

MPJOINT

Quick, Simple, and Economical Pipe Joint



Pipe Coupling for pipe connection

Grip type Utility Model



MJG 15~400A / MJGL 20~300A / MGLP 20~200A MJGF 65~400A / MJGFL 65~300A

Grip type couplings are axially restrained, and good alternatives to welding, flange, grooved joint, union, etc.

MJG/MJGL have double grip rings which hold pipes tightly and make them not move or separate from each other. MGLP with single grip ring and thinner casing and gasket is good for low pressure pipe line at lower cost. MJGF/MJGFL with thicker casing are for higher pressure.

Grip type for fittings Patent



MJET 15~400A

Because elbow/tee is arc shaped, other methods (socket, grooved joint, union, coupling, etc.) need the end of elbow/tee and pipe to be grooved, threaded, or welded in order to be connected.

MJET is the world's first coupling to connect pipe to elbow/tee without such preprocessing.

Slip (flexible) type



MJS 15~600A / MJL 20~600A / MJSF, MJSFL 65~600A

Slip type couplings, without grip rings, are axially non restrained. They allow thermal expansion and contraction of pipes. Pipes need to be fixed properly in order to avoid fall-out caused by axial force.

MJSF and MJSFL with thicker casing are for higher pressure.

Slip type (2~4 locks)



MJD 13~1000A / MJDL 15~1000A / MJDF, MJDFL 65~1000A MJT, MJTL, MJTF, MJTFL 1100~1500A MJF, MJFL, MJFF, MJFFL 1600~4000A

These are composed of two, three, or four separate pieces of casing and lock part at each end. They have better tightening and wider coupling range. It is easy to install even at large diameter pipes. Pipes need to be fixed properly in order to avoid fall-out caused by axial force.

MJDF, MJDFL / MJTF, MJTFL / MJFF, MJFFL with thicker casing are for higher pressure.

Slip-Grip type Utility Model



MJSG 15~300A / MJSGL 20~300A

Slip-grip type coupling is a combination of slip type and grip type.

The grip ring holds a pipe tightly at one side. The slip part on the other side allows pipe expansion and contraction. Pipes need to be fixed properly in order to avoid fall-out caused by axial force.

Repair Clamp for pipe leakage repair

Hinge type



MJH

MJHL

MJH 15~600A / MJHL 25~300A

Hinge at the opposite side of the lock part enables you to open clamp and cover up the leaking part of pipes easily and quickly.

Bolt-rotating hinge type Patent



MJHT

MJHT 20~600A

This is the improved version of MJH. You can lock up clamp by simply
① swiveling bolt one end of which is already inserted into bar nut,
② fitting into bar washer, and ③ bolting up. The process is very simple and shortens working time compared to MJH or other types.

Multi-locks type



MJD

MJDL

MJD 13~1000A / MJDL 15~1000A / MJDF, MJDFL 65~1000A MJT, MJTL, MJTF, MJTFL 1100~1500A MJF, MJFL, MJFF, MJFFL 1600~4000A

These are composed of two, three, or four separate pieces of casing and lock part at each end. They have better tightening and wider clamping range. It is easy to install even at large diameter pipes.

MJDF, MJDFL / MJTF, MJTFL / MJFF, MJFFL with thicker casing are for higher pressure.

Single lock type



MJR

MJRL

MJR 20~600A / MJRL 25~600A

This is the basic repair clamp. A fastener helps you tighten clamp easily.

Elbow repair clamp Utility Model



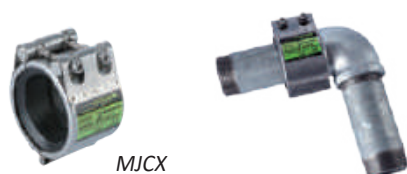
MJER

MJER 13~500A

This is useful for repairing leaking area on elbow or weld, or covering up weld to protect it. This is a top-bottom separated type, like MJD.

MJD for elbow repair over 500A.

Socket repair clamp

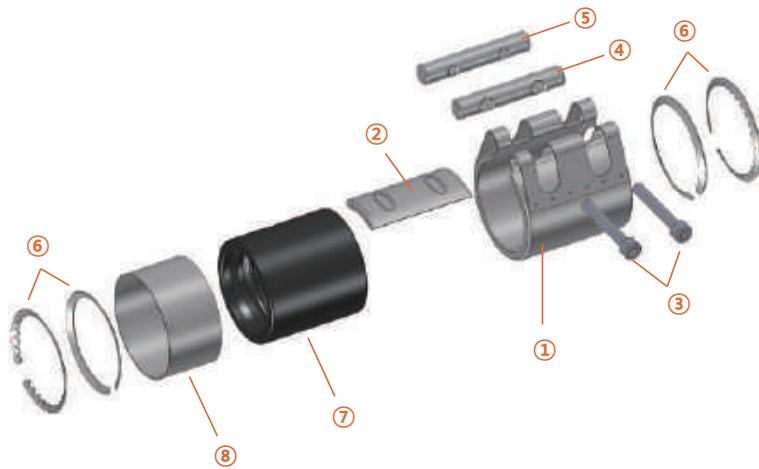


MJCX

MJCX 20~50A

The connecting part of socket method is half thick compared to the other part of pipe. So, it is weak against vibration or impact. MJCX protects the weak part and also covers up damaged ones.

NAME AND MATERIAL OF EACH PART



① Casing	SUS304, SUS316
② Slide	SUS304, SUS316
③ Bolt	SUS304, SUS316, SCR420B, SCM435 galv.
④ Bar Washer	SUS303F, SUS304, SUS316, S45C galv.
⑤ Bar Nut	SUS303F, SUS304, SUS316, S45C galv.
⑥ Grip Ring	SUS301H, SUS304H (grip types only)
⑦ Gasket	EPDM, NBR, Silicone, FKM(Viton)
⑧ Strip Insert	SUS304, SUS316 (option for straight pipe coupling & clamp)

* SUS = STS = stainless steel

Material and Characteristics of Gasket

EPDM

- Characteristic: aging/ weather/ ozone/ electric resistance
- Temperature: -30~110°C
- Use: hot & cold water, drinking water, sea water, brine, sewage, air, oxygen, hydrogen, nitrogen, ammonium hydroxide, ammonia gas, ethylene glycol, methyl alcohol, boric acid, acetic acid, glacial acetic acid, sulfuric acid(~50%), sodium acetate, etc. pH2~11

NBR

- Characteristic: oil/ abrasion/ aging resistance
- Temperature: -20~80°C
- Use: gas, oil (gasoline(toluene ~30%), kerosene, diesel oil, bunker oil, lubricating oil, hydraulic oil, olive oil, coconut oil, corn oil, cottonseed oil, fish oil, neat's-foot oil, etc.), sea water, brine, cold water, sewage, carbon dioxide, hydrogen, nitrogen, ethylene chloride, ethylene glycol, boric acid, etc. pH2~11

Silicone

- Characteristic: heat/ cold/ weather resistance
- Temperature: -40~220°C (steam: ~150°C)
- Use: steam line / sea water, brine, nitrogen, ammonia gas, ethylene glycol, boric acid, acetic acid, etc.

FKM/FPM (Viton)

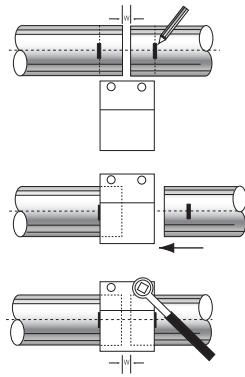
- Characteristic: heat/ chemical/ medicine resistance
- Temperature: -18~300°C (Special Viton: steam ~230°C)
- Use: aqua regia, sea water, oxygen, hydrogen, chlorine, hydrochloric acid, nitrogen, nitric acid(~15%), fatty acids, phthalic acid, sulfuric acid, boric acid, benzene, cresol, ethylene chloride, ethylene glycol, toluene, naphthalene, gasoline, kerosene, diesel oil, fuel oil, lubricating oil, hydraulic oil, turbine oil, corn oil, pine oil, LPG, etc.

※ Proper gasket should be chosen depending on fluid's type, temperature, etc.

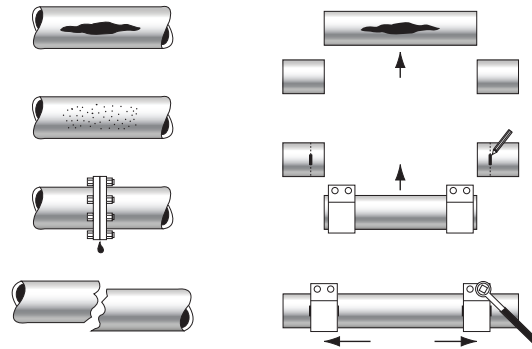
PRODUCT CHARACTERISTICS

- * Assembly type saves work time.
- * Applicable to various pipe materials. Even connects pipe of different material. (e.g. steel pipe + PVC pipe)
- * Using a (torque) wrench to install eliminates worry about fire.
- * No preprocessing is required at pipe ends.
- * Rubber gasket accommodates vibration, impact, noise, angular deflection, and distance between pipe ends. This makes couplings seismic design.
- * Installation is done at one side. It enables products to be stored or work to be done at a narrow area.
- * Stainless steel design is much lighter than cast iron product and reduces load on pipes.
- * Grip type couplings resist against axial movement.
- * Slip (flexible) type couplings allow pipe expansion and contraction.
- * Repair clamps provide semi-permanent repair with speed and no down time.
- * Couplings can be assembled and disassembled several times.

PIPE COUPLING

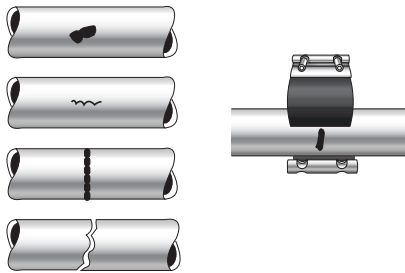


pipe connection

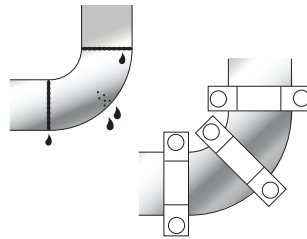


partial replacement

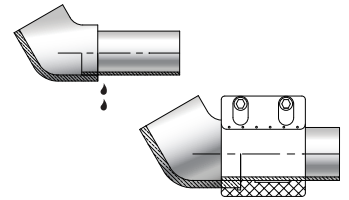
REPAIR CLAMP



straight pipe repair



elbow repair



socket repair

* Remove burrs and contaminants on pipe surface.

* Tighten bolts little by little & alternately & evenly, up to torque rate on label.

If bolts are tightened excessively over torque rate, they can be broken, while if done below torque rate, product performance would be lower than its capability in terms of tightness, pull-out resistance, etc.

* Pipes should be anchored and supported properly, conforming to the relevant industry standards.

FRC (Fire-Resistant Cover)

IACS(International Association of Classification Societies) and other societies prescribe that only approved fire-resistant types can be installed on certain applications (page 6). FRC is to wrap around couplings and makes them resistant to fire of $800\pm 50^{\circ}\text{C}$ for 30 minutes or longer.

* Applicable to MJG, MJGF



Strip Insert (Inner Stainless Steel Plate)

Strip Insert is to prevent rubber gasket from being sucked into vacuum or suction pipe.



CERTIFICATION



INDUSTRY & PIPELINE (examples)

- **General Industry** - chemical, petrochemical, steel mill, cement, mining, paper, pharmaceuticals, semiconductor, fiber & textile, food & beverage, etc.

Raw material transfer line, cooling water line, vacuum line, plumbing system, ventilation system, exhaust system, dust collector, cleaning equipment, sludge line, sewage & wastewater line, sprinkler, steam line, conduit pipe, fuel line, material storage tank

- **Water**

- Various kinds of pipe line at purification plant, sewage treatment plant, seawater desalination plant, pumping station
- Water and sewage pipe line (incl. underground piping)

- **Oil & Gas**

Oil & gas line

- **Civil Engineering & Construction**

Plumbing system, heating/ ventilation/ air-conditioning system, fuel line, fire fighting line, rainwater pipe, district heating system, agricultural water line, industrial water line, conduit pipe

- **Power**

Circulating water system, cooling water system, sewage & wastewater line, atmospheric gas line, dust collector

- **Machinery & Equipment**

Engine, fire truck, drinking fountain, dust collector, train, air compressor, automatic winder, other machine and equipment

- **Maintenance of pipeline**

- **Shipbuilding (according to IACS rule)**

Flammable fluids (flash point ≤ 60°C)

- Cargo oil lines *
- Crude oil washing lines *
- Vent lines *

Inert gas

- Water seal effluent lines
- Scrubber effluent lines
- Main lines *
- Distributions lines *

Flammable fluids (flash point > 60°C)

- Cargo oil lines *
- Fuel oil lines *
- Lubricating oil lines *
- Hydraulic oil *
- Thermal oil *

Sea Water

- Bilge lines *
- Water filled fire extinguishing systems * (e.g. sprinkler systems)
- Non water filled fire extinguishing systems * (e.g. foam, drencher systems)
- Fire main (not permanently filled) *
- Ballast system *
- Cooling water system *
- Tank cleaning services
- Non-essential systems

Fresh water

- Cooling water system *
- Condensate return *
- Non-essential system

Sanitary / Drains / Scuppers

- Deck drains (internal)
- Sanitary drains

Sounding / Vent

- Water tanks/Dry spaces
- Oil tanks (flash point > 60°C) *

Miscellaneous

- Service air (non-essential)
- Brine
- Steam

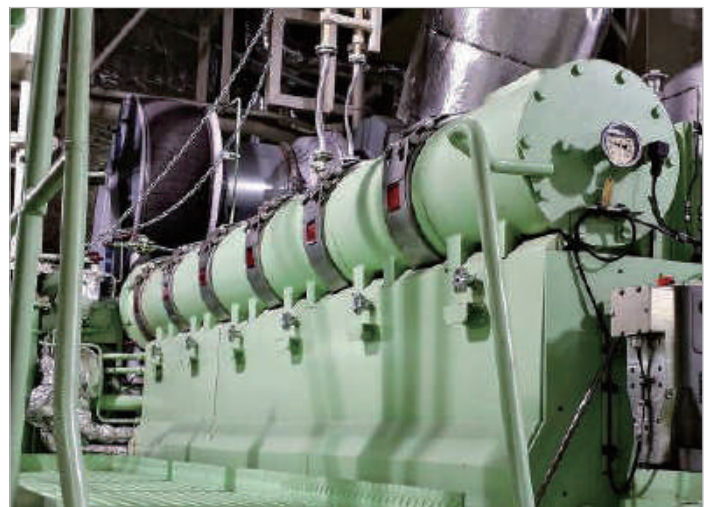
* : FRC is required

PIPE MATERIAL

Steel, stainless steel, cast iron, ductile iron, copper, concrete, Cu-Ni, aluminum, PVC, PPR, PE, glass fiber(FRP; GRE, GRP), etc.

* Pipes of different material can be connected by coupling as long as they have same outside diameter (within coupling range).

INSTALLATION EXAMPLES



Item No	Pipe ND	Pipe OD (mm)	Max. Working Pressure (bar)		Coupling Range (mm)			Coupling Length (mm)	
			Ship	Industry	MJG / MJGL / MGLP MJSG / MJSL / MJET	MJS / MJL / MJR / MJRL MJH / MJHL / MJHT	MJD / MJDL / MJER	Standard	Long
U2	13-1A	15.8	16	32	-	-	15.3 ~ 17.0	60 (MJER:27)	100
01	15-1A	21.3 21.7 21.8			21.2 ~ 22.2	21.0 ~ 22.0	21.0 ~ 23.0		
04	20-1A	26.7 26.9 27.2			26.7 ~ 27.7	26.0 ~ 28.0	26.0 ~ 29.0		
05	20-2A	25.0			24.5 ~ 25.5	24.0 ~ 26.0	24.0 ~ 26.5		
07	25-1A	33.4 33.7 34.0			33.0 ~ 34.6	33.0 ~ 35.0	33.0 ~ 35.5		
08	25-2A	30.0			29.5 ~ 30.5	29.0 ~ 31.0	29.0 ~ 31.5		
10	32-1A	38.0			37.5 ~ 38.5	37.0 ~ 39.0	37.0 ~ 39.5		
11	32-2A	42.2 42.4 42.7			41.9 ~ 43.0	42.0 ~ 44.0	41.0 ~ 44.5		
12	32-3A	44.5			44.0 ~ 45.0	44.0 ~ 46.0	44.0 ~ 46.5		
15	40-1A	48.3 48.6			47.8 ~ 49.0	47.5 ~ 49.5	47.5 ~ 50.5		
18	50-1A	54.0	14	28	53.4 ~ 54.6	53.0 ~ 55.0	53.0 ~ 56.0	80 (40)	150
19	50-2A	57.0			56.4 ~ 57.6	56.0 ~ 58.0	56.0 ~ 59.0		
20	50-3A	60.3 60.5			59.0 ~ 61.5	59.0 ~ 61.5	59.0 ~ 62.0		
21	50-4A	63.0			62.4 ~ 63.6	62.0 ~ 64.0	62.0 ~ 65.0		
23	65-1A	73.0			71.5 ~ 74.1	72.5 ~ 75.5	72.5 ~ 76.5		
24	65-2A	76.1 76.3			75.0 ~ 77.2	75.0 ~ 78.0	75.0 ~ 79.0		
25	65-3A	69.0			68.0 ~ 70.1	68.5 ~ 71.0	68.5 ~ 72.0		
27	80-1A	84.0			83.0 ~ 84.9	82.5 ~ 85.5	82.5 ~ 86.0		
28	80-2A	88.9 89.1			87.8 ~ 91.0	88.0 ~ 91.0	88.0 ~ 92.0		
32	90-1A	101.6			100.4 ~ 102.6	100.0 ~ 103.0	100.0 ~ 104.0	110 (60)	200
34	100-1A	104.0			103.0 ~ 104.8	102.0 ~ 105.0	102.0 ~ 106.0		
35	100-2A	108.0			106.5 ~ 108.5	106.0 ~ 109.0	106.0 ~ 110.0		
36	100-3A	114.3			113.2 ~ 115.4	113.0 ~ 116.0	113.0 ~ 118.0		
38	100-5A	110.0			108.5 ~ 111.0	108.5 ~ 111.5	108.5 ~ 113.5		
39	125-1A	133.0			131.6 ~ 134.4	131.0 ~ 135.0	131.0 ~ 135.5		
40	125-2A	139.7 139.8			137.7 ~ 140.9	138.0 ~ 142.0	138.0 ~ 142.5	111 (60)	201
41	125-3A	141.1 141.3			139.7 ~ 142.5	139.5 ~ 143.5	139.5 ~ 144.0		
42	125-4A	127.0			125.6 ~ 128.4	125.0 ~ 129.0	125.0 ~ 129.5		
44	150-1A	154.0	12	24	151.5 ~ 155.0	151.5 ~ 155.5	151.5 ~ 156.0		
45	150-2A	159.0			156.5 ~ 160.0	156.0 ~ 160.0	156.0 ~ 161.0		
46	150-3A	165.2			163.3 ~ 166.7	164.0 ~ 167.0	164.0 ~ 168.5		
47	150-4A	168.3			166.6 ~ 170.0	166.0 ~ 170.0	166.0 ~ 170.5		
51	200-1A	216.3			214.5 ~ 218.3	214.0 ~ 218.5	214.0 ~ 219.0	150 (61)	250 (300,400: by special order)
52	200-2A	219.1	8	16	217.0 ~ 221.0	216.5 ~ 221.5	216.5 ~ 222.0		
56	250-1A	267.0 267.4			264.8 ~ 270.0	262.0 ~ 269.0	262.0 ~ 270.0		
57	250-2A	273.1			270.4 ~ 275.6	270.0 ~ 276.0	270.0 ~ 277.0		
61	300-1A	318.5			316.0 ~ 322.0	316.0 ~ 322.5	316.0 ~ 323.0		
64	300-2A	323.9			321.0 ~ 327.4	322.0 ~ 328.0	322.0 ~ 329.0		
67	350-1A	355.6			352.0 ~ 360.0	352.0 ~ 359.5	352.0 ~ 361.0		
71	400-1A	406.4			402.0 ~ 410.0	402.0 ~ 410.0	402.0 ~ 411.0		
74	450-1A	457.2			-	453.0 ~ 460.0	453.0 ~ 462.0		
77	500-1A	508.0	5	10		504.0 ~ 512.0	504.0 ~ 513.0		
80	550-1A	558.8	4.6	9.2		555.0 ~ 563.0	554.0 ~ 564.0		
83	600-1A	609.6	4.2	8.4		605.0 ~ 614.0	605.0 ~ 615.0		
86	650-1A	660.4	4.0	8.0		-	654.0 ~ 666.0		
88	700-1A	711.2	3.7	7.4			705.0 ~ 717.0		
91	750-1A	762.0	3.6	7.2			756.0 ~ 768.0		
93	800-1A	812.8	3.4	6.8			806.0 ~ 818.0		
96	850-1A	863.6	3.2	6.4			857.0 ~ 869.0		
98	900-1A	914.4	3.0	6.0			908.0 ~ 920.0		
L1	1000-1A	1016.0	2.7	5.4			1010.0 ~ 1022.0		
L6	1100-1A	1117.2	2.5	5.0			1111.0 ~ 1123.0		
L8	1200-1A	1219.2	2.3	4.6			1213.0 ~ 1225.0		
L0	1350-1A	1371.6	2.0	4.0			1365.0 ~ 1377.0		
M2	1500-1A	1524.0	1.8	3.6			1518.0 ~ 1530.0		
M7	1650-1A	1676.4	1.6	3.2			1672.0 ~ 1682.0		
M9	1800-1A	1828.8	1.5	3.0			1822.0 ~ 1834.0		
N1	1900-1A	1930.4	1.4	2.8			1924.0 ~ 1936.0		
N3	2000-1A	2032.0	1.3	2.6			2026.0 ~ 2038.0		

[Remark]

* Burst pressure \geq working pressure for ship x ship safety factor (4)

Burst pressure \geq working pressure for industry x industry safety factor (2)

* The sizes highlighted in bold are JWC standard.

* There are some more sizes producible. Visit our website for further information.

* It is not recommended to use couplings for food ingredient conveying line where those fluids can get jammed in rubber gasket and get rotted.

* Please check pipe OD in millimeter, pressure, fluid type & temperature, etc.

how to order	for example
Model + Pipe OD + Gasket material (+ Casing & Bolt material) + Quantity (+ Certification)	MJG 100A(114.3mm), EPDM, SUS304 casing, SUS304 bolt, 350pcs , ABS



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