

## Precautions

- 1 Swivel joint must confirm the rated working pressure , applicable specifications, the temperature range on the nameplate before operation
- 2 Swivel joint should be regularly using ultrasonic thickness measurement of wall thickness, it is recommended once a month, if not reach the effective thickness value, should be replaced immediately.
- 3 Swivel joint can not operate in continuous or frequent rotation swing working condition; can not be immersed in water or working underwater. Can not withstand axial load elbow work activities.
- 4 When the installation Swivel joint, should fill seal grease, and manually check each joint rotation is flexible, without jamming. Operators should wear goggles to prevent the installation of a small debris flying eye injury.

## Use methods and precautions

### How to use

Check all parts before use Swivel joint is flexible to use, it must be intact, in line with criteria to use.  
Allowed pressure to meet the requirements of the construction process, not up to standard can not be used.  
Hand-tighten Swivel joint, adjusted to the desired angle and then hit with a pipe wrench to tighten or tighten.

### Notes

Put away after use to clean.  
Always bearing oiling, rust-proof die.

## Transport

- Swivel joint during transport, non-collision, to avoid the rain.
- Swivel joint should be stored in ventilated, dry place, not the sun and rain. Forbidden contact with acid, alkali, salt and other corrosive substances.

## Service

- Under normal conditions of storage and use, starting six months from the date of shipment or product within three months, due to manufacturing quality and affect the normal use, the company responsible for free replacement or warranty.
- Each product is accompanied by certificates, and instructions.
- Customers can order the appropriate product types according to the table. Any special requirements, the company can design and manufacture.

# SWIVEL JOINT



## Product Overview

Swivel joint is cementing and fracturing equipment High Pressure Fluid Control Products. Hammer union is to change direction and to facilitate the construction of the pipeline connecting the pipe line connection. Widely used in the acidic operating environment (excluding containing CO<sub>2</sub>, H<sub>2</sub>S sour gas operating environment), in the high-pressure discharge line, input line, a temporary flow line, well testing, and other high-voltage transmission lines on pipelines. Swivel joint specifications are 1 1/2"~4", rated working pressure of 42MPa ~ 105MPa, working temperature -46 °C ~ 121 °C.

- 1 The **high pressure swivel joint** has been widely applied in the condition of acid working, mainly including the high pressure discharge pipe, intake pipe, temporary flow pipe, well-testing pipe and pipes of fluid transportation under other high-pressure conditions.
- 2 The well-designed 1 1/2"~4" long sweep swivel joint possesses the cold working pressure of 42Mpa~105Mpa (6000psi~15000psi), with 10 different types. It can be rotated by 360° along one direction, two directions or three directions. we can also provide 90 degree swivel joints with different types and repair kits under the conditions of normal temperature, low temperature and sulfurous gas.

## Design Features

Swivel joint technical parameters and performance specifications are in line with API 6A. Its product specification levels PLS3, performance levels for the PR2.

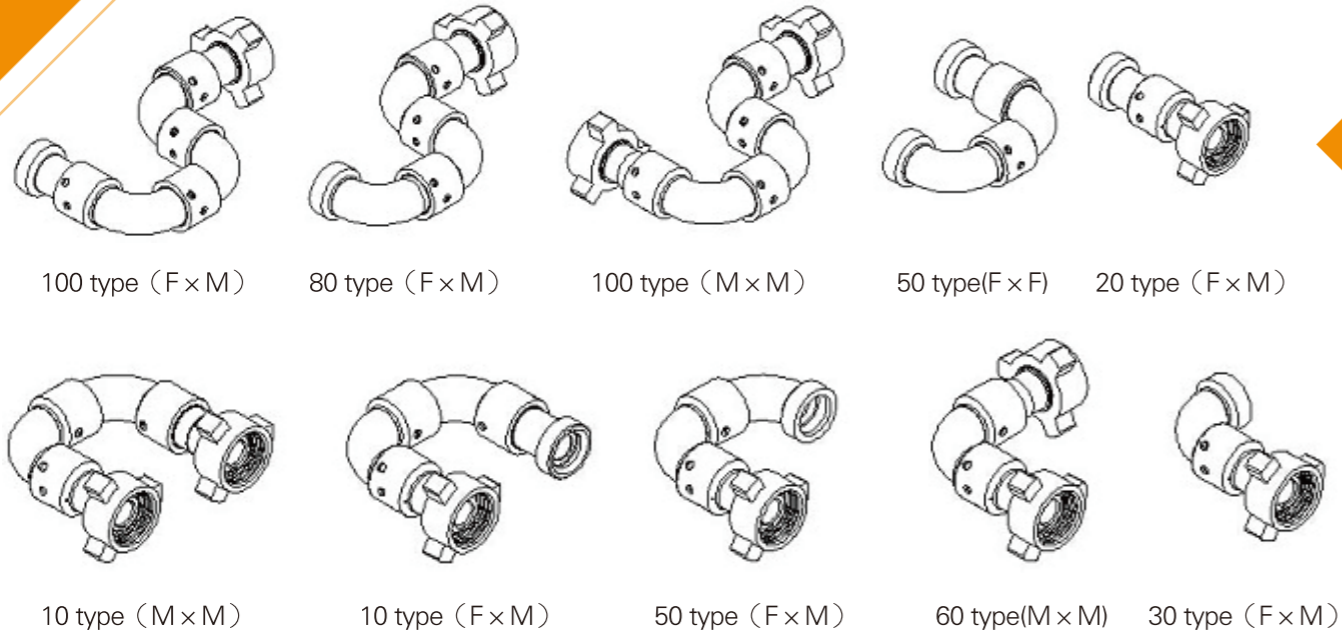
Swivel joint made of high strength alloy steel, special heat treatment process. It uses a unique trajectory, ball structure, to ensure a good rotation Swivel joint performance and impact resistance. ACME threaded connections, making it with the demolition convenient, fast, reliable connection, and reliable. Multiple seal design and high precision, to ensure the sealing performance of Swivel joint.

- 1 **90 Degree swivel joint** is connected with the hammer union, being characterized by the flexibility, fast tightening and disassembly, pressure-proof, sealing, convenient transportation and storage.

- The **long sweep swivel joint** is designed by three lanes, which can effectively bear the heavy load and radial load to achieve the smooth pressure-bearing. The vibration of pipe will be minimized when bearing the variable loads.
- All joint sizes are similar to products of FMC in the well cementation and fracturing.
- Uniform wall thickness, long service life and smoother transportation of fluid.
- The sealing elements are made of hydrogenated nitrile butadiene rubber, with the good sealing performance.
- The sealing elements are equipped with the metal spray ring, as well as the relief hold. In case of the leakage, the pressure will be relieved automatically to avoid its accumulation in the lane cavity.
- The spot maintenance of high pressure swivel joint only requires the addition of lubrication oil occasionally to guarantee the normal operation.

## Main Technical Parameters of swivel joint

- 90 degree swivel joint is connected with 10 type, 20 type, 30 type, 40 type, 50 type, 60 type, 70 type, 80 type, 90 type, 100 type union, and common connection modes are as below:

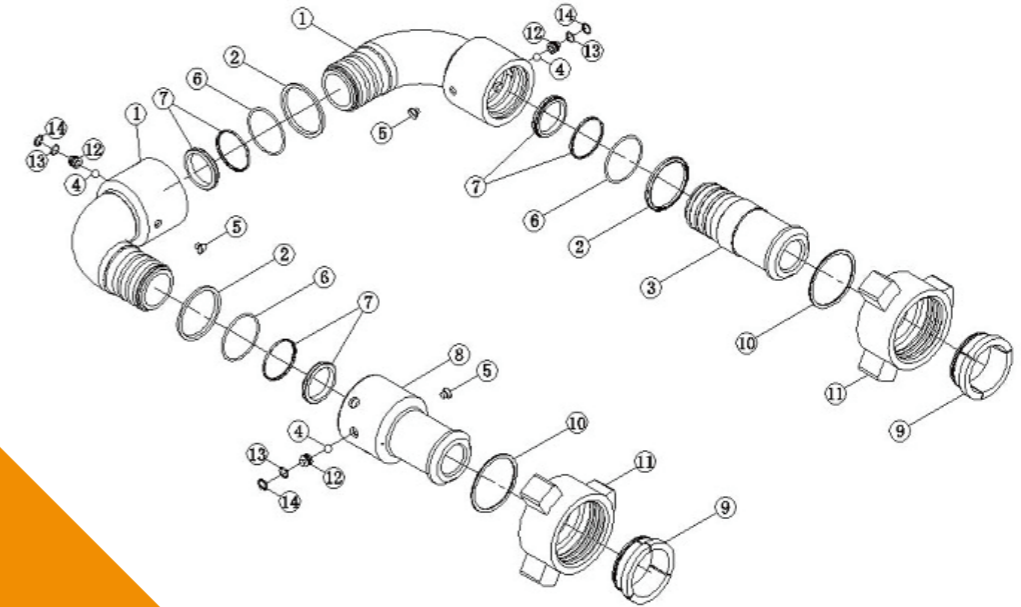


- Common high pressure swivel joint specifications:

Name	Buckling Size	Cold Working Press	Terminal Connection Type	Buckle Model	Model
Long Sweep Swivel Joint	1 1/2"	42 Mpa (6000 psi)	screw thread (Tr100 x 12)	M x M	10 type
	2"	70 Mpa (10000 psi)			20 type
	3"	105 Mpa (15000 psi)	30 type		
	4"		40 type		
			50 type		
			Fig. 602	M x F	60 type
			Fig. 1002	M x F	70 type
			Fig. 1502	F x F	80 type
					90 type
					100 type

Remark:  
 ①. The connection type of swivel joints can be design as users' needs  
 ②. "F"—threaded joint, "M"—sphere joint  
 ③. How to place an order: 3" x 105Mpa (15000psi)-fig1502 (F x M) -type10

- Example: Explosion photos of 3" x 105Mpa(15000psi)-Fig1502-M x M-10 type 90 degree Swivel joint



- Example: Parts list of 3" x 105Mpa(15000psi)-Fig1502-M x M-10 type swivel joint

No.	Name	Qty	No.	Name	Qty
1	WN Bent joint	1	8	NQ Straight Joint	1
2	Grease Retainer Ring	3	9	Rand	2
3	WQ Straight Joint	1	10	Spring Rand	2
4	Steel Ball	297	11	Hummer Union	2
5	Greasy Blockage	9	12	Steel Ball Plug	6
6	Union Sealing Ring	3	13	O-shaped Sealing Ring	3
7	Gland Packing	3	14	Circlip for Hole	6

- Each swivel joint is accompanied with a maintenance package. The maintenance package can also be ordered independently. Parts name and qty of long sweep swivel joint maintenance package

Name of Maintenance Package	10 Type (Qty)	20 Type (Qty)	30 Type (Qty)	50 Type (Qty)	80 Type (Qty)	100 Type (Qty)
Union sealing ring						
Spring Rand						
Gland Packing						
Circlip for Hole	3	1	1	2	3	4
Steel Ball Plug						
Steel Ball						
Greasy Blockage						