20	1.65(42)	1 1/2
16	400	27.76(705)	3.50(88.9)	22.44(569.9)	24.25(616.0)	20	1.77(45)	1 5/8

Engineering Data

■ Conversion Table

LENGTH	cm	m	km	in	ft
	1	0.01	0.01	0.3937	0.0328
	100	1	0.001	39.371	3.2809
	100,000	1,000	1	39,371	3,280.9
	2.54	0.02540	0.0254	1	0.08333
	30.48	0.3048	0.03048	12	1
	30.30	0.30303	0.03030	11.9303	0.9942

VOLUME	dm ³ or ℓ	m ³ or kℓ	ft ³	(U.K) gal	(U.S.A) gal
	1	0.001	0.03532	0.220	0.2642
	1,000	1	35.317	219.95	264.19
	28.315	0.2832	1	6.2279	7.4806
	4.5456	0.04547	0.1606	1	1.2011
	3.7852	0.03785	0.1337	0.8325	1
	180.39	0.18039	6.3707	39.676	47.656
	27.826	0.02783	0.9827	6.1203	7.3514

VISCOSITY	Poise = g/cm · s (CGS)	centipoise.cP	kg/m · s	kg/m · h	lb/ft · s
	1	100	0.1	360	0.0672
	0.01	1	0.001	3.6	0.000672
	10	1,000	1	3,600	0.672
	0.00278	0.278	0.0278	1	0.000187
	14.88	1,488	1.488	5,356.8	1

FLOW	ℓ /s	m ³ /h	m ³ /s	(U.K) gal/min	(U.S.A) gal/min	ft ³ /h	ft ³ /s
	1	3.6	0.001	13.197	15.8514	127.14	0.03532
	0.2778	1	0.02778	3.6658	4.4032	35.317	0.029801
	1,000	6,600	1	13,197	15,851	127,150	35.3165
	0.075775	0.27279	0.0475775	1	1.2011	9.6342	0.02676
	0.06309	0.2271	0.046304	0.8325	1	8.0208	0.02228
	0.027865	0.02832	0.027865	0.1038	0.1247	1	0.02778
	28.3153	101.935	0.02832	373.672	448.833	3,600	1

PRESSURE	kPa	bar	kgf/cm ²	lb/in ²	atm	mHg	inHg	mH ₂ O (mAq)	inH ₂ O (mAq)
	1	0.01	0.010197	0.14504	0.009869	0.007501	0.29530	0.10197	4.01463
	100	1	1.0197	14.50	0.9869	0.7500	29.55	10.21	401.8
	98.0665	0.9807	1	14.223	0.9678	0.7355	28.96	10.01	394.0
	6.8948	0.06895	0.07031	1	20.06804	0.05161	2.0355	0.7037	27.70
	101.325	1.0133	1.0333	14.70	1	0.760	29.92	10.34	407.2
	133.322	1.3333	1.3596	19.34	1.316	1	39.37	13.61	535.67
	3.3864	0.03386	0.03453	0.4912	0.3342	0.02540	1	0.3456	13.61
	9.8067	0.9798	0.09991	1.421	0.0967	0.07349	2.893	1	39.37
	0.24909	0.002489	0.002538	0.03609	0.002456	0.001867	0.07349	0.0254	1

Total Safety Solution Provider!

JOKWANG



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