

# WATERFRONT Flexible Connectors

## WR Series

### Product Application

#### **Air Conditioning, Heating, Ventilating, Fire Service and Pump Drain Systems:**

Waterfront Flexible Connectors eliminate stresses caused by change in temperature and piping misalignment, as well as reduce the transmission of noise and vibration. They are used on both hot and chilled water circulation lines, suction and discharge sides of pumps, and header connections.

**Industrial:** One of the most significant uses for Waterfront Flexible Connectors is in industrial piping installations to compensate for the thermal expansion and contraction of the pipe.

**Power Plants:** Because of the ability of the Waterfront Flexible Connectors to adjust to pipe misalignment, they can be used in power plants for condenser connections, auxiliary exhaust lines and connections to air ejectors.

**Marine Systems:** Waterfront Flexible Connectors isolate marine systems against the transmission of noise and vibration and eliminate the destructive action of electrolysis. They are used on suction and discharge sides of circulating water-cooling systems and air intake lines on diesel engines.



### Product Application

Waterfront Flexible Connectors prevent stresses due to expansion and contraction, isolate against the transfer of noise and vibration, and compensate for misalignment.

Waterfront Connectors absorb the continuing movement experienced in piping systems because of varying ambient temperatures, difference in temperature of materials being handled, and difference in composition. The danger of buckling or pulling apart and resulting maintenance costs are eliminated.

Waterfront Connectors reduce objectionable noise and experienced in piping systems connected to pumps, compressors, and similar pulsating equipment. The transmission of noise and vibration tends to reduce the efficiency of adjacent equipment as well as impairing the working conditions in offices and factories.

Settlement, load stresses, and wearing of parts frequently cause piping and mechanical equipment to move out of normal alignment. Waterfront Flexible Connectors compensate for these lateral, torsional, and angular movement.



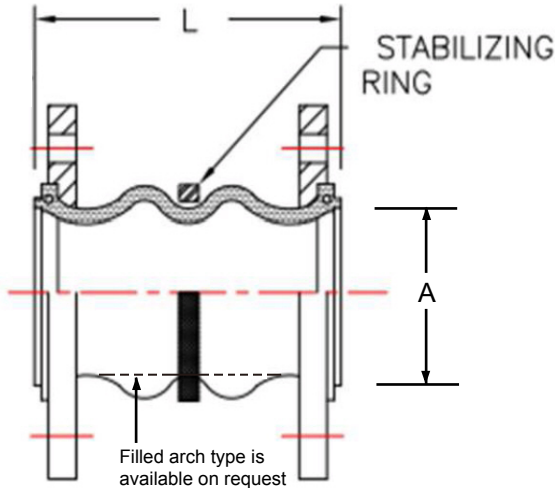
# WATERFRONT

## Flexible Connectors

## WR SERIES

### WRT Twin Sphere Floating Flange Flexible Connector

Allowable Movements in Operation



Size-A In. (mm)	Length-L In. (mm)	Axial Compression In. (mm)	Axial Elongation In. (mm)	Transverse Movement In. (mm)	Angular Deflection
1 ¼ (32)	7 (118)	2 ⅛ (52)	1 ⅛ (27)	1 ¾ (45)	40°
1 ½ (38)	7 (118)	2 ⅛ (52)	1 ⅛ (27)	1 ¾ (45)	40°
2 (50)	7 (118)	2 ⅛ (52)	1 ⅛ (27)	1 ¾ (45)	40°
2 ½ (63)	7 (118)	2 ⅛ (52)	1 ⅛ (27)	1 ¾ (45)	40°
3 (75)	7 (118)	2 ⅛ (52)	1 ⅛ (27)	1 ¾ (45)	40°
4 (100)	9 (229)	2 ⅛ (52)	1 ⅝ (30)	1 ½ (40)	35°
5 (127)	9 (229)	2 ⅛ (52)	1 ⅝ (30)	1 ½ (40)	35°
6 (152)	9 (229)	2 ⅛ (52)	1 ⅝ (30)	1 ½ (40)	35°
8 (203)	13 (330)	2 ⅝ (65)	1 ⅝ (29)	1 ⅝ (35)	30°
10 (254)	13 (330)	2 ⅝ (65)	1 ⅝ (29)	1 ⅝ (35)	30°
12 (305)	13 (330)	2 ⅝ (65)	1 ⅝ (29)	1 ⅝ (35)	30°
14 (356)	13 ¾ (349)	1 ¾ (45)	1 ⅝ (30)	1 ⅝ (30)	20°
16 (406)	13 ¾ (349)	1 ¾ (45)	1 ⅝ (30)	1 ⅝ (30)	20°
18 (457)	13 ¾ (349)	1 ¾ (45)	1 ⅝ (30)	1 ⅝ (30)	20°
20 (508)	13 ¾ (349)	1 ¾ (45)	1 ⅝ (30)	1 ⅝ (30)	20°
24 (610)	13 ¾ (349)	1 ¾ (45)	1 ⅝ (30)	1 ⅝ (30)	20°

#### Operating Conditions

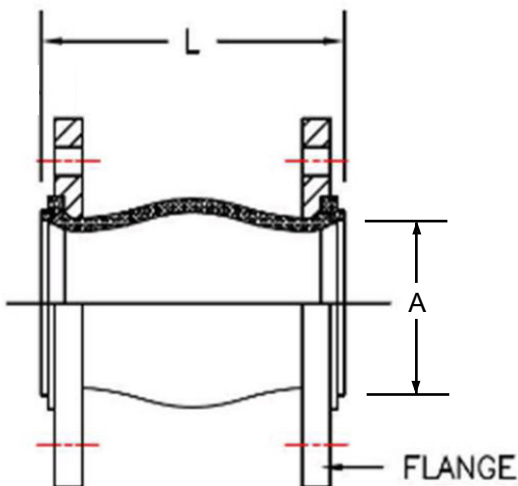
Operating Pressure	225 psig ( 16 kg/cm )
Burst Pressure	850 psig ( 60 kg/cm )
Vacuum Rating	26" ( 600 mm ) Hg
Temperature	14°F to 158°F ( -10°C to 70 °C )

#### Part

Flange	Ductile Iron / Mild Steel & SS on Request
Wire	Hard Steel Wire
Body	EPDM
Body (Reinforcement)	Nylon Tire Cord

### WRS Single Sphere Floating Flange Flexible Connector

Allowable Movements in Operation



Size-A In. (mm)	Length-L In. (mm)	Axial Compression In. (mm)	Axial Elongation In. (mm)	Transverse Movement In. (mm)	Angular Deflection
1 (25)	6 (152)	½ (13)	⅝ (9)	±½ (13)	15°
1 ¼ (32)	6 (152)	½ (13)	⅝ (9)	±½ (13)	15°
1 ½ (38)	6 (152)	½ (13)	⅝ (9)	±½ (13)	15°
2 (50)	6 (152)	½ (13)	⅝ (9)	±½ (13)	15°
2 ½ (63)	6 (152)	½ (13)	⅝ (9)	±½ (13)	15°
3 (75)	6 (152)	½ (13)	⅝ (9)	±½ (13)	15°
4 (100)	6 (152)	¾ (19)	½ (13)	±½ (13)	15°
5 (127)	6 (152)	¾ (19)	½ (13)	±½ (13)	15°
6 (152)	6 (152)	¾ (19)	½ (13)	±½ (13)	15°
8 (203)	6 (152)	¾ (19)	½ (13)	±½ (13)	15°
10 (254)	8 (203)	1 (25)	⅝ (16)	±¾ (19)	15°
12 (305)	8 (203)	1 (25)	⅝ (16)	±¾ (19)	15°
14 (356)	8 (203)	1 (25)	⅝ (16)	±¾ (19)	15°
16 (406)	8 (203)	1 (25)	⅝ (16)	±¾ (19)	15°
18 (457)	8 (203)	1 (25)	⅝ (16)	±¾ (19)	15°
20 (508)	8 (203)	1 (25)	⅝ (16)	±¾ (19)	15°
24 (610)	10 (254)	1 (25)	⅝ (16)	±¾ (19)	15°

#### Operating Conditions

Operating Pressure	225 psig ( 16 kg/cm )
Burst Pressure	850 psig ( 60 kg/cm )
Vacuum Rating	26" ( 600 mm ) Hg
Temperature	14°F to 158°F ( -10°C to 70 °C )

#### Part

Flange	Ductile Iron / Mild Steel & SS on Request
Wire	Hard Steel Wire
Body	EPDM
Body (Reinforcement)	Nylon Tire Cord

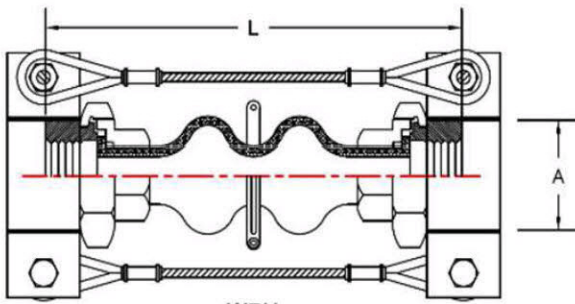


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### WRU Twin Sphere Union Joint Flexible Connector



Allowable Movements in Operation

Size-A	Length-L	Axial Compression	Axial Elongation	Transverse Movement	Angular Deflection
In. (mm)	In. (mm)	In. (mm)	In. (mm)	In. (mm)	
3/4 (22)	8 (203)	7/8 (22)	1/4 (6)	7/8 (22)	32°
1 (25)	8 (203)	7/8 (22)	1/4 (6)	7/8 (22)	25°
1 1/4 (32)	8 (203)	7/8 (22)	1/4 (6)	7/8 (22)	21°
1 1/2 (38)	8 (203)	7/8 (22)	1/4 (6)	7/8 (22)	17°
2 (51)	8 (203)	7/8 (22)	1/4 (6)	7/8 (22)	13°
2 1/2 (64)	8 (203)	7/8 (22)	1/4 (6)	7/8 (22)	11°
3 (76)	8 (203)	7/8 (22)	1/4 (6)	7/8 (22)	9°

#### Operating Conditions

Operating Pressure	225 psig ( 16 kg/cm )
Burst Pressure	850 psig ( 60 kg/cm )
Vacuum Rating	26" ( 600 mm ) Hg
Temperature	14°F to 158°F ( -10°C to 70 °C )

#### Part

Union	Ductile Iron / Mild Steel & SS on Request
Body (Reinforcement)	Nylon Tire Cord
Ring	Ductile Iron
Restraint Assembly	1/8" Dia. Wire Rope on Request
Body	EPDM

\*The right to change or modify product design without prior notice is reserved.

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