

# 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 a good alternative to welding, flange, grooved joint, union, etc.

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

### Slip (flexible) type



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

Slip type couplings are axially non restrained. They allow expansion and contraction of pipes which happen due to environmental factors.

Fall-out may happen because of axial force, so it is recommended to fix pipes on its installation.

MJSF and MJSFL 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 range of allowable pipe outside diameter. It is easy to install even at large diameter pipes. It is recommended to fix pipes.

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

### Slip-Grip type Utility Model



**MJSGL 15~300A / MJSG 20~300A**

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

The grip holds a pipe tightly at one side. The slip part on the other side allows pipe expansion and contraction. Fall-out may happen because of axial force, so it is recommended to fix pipes at installation.

## Repair Clamp for pipe leakage repair

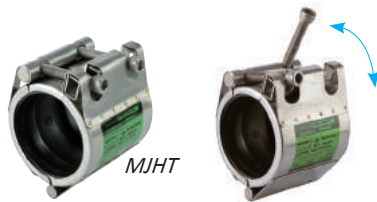
### Hinge type



### MJH 15~600A / MJHL 25~300A

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

### Bolt-rotating hinge type Patent



### MJHT 20~600A

This is the improved version of MJH. You can lock up the clamp by simply swiveling the bolt one end of which is already inserted into the bar nut, fitting into the bar washer, and bolting up. The process is very simple and shortens working time more than 30% compared to MJH.

### Multi-locks type



### 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 range of allowable pipe outside diameter. It is easy to install even at large diameter pipes.

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

### Single lock type



### MJR 20~600A / MJRL 25~600A

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

### Elbow repair clamp Utility Model



### MJER 13~500A

This is useful for repairing damaged or leaking area on elbow, or covering up welded area to protect it. This is top-bottom separated type, like MJD. You can use MJD for elbow repair over 500A.

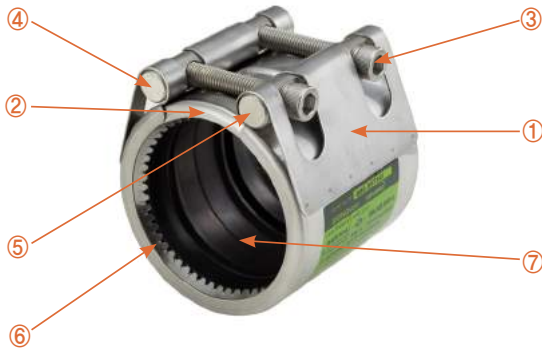
### Socket repair clamp



### MJCX 20~50A

The connecting part of socket method is half thick compared to the other part of a 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, 51B20, SCM435 galv.
④	Bar Nut	SUS303F, SUS304, SUS316, S45C galv.
⑤	Bar Washer	SUS303F, SUS304, SUS316, S45C galv.
⑥	Grip	SUS301H, SUS304H
⑦	Gasket	EPDM, NBR, Silicone, FKM(Viton)

## 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, air, oxygen, hydrogen, nitrogen, ammonium hydroxide, ammonia gas, ethylene glycol, methyl alcohol, glacial acetic acid, boric acid, acetic acid, sodium acetate, lindol, etc. pH2~11

### NBR

- Characteristic: oil/ abrasion/ aging resistance
- Temperature: -20~80°C
- Use: gas, oil (gasoline, kerosene, diesel oil, bunker oil, lubricating oil, hydraulic oil, olive oil, coconut oil, cottonseed oil, corn 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)

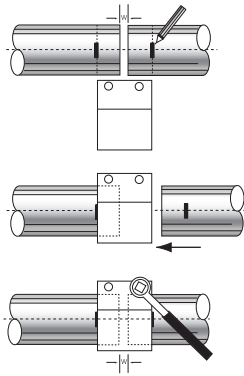
- Characteristic: heat/ chemical/ medicine resistance
- Temperature: -18~300°C (Special Viton: steam ~230°C)
- Use: aqua regia, sea water, oxygen, hydrogen, chlorine, nitric acid, fatty acids, phthalic acid, sulfuric acid, boric acid, benzene, cresol, ethylene chloride, ethylene glycol, toluene, naphthalene, 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.

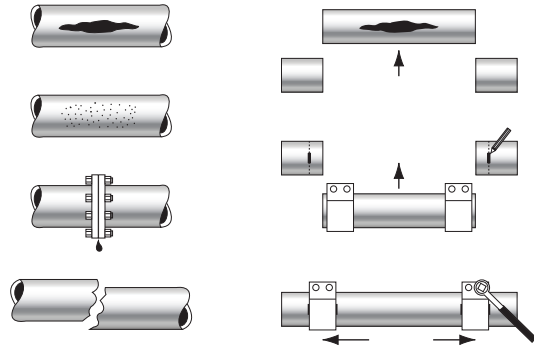
## PRODUCT CHARACTERISTICS

- \* Assembly type saves work time.
- \* Couplings can connect pipes of different material.
- \* Using a wrench to install eliminates worry about fire.
- \* Stainless steel design is much lighter than cast iron product and saves manpower and cost.
- \* No preprocessing is required at pipe ends.
- \* Installation is done at one side. It enables products to be stored or work to be done at a narrow area.
- \* Rubber gasket accommodates vibration, impact, noise, angular deflection, and distance between pipe ends. This makes couplings seismic design.
- \* Couplings can be assembled and disassembled several times.
- \* 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.

PIPE COUPLING

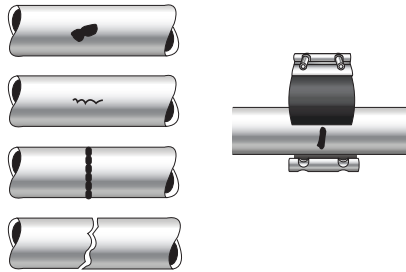


pipe connection

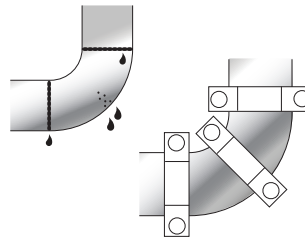


partial replacement

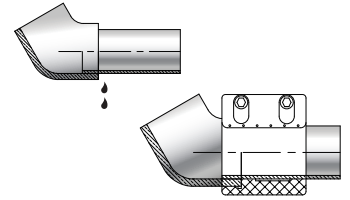
REPAIR CLAMP



straight pipe repair



elbow repair



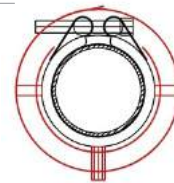
socket repair

- \* Remove burrs and contaminants on pipe surface.
- \* Tighten bolts little by little & alternately up to the torque rate on the label.  
If bolts are tightened over torque rate, they can be broken, while if done below torque rate, product performance would be lower than its capacity.
- \* Pipes should be anchored and supported properly, conforming to the relevant industry standards.

**Fire-Resistant Cover** FRC 20~300A **Design**

If coupling is equipped with FRC, it is compliant with IACS(International Association of Classification Societies) regulations of being resistant to fire of 800°C for 30 minutes. Cover up couplings with FRC where there is high risk of fire.

\* Applicable to MJG, MJGF, MJS, MJSF



**Inner Stainless Steel Plate**

Inner stainless steel plate is to prevent rubber gasket from being sucked into vacuum or suction pipe.

CERTIFICATION



ISO 9001

CE Mark

ABS

BV

DNV GL

LR

RINA

Korean Water

Japanese Water / Fire

## 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/ ventilating/ 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 (IACS)**

Flammable fluids (flash point $\leq$ 60°C)

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

Inert gas

- Water seal effluent lines
- Scrubber effluent lines
- Main lines \*
- Distribution lines \*

Flammable fluids (flash point $\geq$ 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 \*
- 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 $\geq$ 60°C) \*

Miscellaneous

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

(\* : FRC is required)

## PIPE MATERIAL

Steel, stainless steel, cast iron, ductile iron, copper, concrete, cement, 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.

# 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 / MJSGL / MJET	MJS / MJL / MJR / MJRL MJH / MJHL / MJHT	MJD / MJDL / MJER	Standard	Long
U2	13-1A	15.8			-	-	15.3 ~ 17.0		
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 ~ 28.5		
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	42.0 ~ 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			53.4 ~ 54.6	53.0 ~ 55.0	53.0 ~ 56.0		
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		
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		
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		
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			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		
52	200-2A	219.1			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		
62	300-2A	323.7 327.3			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				504.0 ~ 512.0	504.0 ~ 513.0		
80	550-1A	558.8				555.0 ~ 563.0	554.0 ~ 564.0		
83	600-1A	609.6				605.0 ~ 614.0	605.0 ~ 615.0		
86	650-1A	660.4				655.0 ~ 665.0	654.0 ~ 666.0		
88	700-1A	711.2				706.0 ~ 716.0	705.0 ~ 717.0		
91	750-1A	762.0				757.0 ~ 767.0	756.0 ~ 768.0		
93	800-1A	812.8				807.0 ~ 817.0	806.0 ~ 818.0		
96	850-1A	863.6				858.0 ~ 868.0	857.0 ~ 869.0		
98	900-1A	914.4				909.0 ~ 919.0	908.0 ~ 920.0		
L1	1000-1A	1016.0				1011.0 ~ 1021.0	1010.0 ~ 1022.0		
L6	1100-1A	1117.6				1112.0 ~ 1122.0	1111.0 ~ 1123.0		
L8	1200-1A	1219.2				1214.0 ~ 1224.0	1213.0 ~ 1225.0		
L0	1350-1A	1371.2				1366.0 ~ 1376.0	1365.0 ~ 1377.0		
M2	1500-1A	1524.0				1519.0 ~ 1529.0	1518.0 ~ 1530.0		
M7	1650-1A	1676.4				1671.0 ~ 1681.0	1672.0 ~ 1682.0		
M9	1800-1A	1828.8				1823.0 ~ 1833.0	1822.0 ~ 1834.0		
N1	1900-1A	1930.4				1925.0 ~ 1935.0	1924.0 ~ 1936.0		
N3	2000-1A	2032.0				2027.0 ~ 2037.0	2026.0 ~ 2038.0		
								60 (MJER:27)	100
								80 (40)	150
								110 (60)	200
								111 (60)	201
								150 (61)	250 (300,400: by special order)

[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)

\* 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 decomposed.

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

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

## JEONG WOO COUPLING CO., LTD.

83-16, Dongbuk-ro 437beon-gil, Sangdong-myeon, Gimhae-si,  
Gyeongnam, Republic of Korea 50804

Tel **+82-55-339-7666**

Fax **+82-55-339-8666**

Web **www.mpjoint.com**

Email **mpjoint.com@gmail.com**

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