YN-COUPLINGS

YOUNGNAM METAL CO.,LTD

YN-COUPLINGS

www.yncoupling.com

APPROVALS

LRQA ISO 9001

WORLD CLASS

(DNV)

(ABS)

(NK)

(LR)

(RMRS)

(BV)

(KR)

YN-COUPLINGS

Model 1 : GR-S

Model 2 : GR-L

Model 3 : MF-RS

Model 4 : MF-RL

Model 5 : RCH-S

Model 6 : RCH-L

Model 7 : RCD-S

Model 8 : RCD-L

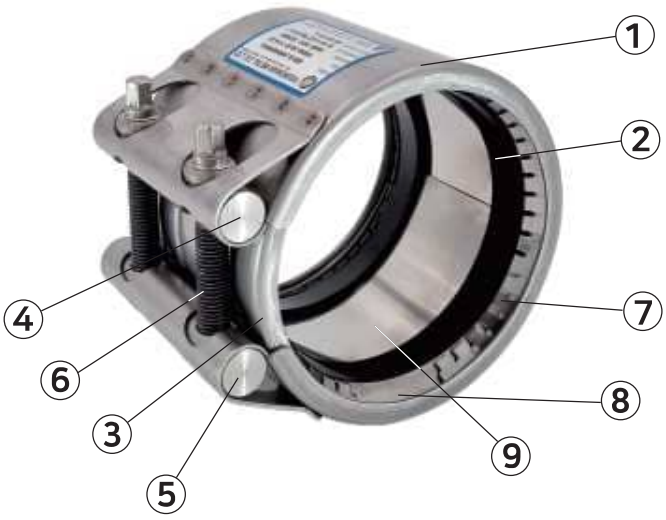
Model 9 : RCH-E

Model 10 : RCD-E

Model 11 : FPC-GR-S

YN-COUPLINGS

NAME OF PARTS



No	Component		Material
1	Case		SUS 304 / SUS 316L
2	RUBBER Gasket	EPDM	Water, Air, Solids (-30℃ ~ +100℃)
		NBR	Oil, Gas, Fuel, Hydrocarbons (-20℃ ~ +80℃)
		SILICONE (ND 15A~200A)	Steam, high-heat applications (-50℃ ~ +190℃)
		FKM (VITON) (ND 15A~150A)	Chemical, High Temperature, Lubricants (-30℃ ~ +220℃)
3	Slide Plate		SUS 304 / SUS 316L
4	Round Bar Washer		SUS 304 / SUS 316L
5	Round Bar Nut		SUS 304 / SUS 316L
6	Bolt		SUS 304 / SUS 316L
7	Grip Ring		SUS 304 / SUS 301
8	Grip Insert		SUS 304
9	Insert-Plate		PE, SUS 304 (Option)

1. Technical consultation with the manufacturing company is required when using high temperatures.
2. Vacuum suction reinforcement plate No. 9 is recommended for pipes that are concerned about vacuum generation.

YN-COUPLINGS

About 40 years of experience in manufacturing of YN- Coupling.
Completed development and testing of the world's largest 3,500mm
(3.5m in diameter with 700mm Lenth).

▶ Ø3500mm (Diameter 3.5m)

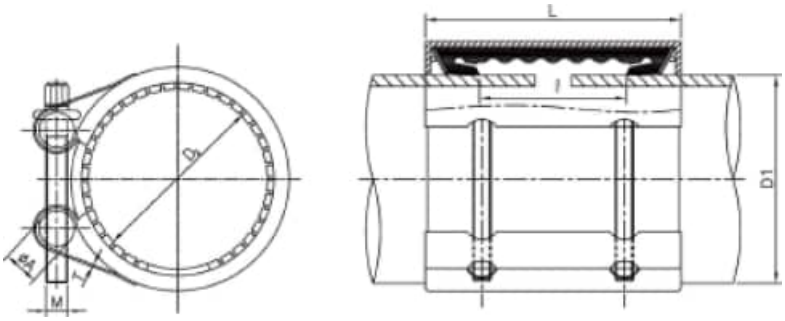
▶ Ø3040mm (Diameter 3.04m)

Best Quality! Price Satisfaction! Timely Delivery!

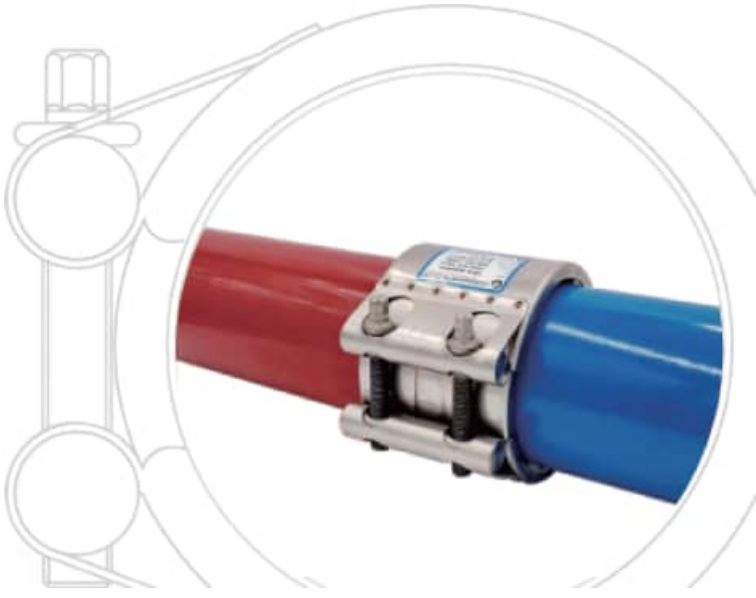
MODEL 1 : GR-S

Grip Type Coupling : GR-S , GR-L : Pipe connector with axial restraint

The YOUNGNAM GRIP-Couplings join plain end pipes with axial restraint. YOUNGNAM GRIP coupling provide pull out resistance in excess of rhe couplings rated working pressure.
Whether for pressure or suction lines, thick or thin wall pipe, the YN-GRIP-Couplings are installed quickly, safely and economically.



MODEL 2 : GR-L



GRIP TYPE YN-COUPLINGS

GR-S

Size	OD (mm)	Range (mm)	M	L	ℓ	W.P		W.T	P (N.m(kgf·cm))
ND (Inch)	D 1	D 2							
15A (1/2")	21.3 / 21.7	OD ± 0.3	M6	57	20	40	20	0.18	3~5(30~50)
20A (3/4")	26.0 / 26.9 / 26.7 / 27.2	OD ± 0.5	M6	57	20	40	20	0.21	4~6(40~60)
25A (1")	30.0 / 32.0 / 33.4 / 33.7 / 34.0	OD ± 0.6	M6	57	20	40	20	0.23	4~6(40~60)
32A (1-1/4")	38.0 / 40.9 / 42.2 / 42.4 / 42.7	OD ± 0.6	M8	57	20	40	20	0.34	10~12(100~120)
40A (1-1/2")	44.5 / 48.3 / 48.6 / 50.8	OD ± 1.0	M8	57	22	40	20	0.36	10~12(100~120)
50A (2")	54.0 / 57.0 / 60.3 / 60.5 / 63.0	OD ± 1.0	M10	80	30	36	18	0.80	15~18(150~180)
65A (2-1/2")	66.7 / 69.0 / 73.0 / 76.3	OD ± 1.0	M10	80	30	36	18	0.89	15~18(150~180)
80A (3")	79.8 / 84.0 / 88.9 / 89.1	OD ± 1.5	M12	108	50	32	16	1.56	40~50(400~500)
90A (3-1/2")	101.6	OD ± 1.5	M12	108	50	32	16	1.64	40~50(400~500)
100A (4")	104.8 / 106.3 / 108.0 / 114.3	OD ± 1.5	M12	108	50	32	16	1.77	40~50(400~500)
125A (5")	129.0 / 133.0 / 139.8	OD ± 1.5	M14	117	55	28	12	2.95	60~80(600~800)
150A (6")	154.0 / 159.0 / 165.2 / 168.3	OD ± 1.5	M14	117	55	28	12	3.15	60~80(600~800)
200A (8")	204.0 / 216.3 / 219.1	OD ± 2.0	M16	155	72	24	7	6.60	120~150(1200~1500)
250A (10")	254.0 / 267.4 / 273.1	OD ± 2.0	M16	155	65	20	7	7.55	120~150(1200~1500)
300A (12")	304.0 / 318.5 / 323.9	OD ± 2.0	M18	155	65	14	5	9.75	170~190(1700~1900)
350A (14")	355.6	OD ± 2.0	M18	155	65	14	5	10.58	170~190(1700~1900)

GR-L

Size	OD (mm)	Range (mm)	M	L	ℓ	W.P		W.T	P (N.m(kgf·cm))
ND (Inch)	D 1	D 2							
15A (1/2")	21.3 / 21.7	OD ± 0.3	M6	72	40	40	20	0.23	3~5(30~50)
20A (3/4")	26.9 / 26.7 / 27.2	OD ± 0.5	M6	72	40	40	20	0.26	4~6(40~60)
25A (1")	33.4 / 33.7 / 34.0	OD ± 0.6	M8	100	55	40	20	0.46	5~8(50~80)
32A (1-1/4")	42.2 / 42.4 / 42.7	OD ± 0.6	M8	100	55	40	20	0.53	10~12(100~120)
40A (1-1/2")	48.3 / 48.6	OD ± 1.0	M8	100	55	40	20	0.57	10~12(100~120)
50A (2")	60.3 / 60.5	OD ± 1.0	M10	139	84	36	18	1.29	15~18(150~180)
65A (2-1/2")	76.3	OD ± 1.0	M10	139	84	36	18	1.43	15~18(150~180)
80A (3")	88.9 / 89.1	OD ± 1.5	M12	203	122	32	16	2.83	40~50(400~500)
90A (3-1/2")	98.0	OD ± 1.5	M12	203	122	32	16	3.00	40~50(400~500)
100A (4")	114.3 / 118.0	OD ± 1.5	M12	203	122	32	16	3.18	40~50(400~500)
125A (5")	139.8	OD ± 1.5	M14	204	128	28	12	4.80	60~80(600~800)
150A (6")	159.0 / 165.2 / 168.3	OD ± 1.5	M14	204	128	28	12	5.24	60~80(600~800)
200A (8")	216.3 / 219.1	OD ± 2.0	M16	255	157	24	7	10.74	120~150(1200~1500)
250A (10")	267.4 / 273.1	OD ± 2.0	M16	255	157	20	7	12.08	120~150(1200~1500)
300A (12")	318.5 / 323.9	OD ± 2.0	M18	255	157	14	5	15.60	170~190(1700~1900)

ND : Nominal Diameter (A)
D1 : Actual Outer Diameter of Limit for Pipe (mm)
D2 : Min./Max. Allowable Limit for Pipe (mm)
M : Fastener Bolt Size
L : Coupling Width (mm)

ℓ : Alowable Shrinkage/Expansion Clearance (mm)
(Maximum Pipe Grap = 50% of "ℓ" with Insert Plate)
W.P : Working Pressure (kgf/㎠) : Industrial ( ), Ship( )
W/T : Weight Per Unit (kg)
P : Optimum Locking Torque Value (Nm(kgf·cm))

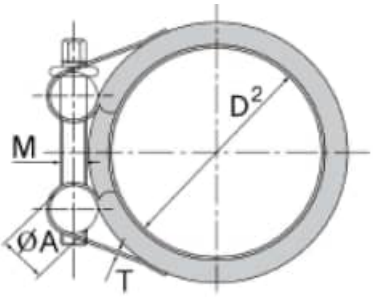
※ The specifications are subject to change for quality improvement

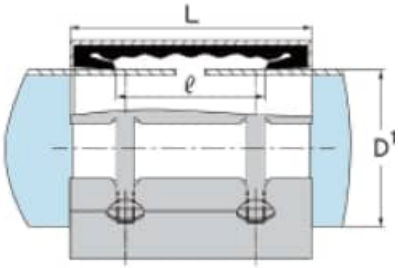
Best Quality! Price Satisfaction! Timely Delivery!

MODEL 3 : MF-RS

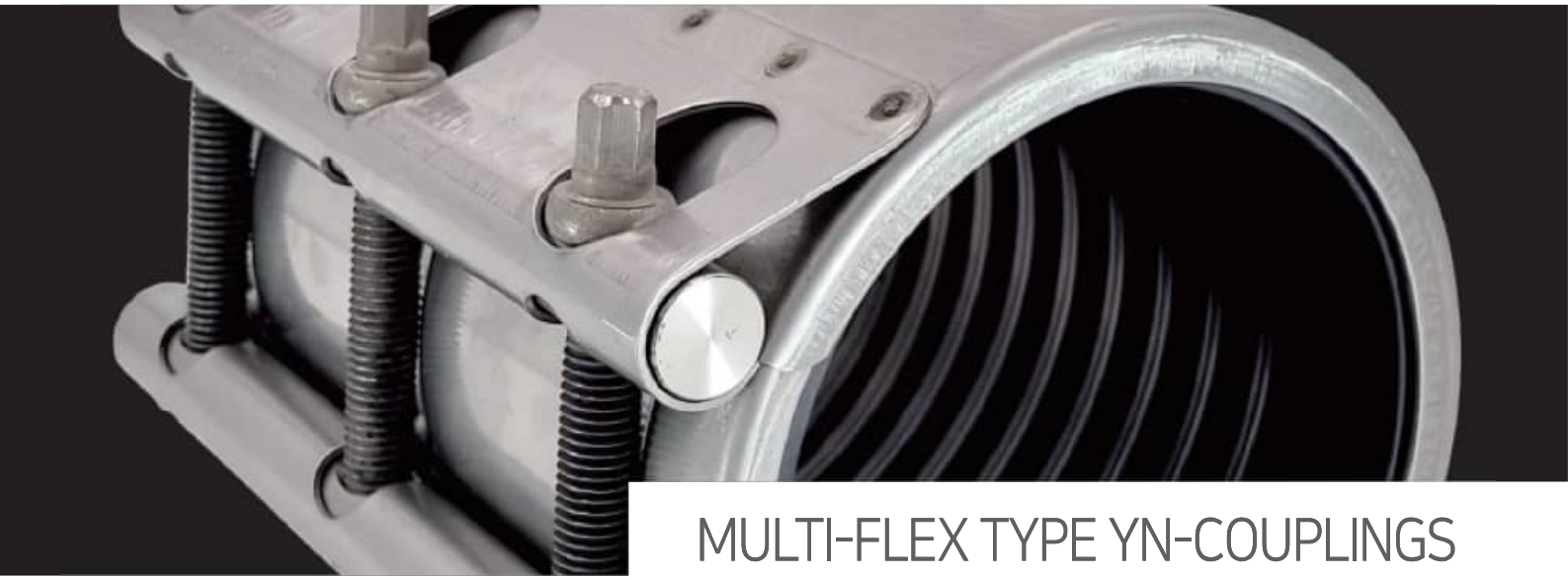
Multi-Flex Type Coupling : MF-RS , MF-RL : Pipe connector with non axial restraint

The YN-Multi Flex type coupling will join virtually any plain end pipe.
Expansion and contraction movement as well as angular deflection.





MODEL 4 : MF-RL



MULTI-FLEX TYPE YN-COUPLINGS

MF-RS

Size	OD (mm)	Range (mm)	M	L	ℓ	W.P		W.T	P (N.m(kgf·㎝))
ND (Inch)	D 1	D 2							
15A (1/2")	15.9 / 21.3 / 21.7	OD ± 0.3	M6	57	34	40	20	0.17	3~5(30~50)
20A (3/4")	25.0 / 26.9 / 26.7 / 27.2	OD ± 0.5	M6	57	32	40	20	0.19	3~5(30~50)
25A (1")	31.8 / 33.4 / 33.7 / 34.0	OD ± 0.6	M6	57	32	40	20	0.21	3~5(30~50)
32A (1-1/4")	38 / 40.9 / 42.2 / 42.4 / 42.7	OD ± 0.6	M8	57	32	40	20	0.30	5~8(50~80)
40A (1-1/2")	44.5 / 48.3 / 48.6 / 50.8	OD ± 1.0	M8	57	32	40	20	0.32	5~8(50~80)
50A (2")	54.0 / 57.0 / 60.3 / 60.5	OD ± 1.0	M10	80	46	36	18	0.72	10~12(100~120)
65A (2-1/2")	66.7 / 69.0 / 73.0 / 76.3	OD ± 1.0	M10	80	46	36	18	0.79	10~12(100~120)
80A (3")	79.8 / 84.0 / 88.9 / 89.1	OD ± 1.5	M12	107	65	32	16	1.41	20~30(200~300)
90A (3-1/2")	101.6	OD ± 1.5	M12	107	65	32	16	1.52	20~30(200~300)
100A (4")	104.8 / 108.0 / 114.3 / 118.0	OD ± 1.5	M12	107	65	32	16	1.58	20~30(200~300)
125A (5")	129.0 / 133.0 / 139.8	OD ± 1.5	M14	117	71	28	14	2.59	40~50(400~500)
150A (6")	154.0 / 159.0 / 165.2 / 168.3	OD ± 1.5	M14	117	71	28	14	2.84	40~50(400~500)
200A (8")	204.0 / 216.3 / 219.1 / 225	OD ± 2.0	M16	155	80	24	10	6.25	60~80(600~800)
250A (10")	241.8 / 254.0 / 267.4 / 273.1 / 280	OD ± 2.0	M16	155	80	24	10	7.01	60~80(600~800)
300A (12")	318.5 / 323.9	OD ± 2.0	M18	155	80	20	8	9.21	80~120(800~1200)
350A (14")	355.6~	OD ± 2.0	M18	155	80	20	8	9.92	80~120(800~1200)
400A (16")	406.4~	OD ± 2.5	M18	155	94	16	5	10.70	80~120(800~1200)
450A (18")	457.2~	OD ± 2.5	M18	155	94	16	5	11.76	80~120(800~1200)
500A (20")	508.0~	OD ± 3.0	M18	155	94	14	4	12.60	120~150(1200~1500)

MF-RL

Size	O.D (mm)	Range (mm)	M	L	ℓ	W.P		W.T	P (N.m(kgf·㎝))
ND (Inch)	D 1	D 2							
15A (1/2")	21.3 / 21.7	OD ± 0.3	M6	72	46	40	20	0.22	3~5(30~50)
20A (3/4")	26.9 / 26.7 / 27.2	OD ± 0.5	M6	72	46	40	20	0.25	3~5(30~50)
25A (1")	33.4 / 33.7 / 34.0	OD ± 0.6	M8	100	70	40	20	0.44	4~6(40~60)
32A (1-1/4")	42.2 / 42.4 / 42.7	OD ± 0.6	M8	100	64	40	20	0.52	5~8(50~80)
40A (1-1/2")	48.3 / 48.6	OD ± 1.0	M8	100	64	40	20	0.54	5~8(50~80)
50A (2")	57.0 / 60.3 / 60.5	OD ± 1.0	M10	139	99	36	18	1.22	10~12(100~120)
65A (2-1/2")	73.0 / 76.3	OD ± 1.0	M10	139	99	36	18	1.34	10~12(100~120)
80A (3")	88.9 / 89.1	OD ± 1.5	M12	203	146	32	16	2.68	20~30(200~300)
90A (3-1/2")	98.0	OD ± 1.5	M12	203	146	32	16	2.83	20~30(200~300)
100A (4")	108.0 / 114.3 / 118.0	OD ± 1.5	M12	203	146	32	16	3.03	20~30(200~300)
125A (5")	133.0 / 139.8	OD ± 1.5	M14	204	138	28	14	4.56	40~50(400~500)
150A (6")	159.0 / 165.2 / 168.3	OD ± 1.5	M14	204	138	28	14	4.98	40~50(400~500)
200A (8")	216.3 / 217.0 / 219.1	OD ± 2.0	M16	255	177	24	10	10.29	60~80(600~800)
250A (10")	267.4 / 273.1	OD ± 2.0	M16	255	177	24	10	11.50	60~80(600~800)
300A (12")	318.5 / 323.9	OD ± 2.0	M18	255	177	20	8	15.00	80~120(800~1200)
350A (14")	355.6~	OD ± 2.0	M18	255	170	20	8	16.62	80~120(800~1200)
400A (16")	406.4~	OD ± 2.5	M18	255	170	16	5	18.08	80~120(800~1200)
450A (18")	457.2~	OD ± 2.5	M18	255	170	16	5	19.33	80~120(800~1200)
500A (20")	508.0~	OD ± 3.0	M18	255	170	14	4	21.15	120~150(1200~1500)

ND : Nominal Diameter (A)
D1 : Actual Outer Diameter of Limit for Pipe (mm)
D2 : Min./Max. Allowable Limit for Pipe (mm)
M : Fastener Bolt Size
L : Coupling Width (mm)

ℓ : Alowable Shrinkage/Expansion Clearance (mm)
(Maximum Pipe Grap = 50% of "ℓ" with Insert Plate)
W.P : Working Pressure (kgf/㎠) : Industrial ( ), Ship( )
W/T : Weight Per Unit (kg)
P : Optimum Locking Torque Value (Nm(kgf·㎝))

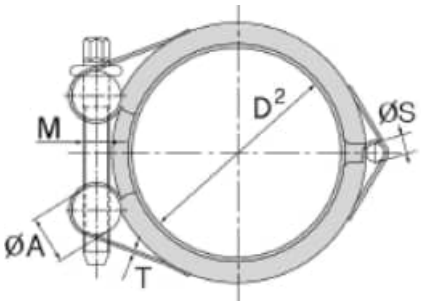
※ The specifications are subject to change for quality improvement

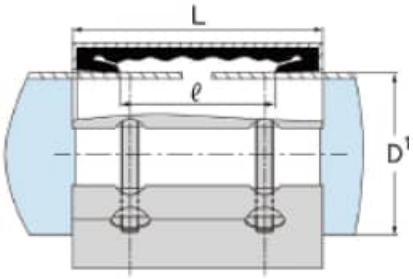
Best Quality! Price Satisfaction! Timely Delivery!

MODEL 5 : RCH-S

Repair Camp Hinge Type Coupling : RCH-S , RCH-L

The YN-REPAIR HINGE Clamp is a split in half coupling and open split version of Multi Flex, offering all the YOUNGNAM REPAIR HINGE benefits, plus being able to make repairs to in service pipe lines.
With the YOUNGNAM REPAIR HINGE coupling, leaks due to faulty weld joints, pitting holes and short cracks can be temporarily or permanently repaired with minimal down time.





MODEL 6 : RCH-L

HINGE TYPE YN-COUPLINGS

RCH-S

※ PIPE O.D. spacs are avaiable for all sizes

Size	OD (mm)	Range (mm)	M	L	ℓ	W.P		W.T	P (N.m(kgf·cm))
ND (Inch)	D 1	D 2							
15A (1/2")	15.9 / 21.3 / 21.7	OD ± 0.3	M6	57	34	28	14	0.20	3~5(30~50)
20A (3/4")	25.0 / 26.7 / 26.9 / 27.2	OD ± 0.5	M6	57	32	28	14	0.23	3~5(30~50)
25A (1")	31.8 / 33.4 / 33.7 / 34.0	OD ± 0.6	M6	57	32	28	14	0.25	3~5(30~50)
32A (1-1/4")	38 / 40.9 / 42.2 / 42.4 / 42.7	OD ± 0.6	M8	57	32	24	12	0.36	4~6(40~60)
40A (1-1/2")	44.5 / 48.3 / 48.6 / 50.8	OD ± 1.0	M8	57	32	24	12	0.37	4~6(40~60)
50A (2")	54.0 / 57.0 / 60.3 / 60.5	OD ± 1.0	M10	80	46	20	10	0.81	8~10(80~100)
65A (2-1/2")	66.7 / 69.0 / 73.0 / 76.3	OD ± 1.0	M10	80	46	20	10	0.88	8~10(80~100)
80A (3")	79.8 / 84.0 / 88.9 / 89.1	OD ± 1.5	M12	107	65	16	8	1.63	20~25(200~250)
90A (3-1/2")	98.0 / 101.6	OD ± 1.5	M12	107	65	16	8	1.71	20~25(200~250)
100A (4")	104.8 / 108.0 / 114.3 / 118.0	OD ± 1.5	M12	107	65	16	8	1.80	20~25(200~250)
125A (5")	129.0 / 133.0 / 139.8	OD ± 1.5	M14	117	71	16	8	2.96	30~35(300~350)
150A (6")	154.0 / 159.0 / 165.2 / 168.3	OD ± 1.5	M14	117	71	16	8	3.20	30~35(300~350)
200A (8")	204.0 / 216.3 / 219.1 / 225	OD ± 2.0	M16	155	80	14	7	6.94	40~50(400~500)
250A (10")	241.8 / 254.0 / 267.4 / 273.1 / 280	OD ± 2.0	M16	155	80	14	7	7.67	40~50(400~500)
300A (12")	315.0 / 318.5 / 323.9	OD ± 2.0	M18	155	80	12	6	10.01	60~80(600~800)
350A (14")	355.6~	OD ± 2.0	M18	155	80	12	6	10.68	60~80(600~800)
400A (16")	400.0~	OD ± 2.5	M18	155	94	10	4	10.70	80~100(800~1000)
450A (18")	457.2~	OD ± 2.5	M18	155	94	10	4	12.55	80~100(800~1000)
500A (20")	508.0~	OD ± 3.0	M18	155	94	10	3	13.45	100~120(1000~1200)

RCH-L

※ PIPE O.D. spacs are avaiable for all sizes

Size	OD (mm)	Range (mm)	M	L	ℓ	W.P		W.T	P (N.m(kgf·cm))
ND (Inch)	D 1	D 2							
15A (1/2")	21.3 / 21.7	OD ± 0.3	M6	72	46	28	14	0.25	3~5(30~50)
20A (3/4")	26.7 / 26.9 / 27.2	OD ± 0.5	M6	72	46	28	14	0.30	3~5(30~50)
25A (1")	33.4 / 33.7 / 34.0	OD ± 0.6	M8	100	70	28	14	0.52	3~5(30~50)
32A (1-1/4")	42.2 / 42.4 / 42.7	OD ± 0.6	M8	100	64	24	12	0.61	4~6(40~60)
40A (1-1/2")	48.3 / 48.6	OD ± 1.0	M8	100	64	24	12	0.62	4~6(40~60)
50A (2")	57.0 / 60.3 / 60.5	OD ± 1.0	M10	139	99	20	10	1.40	8~10(80~100)
65A (2-1/2")	73.0 / 76.3	OD ± 1.0	M10	139	99	20	10	1.51	8~10(80~100)
80A (3")	88.9 / 89.1	OD ± 1.5	M12	203	146	16	8	3.07	20~25(200~250)
90A (3-1/2")	98.0 / 101.6	OD ± 1.5	M12	203	146	16	8	3.25	20~25(200~250)
100A (4")	108.0 / 114.3 / 118.0	OD ± 1.5	M12	203	146	16	8	3.35	20~25(200~250)
125A (5")	133.0 / 139.8	OD ± 1.5	M14	204	138	16	8	5.19	30~35(300~350)
150A (6")	159.0 / 165.2 / 168.3	OD ± 1.5	M14	204	138	16	8	5.60	30~35(300~350)
200A (8")	216.3 / 219.1	OD ± 2.0	M16	255	177	14	7	11.55	40~50(400~500)
250A (10")	267.4 / 273.1	OD ± 2.0	M16	255	177	14	7	12.78	40~50(400~500)
300A (12")	318.5 / 323.9	OD ± 2.0	M18	255	177	12	6	16.51	60~80(600~800)
350A (14")	355.6~	OD ± 2.0	M18	255	170	12	6	18.18	60~80(600~800)
400A (16")	400.0~	OD ± 2.5	M18	255	170	10	4	19.80	80~100(800~1000)
450A (18")	457.2~	OD ± 2.5	M18	255	170	10	4	21.22	80~100(800~1000)
500A (20")	508.0~	OD ± 3.0	M18	255	170	10	3	22.68	100~120(1000~1200)

ND : Nominal Diameter (A)
D1 : Actual Outer Diameter of Limit for Pipe (mm)
D2 : Min./Max. Allowable Limit for Pipe (mm)
M : Fastener Bolt Size
L : Coupling Width (mm)

ℓ : Alowable Shrinkage/Expansion Clearance (mm)
(Maximum Pipe Grap = 50% of "ℓ" with Insert Plate)
W.P : Working Pressure (kgf/㎠) : Industrial ( ), Ship( )
W/T : Weight Per Unit (kg)
P : Optimum Locking Torque Value (Nm(kgf·cm))

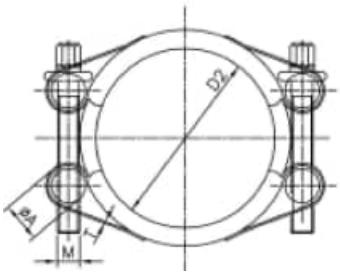
※ The specifications are subject to change for quality improvement

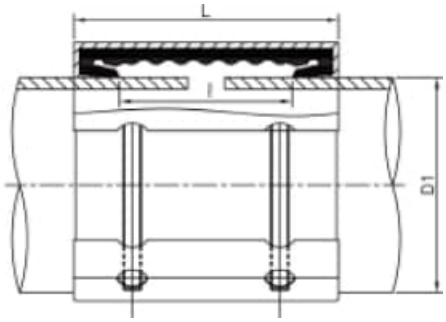
Best Quality! Price Satisfaction! Timely Delivery!

MODEL 7 : RCD-S

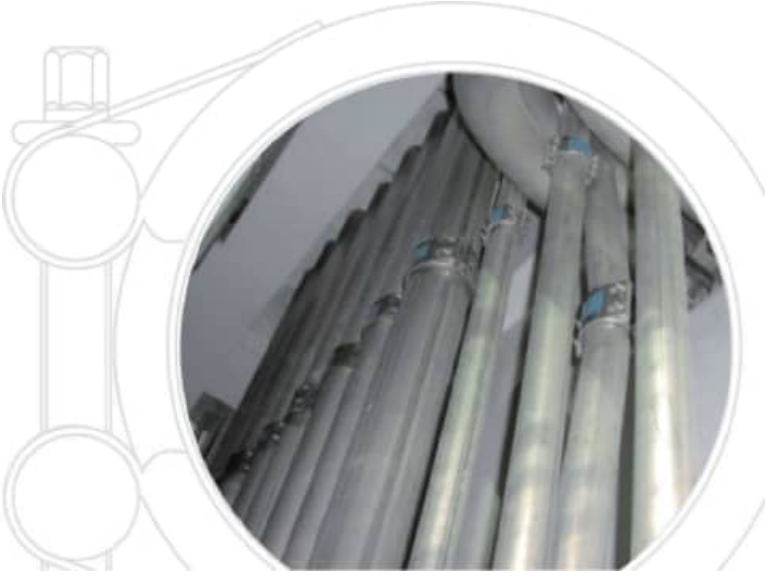
Repair or Connect Clamp Double Type Coupling : RCD-S , RCD-L

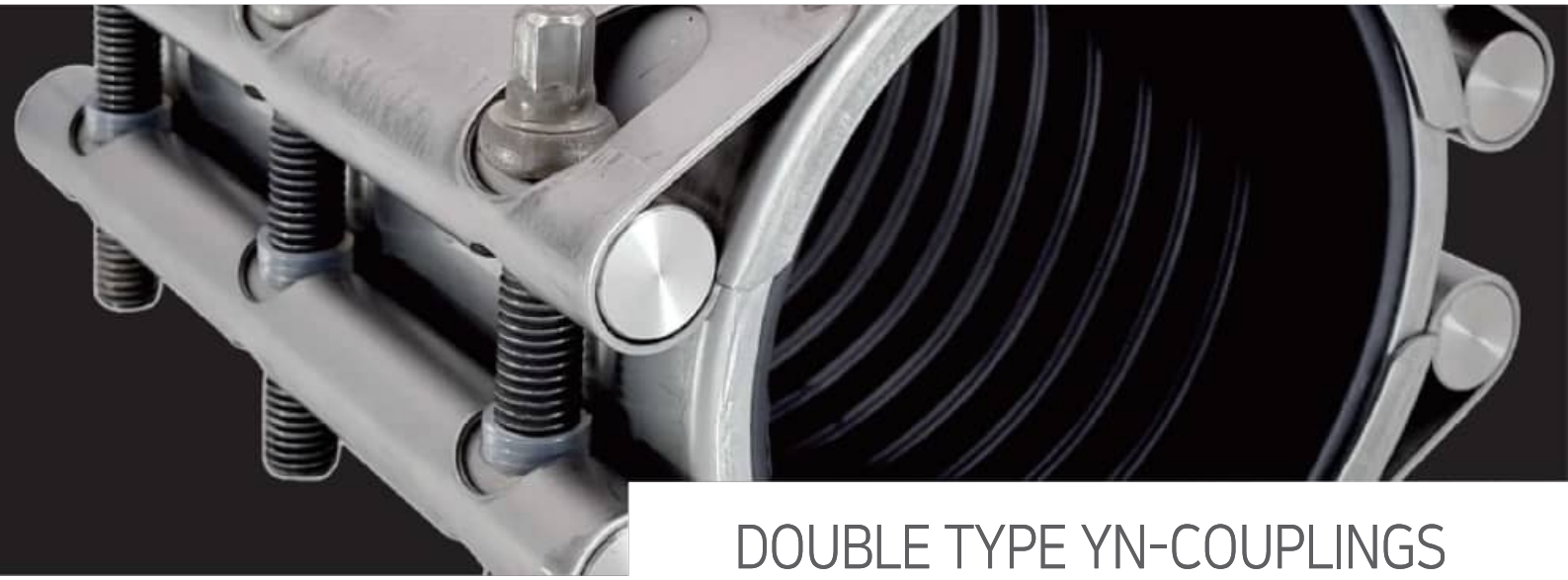
The YN-RCD type is a open split version of repair or connect pipe clamp, plus being able to make repairs and connect to in service pipe lines. Leaks due to faulty weld joints, pitting holes and short cracks can be temporarily or permanently repaired with minimal down time.
The split gasket design can be wrapped around the pipe and installed without pipe disassembly.





MODEL 8 : RCD-L





DOUBLE TYPE YN-COUPLINGS

RCD-S (20A~3,000A) Avaiable

※ PIPE O.D. spacs are avaiable for all sizes

Size	OD (mm)	Range (mm)	M	L	ℓ	W.P	W.T	P (N.m(kgf·㎝))
ND (Inch)	D 1	D 2						
20A (3/4")	25.0 / 26.7 / 26.9 / 27.2	OD ± 0.5	M6	57	32	28	0.30	3~5(30~50)
25A (1")	31.8 / 33.4 / 33.7 / 34.0	OD ± 0.6	M6	57	32	28	0.32	3~5(30~50)
32A (1-1/4")	38 / 40.9 / 42.2 / 42.4 / 42.7	OD ± 0.6	M8	57	32	24	0.47	5~10(50~100)
40A (1-1/2")	44.5 / 48.3 / 48.6 / 50.8	OD ± 1.0	M8	57	32	24	0.48	5~10(50~100)
50A (2")	54.0 / 57.0 / 60.3 / 60.5	OD ± 1.0	M10	80	46	20	1.10	10~15(100~150)
65A (2-1/2")	66.7 / 69.0 / 73.0 / 76.3	OD ± 1.0	M10	80	46	20	1.17	10~15(100~150)
80A (3")	79.8 / 84.0 / 88.9 / 89.1	OD ± 1.5	M12	107	65	16	2.10	20~30(200~300)
90A (3-1/2")	101.6	OD ± 1.5	M12	107	65	16	2.22	20~30(200~300)
100A (4")	104.8 / 108.0 / 114.3 / 118.0	OD ± 1.5	M12	107	65	16	2.29	20~30(200~300)
125A (5")	129.0 / 133.0 / 139.8	OD ± 1.5	M14	117	71	16	3.79	40~50(400~500)
150A (6")	154.0 / 159.0 / 165.2 / 168.3	OD ± 1.5	M14	117	71	16	4.09	40~50(400~500)
200A (8")	204.0 / 216.3 / 219.1 / 225	OD ± 2.0	M16	155	80	14	8.85	60~80(600~800)
250A (10")	241.8 / 254.0 / 267.4 / 273.1 / 280	OD ± 2.0	M16	155	80	14	9.63	60~80(600~800)
300A (12")	318.5 / 323.9	OD ± 2.0	M18	155	80	12	12.36	80~120(800~1200)
350A (14")	355.6~	OD ± 2.0	M18	155	80	12	12.96	80~120(800~1200)
400A (16")	400.0~	OD ± 2.5	M18	155	94	10	13.81	80~120(800~1200)
450A (18")	457.2~	OD ± 2.5	M18	155	94	10	14.76	80~120(800~1200)
500A (20")	500.0~	OD ± 3.0	M18	155	94	10	15.60	120~150(1200~1500)

RCD-L (20A~3,000A) Avaiable

※ PIPE O.D. spacs are avaiable for all sizes

Size	OD (mm)	Range (mm)	M	L	ℓ	W.P	W.T	P (N.m(kgf·㎝))
ND (Inch)	D 1	D 2						
20A (3/4")	26.7 / 26.9 / 27.2	OD ± 0.5	M6	72	46	28	0.37	3~5(30~50)
25A (1")	33.4 / 33.7 / 34.0	OD ± 0.6	M8	100	70	28	0.70	3~5(30~50)
32A (1-1/4")	42.2 / 42.4 / 42.7	OD ± 0.6	M8	100	64	24	0.80	5~10(50~100)
40A (1-1/2")	48.3 / 48.6	OD ± 1.0	M8	100	64	24	0.82	5~10(50~100)
50A (2")	57.0 / 60.3 / 60.5	OD ± 1.0	M10	139	99	20	1.90	10~15(100~150)
65A (2-1/2")	76.3	OD ± 1.0	M10	139	99	20	2.02	10~15(100~150)
80A (3")	88.9 / 89.1	OD ± 1.5	M12	203	146	16	3.94	20~30(200~300)
90A (3-1/2")	98.0	OD ± 1.5	M12	203	146	16	4.17	20~30(200~300)
100A (4")	108.0 / 114.3 / 118.0	OD ± 1.5	M12	203	146	16	4.35	20~30(200~300)
125A (5")	133.0 / 139.8	OD ± 1.5	M14	204	138	16	6.40	40~50(400~500)
150A (6")	159.0 / 165.2 / 168.3	OD ± 1.5	M14	204	138	16	6.90	40~50(400~500)
200A (8")	216.3 / 219.1	OD ± 2.0	M16	255	177	14	14.88	60~80(600~800)
250A (10")	267.4 / 273.1	OD ± 2.0	M16	255	177	14	16.04	60~80(600~800)
300A (12")	318.5 / 323.9	OD ± 2.0	M18	255	177	12	20.36	80~120(800~1200)
350A (14")	355.6~	OD ± 2.0	M18	255	170	12	21.84	80~120(800~1200)
400A (16")	400.0~	OD ± 2.5	M18	255	170	10	23.56	80~120(800~1200)
450A (18")	457.2~	OD ± 2.5	M18	255	170	10	24.98	80~120(800~1200)
500A (20")	500.0~	OD ± 3.0	M18	255	170	10	26.48	120~150(1200~1500)

ND : Nominal Diameter (A)
D1 : Actual Outer Diameter of Limit for Pipe (mm)
D2 : Min./Max. Allowable Limit for Pipe (mm)
M : Fastener Bolt Size
L : Coupling Width (mm)

ℓ : Alowable Shrinkage/Expansion Clearance (mm)
(Maximum Pipe Grap = 50% of "ℓ" with Insert Plate)
W.P : Working Pressure (kgf/㎠)
W/T : Weight Per Unit (kg)
P : Optimum Locking Torque Value (Nm(kgf·㎝))

※ The specifications are subject to change for quality improvement

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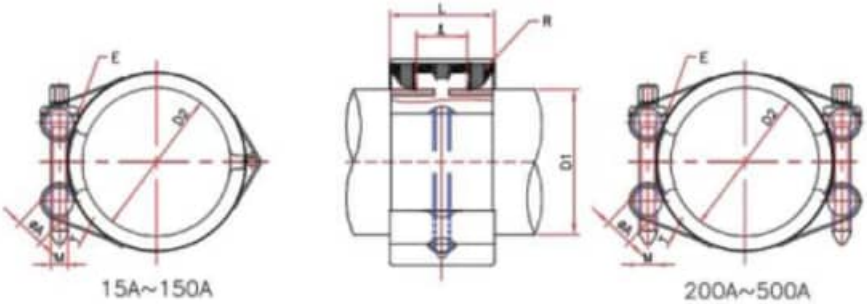
MODEL 9 : RCH-E

Elbow (Cross and Tee)-Repair Clamp Type Coupling : RCH-E , RCD-E

The YN-ELBOW REPAIR Clamp type is a split in half coupling and open split version, plus being able to make repairs to in service Elbow(Cross and Tee) pipe lines.
With the REPAIR HINGE and OPEN SPLIT coupling, leaks due to faulty weld joints, pitting holes and short cracks can be temporarily or permanently repaired with minimal down time.



15A~150A

200A~500A

MODEL 10 : RCD-E

ELBOW REPAIR TYPE YN-COUPLINGS

RCH-E

Size	OD (mm)	Range (mm)	M	L	ℓ	W.P		W.T	P (N.m(kgf·㎝))
ND (Inch)	D1	D2							
15A (1/2")	21.7 / 21.3	OD ± 0.3	M6	26.3	12.5	22	11	0.092	3~5(30~50)
20A (3/4")	27.2 / 26.7	OD ± 0.5	M6	26.3	12.5	18	8	0.098	3~5(30~50)
25A (1")	34 / 33.4	OD ± 0.6	M6	26.3	12.5	18	8	0.10	3~5(30~50)
32A (1-1/4")	42.7 / 42.2	OD ± 0.6	M6	26.3	12.5	18	8	0.11	3~5(30~50)
40A (1-1/2")	48.6 / 48.3	OD ± 1.0	M6	26.3	12.5	18	8	0.12	3~5(30~50)
50A (2")	60.5 / 60.3	OD ± 1.0	M8	41.8	19.5	16	7	0.30	12~15(120~150)
65A (2-1/2")	76.3 / 73	OD ± 1.0	M8	41.8	19.5	16	7	0.32	12~15(120~150)
80A (3")	89.1 / 88.9	OD ± 1.0	M10	52.4	28	14	7	0.60	20~25(200~250)
100A (4")	114.3	OD ± 1.0	M10	52.4	28	14	7	0.67	20~25(200~250)
125A (5")	139.8	OD ± 1.0	M12	52.4	28	14	7	0.85	30~32(300~320)
150A (6")	165.2 / 168.3	OD ± 1.0	M12	52.4	28	14	7	0.88	30~32(300~320)

RCD-E

※ PIPE O.D. spacs are avaiable for all sizes

Size	OD (mm)	Range (mm)	M	L	ℓ	W.P		W.T	P (N.m(kgf·㎝))
ND (Inch)	D1	D2							
200A (8")	204.0 / 216.3 / 219.1 / 225	OD ± 2.0	M12	57.5	30	12	6	1.65	32~35(320~350)
250A (10")	254.0 / 264.4 / 273.1 / 280	OD ± 2.0	M12	57.5	30	12	6	1.84	32~35(320~350)
300A (12")	318.5 / 323.9	OD ± 2.0	M14	58.5	30	10	5	2.67	45~50(450~500)
350A (14")	355.6~	OD ± 2.0	M14	58.5	30	10	5	2.81	45~50(450~500)
400A (16")	400.0~	OD ± 2.0	M14	58.5	30	10	5	3.02	55~60(550~600)
450A (18")	457.2~	OD ± 2.0	M14	58.5	30	8	4	3.25	55~60(550~600)
500A (20")	500.0~	OD ± 2.0	M14	58.5	30	7	3	3.53	65~70(650~700)

ND : Nominal Diameter(A)
D1 : Actual Outer Diameter of Limit for Pipe(mm)
D2 : Min./Max. Allowable Limit for Pipe(mm)
M : Fastener Bolt Size
L : Coupling Width(mm)

ℓ : Alowable Shrinkage/Expansion Clearance(mm)
(Maximum Pipe Grap = 50% of "ℓ" with Insert Plate)
W.P : Working Pressure (kgf/㎠) : Industrial ( ), Ship( )
W/T : Weight Per Unit(kg)
P : Optimum Locking Torque Value(Nm(kgf·㎝))

※ The specifications are subject to change for quality improvement

Best Quality! Price Satisfaction! Timely Delivery!

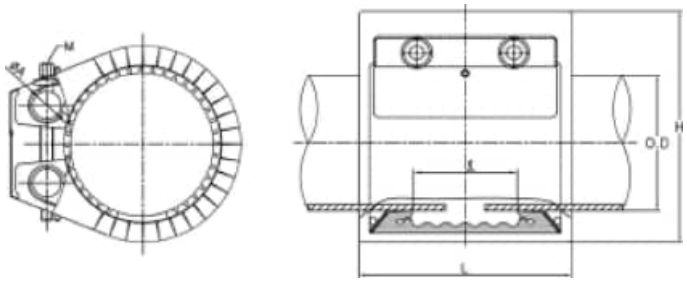
『 Fire resistance test under fire prevention regulations 』

MODEL 11 : FPC-GR-S

Fire Protect Cover Grip Type Coupling : FPC-GR-S

Fire Protection Cover Ring pipe couplings FPC GR-S (DN15-DN350) withstand fire better than regular couplings. Couplings suitable to be used with metal pipes and Suitable for engine room application on ships.

1. Axially restrained pipe coupling, no pull out or vibration
2. Fire Testing according to ISO 19921&19922 regulation 30 minutes at 800℃ (Wet condition)
3. Maintains internal structure of the coupling during a fire
4. SUS304 or SUS316L Stainless Steel Couplings



Fire test regulations

- IACS Req.2001
- Rev.10 2021
- ISO 19921 Test regulations
- ISO 19922 Test regulations

FIREPROOF YN-COUPLINGS

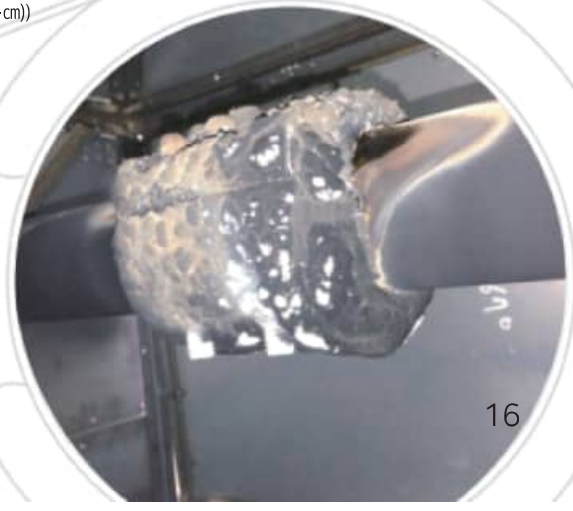
FPC-GR-S

Size	OD (mm)	Range (mm)	M	L	ℓ	H	W.P		W.T	P (N.m(kgf·cm))
ND (Inch)	D 1	D 2								
15A (1/2")	21.3 / 21.7	OD ± 0.3	M6	68	20	40	40	20	0.28	3~5(30~50)
20A (3/4")	25.0 / 26.9 / 26.7 / 27.2	OD ± 0.5	M6	68	20	63	40	20	0.32	4~6(40~60)
25A (1")	30.0 / 32.0 / 33.4 / 33.7 / 34.0	OD ± 0.6	M6	68	20	70	40	20	0.35	4~6(40~60)
32A (1-1/4")	38.0 / 40.9 / 42.2 / 42.4 / 42.7	OD ± 0.6	M8	68	20	81	40	20	0.45	10~12(100~120)
40A (1-1/2")	44.5 / 48.3 / 48.6 / 50.8	OD ± 1.0	M8	68	22	87	40	20	0.5	10~12(100~120)
50A (2")	54.0 / 57.0 / 60.3 / 60.5 / 63.0	OD ± 1.0	M10	94	30	109	36	18	1.0	15~18(150~180)
65A (2-1/2")	66.7 / 69.0 / 73.0 / 76.3	OD ± 1.0	M10	94	30	124	36	18	1.2	15~18(150~180)
80A (3")	79.8 / 84.0 / 88.9 / 89.1	OD ± 1.5	M12	122	50	144	32	16	2.1	40~50400~500)
90A (3-1/2")	101.6	OD ± 1.5	M12	122	50	171	32	16	2.4	40~50400~500)
100A (4")	104.8 / 106.3 / 108.0 / 114.3	OD ± 1.5	M12	122	50	171	32	16	2.4	40~50400~500)
125A (5")	129.0 / 133.0 / 139.8	OD ± 1.5	M14	138	55	203	28	12	3.8	60~80(600~800)
150A (6")	154.0 / 159.0 / 165.2 / 168.3	OD ± 1.5	M14	138	55	229	28	12	4.2	60~80(600~800)
200A (8")	204.0 / 216.3 / 219.1	OD ± 2.0	M16	176	72	297	24	7	11.2	120~150(1200~1500)
250A (10")	254.0 / 267.4 / 273.1	OD ± 2.0	M16	176	65	348	20	7	12.9	120~150(1200~1500)
300A (12")	304.0 / 318.5 / 323.9	OD ± 2.0	M18	176	65	400	14	5	14.9	170~190(1700~1900)
350A (14")	355.6	OD ± 2.0	M18	176	65	439	14	5	16.1	170~190(1700~1900)

ND : Nominal Diameter (A)
D1 : Actual Outer Diameter of Limit for Pipe (mm)
D2 : Min./Max. Allowable Limit for Pipe (mm)
M : Fastener Bolt Size
L : Coupling Width (mm)

ℓ : Alowable Shrinkage/Expansion Clearance (mm)
(Maximum Pipe Grap = 50% of "ℓ with Insert Plate)
H : Fireproof Cover Height (mm)
W.P : Working Pressure (kgf/㎠) : Industrial ( ), Ship( )
W/T : Weight Per Unit (kg)
P : Optimum Locking Torque Value (Nm (kgf·cm))

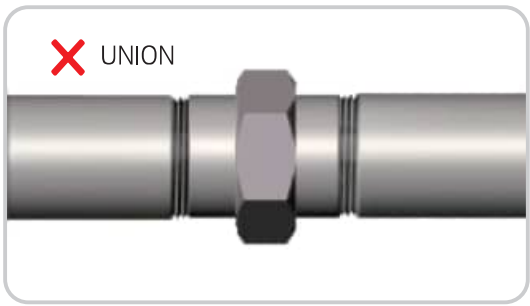
※ The specifications are subject to change for quality improvement

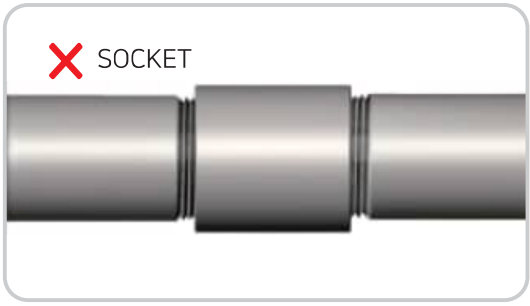


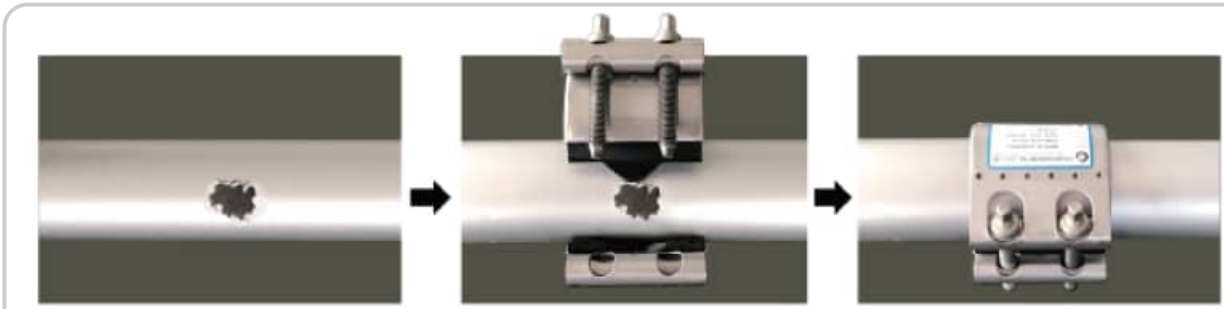
Comparison of YN Coupling and Other Connections

[YN-COUPLING GUIDE]

YN-COUPLINGS







DAMAGED PIPES REPAIRING PIPES COMPLETED REPAIRING

WIDE LARGE TYPE YN-COUPLINGS

YN-COUPLING
RCD-L3
(Width 300mm)
300A~3,000A

YN-COUPLING
RCD-L5
(Width 500mm)
500A~4,000A

YN-COUPLING
RCD-L7
(Width 700mm)
800A~5,000A

Remark : YN COUPLING Length(mm) (L:300, L:500, L:700 Available by order)

Water Drainage Works for Boryeong Thermal Power Plant

YN-PIPE COUPLING SITE APPLICATION

Applications for the shipbuilding industry

Firefighting lines, plumbing, ballast, sanitary, compressed air, cooling water systems, seawater, fresh water, drains, soundings, electric cable protection, oil transfer, and fuel oil lines, MULTI-FLEX, GRIP RING PIPE COUPLINGS are used in a wide range of applications. They have front and back, left and right torsions in the calibarted part of the canter line. For places with a high noise level, they guarantee various useful functions, such as a 30% lighter weight than the general flange connection process. In particular, the long -sized coupling with its long attachment Length is an innovative product for the shipbuilding industry where severe vibration, shrinkage and expansion commonly occur.

For Oil supply and piping for district heating works

Oil pipes and dual-pipes for heating works are mostly welded; however such a welding process has its drawbacks: the weld zone requires ultra-precision welding technology and if a fault about the size of the eye of a needle develops, gas and warm water is sure to continue to leak underground thereby causing fatigue phenomena, soft ground and excessive load. We are justly proud that this product is the only solution to prevent a major accident arising from such factors, particularly with respect to pipes buried underground.

Piping for heavy industry

As it is used annually for repairs to cold and warm water pump lines and LPG, LNG and GAS pipelines its cost efficiency has already been proved. In particular the pipe ends do not need to be machined but can be used as they are. If there are no severe rock pockets or rust or rock pockets are minor, its functions remain intact and in perfect condition.

Piping in mechanical device sectors that experience vibrations

Widely used as intake and discharge piping for clean water, seawater and cooling water, and as pipies for compressed air, powder, chemicals, coal etc. If the pipe is blocked due to wastewater and intake and discharge is prevented the coupling can be detached again, cleaned and reassembled, thereby minimizing the hassle, cost and manpower.

For industrial plants

As it reduces stationary vibrations and noise occurring from continuous vibration and from the mechanical parts of a rotating machine or powder units by more than 60% strains on the accessory equipment or gauges are reduced.

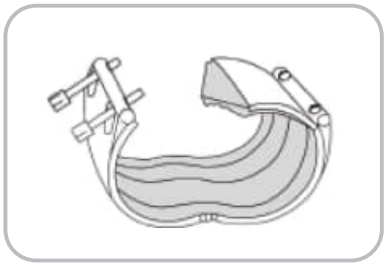
Applied to shipbuilding companies

It is used for connecting PVC pipes with stainless steel pipes made of entirely different materials and for coupling heterogeneous pipes such as stainless steel pipes and cast iron pipes. Even though a deviation of about 0˚~ 5˚ occurs, airtightness is de nitely maintained.

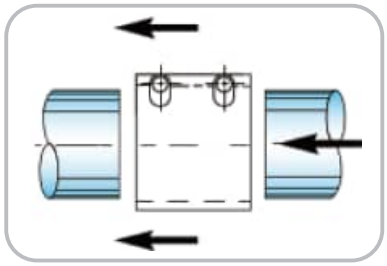
APPLICATION OF PIPE COUPLING

Application of the product

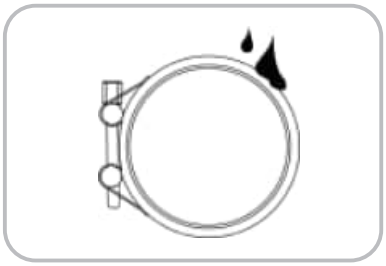
- Installed in the indoor and outdoor pipelines of factories, general buildings and in insulated dual pipe. (district heating works)
- Used for installing/repairing new pipes in commercial ships and battleship engines and decks and for making repair to the pipes of vessels in operation.
- Used to connect water and sewage pipes, drainpipes, firefighting pipes, water supply pipes, agricultural water supply pipes, conduits, hume pipes and PVC, FRP pipes etc.
- Used to installing water pipe and drainpipes in nuclear, thermal and hydreletric power plants.
- Used to installing subways stuctures and for pipe buries underground and underwater.
- Used to installing oil pipelines in refineries and gas pipes buries underwater.
- Used to installing equipment pipes transmission pipes in refrigeration plants and others.
- YN-Couplings should not be used in plastic pipes containing warm or hot fluids.



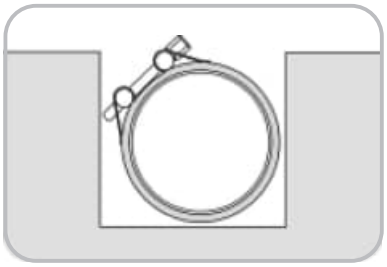
Easy to use for repair of indoor and outdoor piping in new of old building



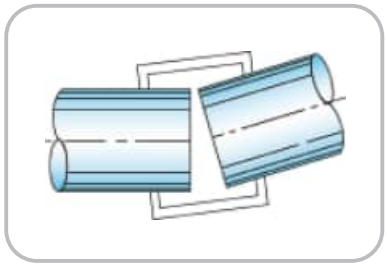
No need for special tools. It has the function of completely absorbing external impacts and vibrations



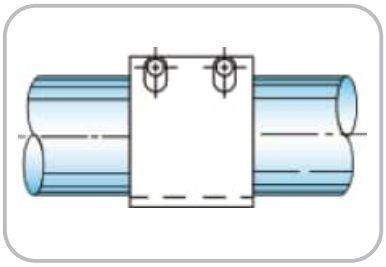
Made of strong corrosion-resistant stainless steel 304, 316L materials it prevents corrosion even in contact with corrosive waste-water or chemicals from the outside.



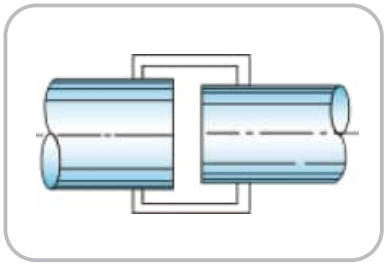
Desgned and manufactired by an sfficient construction method for use even in-onfinned space its cost sfficiency is guar-Nanteed.



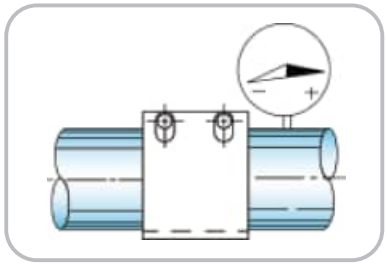
The center torsion is allowed up to 1~5˚ on both sides.



The contents remain airtight even when outside impacts are applied to the front, back, left and right instantaneously or in succession.



Absolutely no problems occur even if the pipe outer diameter(mm) is either larger of smaller by about 1%



Despite the instantaneous inside pressure inflow or vacuum state its function remains in perfact condition.

Drainage Line

TEST SPECIFICATION OF PIPE COUPLING

Test Method : IACS Req.2001 / Rev.10 2021

<table>
<tr><th colspan="2" rowspan="2">Test Item</th><th colspan="2">Type</th><th rowspan="2">Test Method</th></tr>
<tr><th>Grip</th><th>Slip</th></tr>
<tr><td>1</td><td>Tightness Test</td><td>Applied</td><td>Applied</td><td>Connect a mechanical joint in the space between pipe, pressurize it with a pressure 1.5 times the design pressure and maintain it for 5 minutes. PASS if it is leak free.</td></tr>
<tr><td>2</td><td>Vibration Test</td><td>Applied</td><td>-</td><td>Perform the three tests on the pipe connected to a mechanical joint by maintaining design pressure. PASS only if all three tests prove to be leak free.
<table>
<tr><th>Number of cycle</th><th>Amplitude, mm</th><th>Frequency, Hz</th></tr>
<tr><td>3×10^6</td><td>±0.06</td><td>100</td></tr>
<tr><td>3×10^6</td><td>±0.5</td><td>45</td></tr>
<tr><td>3×10^6</td><td>±1.5</td><td>10</td></tr>
</table></td></tr>
<tr><td>3</td><td>Pressure Pulsation Test</td><td>Applied</td><td>-</td><td>A test to check whether an assembly with mechanical joints can withstand pressure pulsation. Increase the impact pressure to 1.5 times the design pressure from zero within a frequency range of 30~50 cycles per minute with the number of cycles being over 500,000 and check for any leaks or signs of fault. PASS only if no faults are detected.</td></tr>
<tr><td>4</td><td>Burst Pressure Test</td><td>Applied</td><td>Applied</td><td>A test intended to check whether an assembly that passda watertight test can withstand a burst pressure four times the design pressure. PASS only if it is leak free even when the foregoing pressure is applied.</td></tr>
<tr><td>5</td><td>Pull-Out Test</td><td>Applied</td><td>-</td><td>When the load pressurized up to the design pressure and calculated by the following equation is applied to an assembly in the direction of axial load to verify that the assembly with a mechanical joint is not separated from the connected pipe under the axial load that can be generated while the assembly is in use. It must be leak free to be declared as PASS.
$L = \frac{\pi}{4} \cdot D^2 \cdot P$
(axial load) (cloacal) (design pressure)</td></tr>
<tr><td>6</td><td>Fire Test</td><td>Applied</td><td>Applied</td><td>Expose an assembly with a mechanical joint to a flame at 800℃ for 30 minutes in a state where water is in circulation at over 80 under the design pressure of a joint. (Have the flame envelop the test material). PASS only if there is no leak.</td></tr>
<tr><td>7</td><td>Vacuum Test</td><td>Applied</td><td>Applied</td><td>Connect the assembly that has a mechanical joint to a vacuum pump to make the pressure 170hPa(absolute pressure). If the pressure is stabilized, separate the vacuum pump from the assembly with a mechanical joint being testing and keep it in this condition for 5 minutes. PASS only if nofault occurs in this state.</td></tr>
<tr><td>8</td><td>Repeated Assembly Test</td><td>Applied</td><td>-</td><td>Combine and separate the test material with a mechanical joint 10 times according to the manufacturer s instructions and carry out the prescribed watertight test. PASS if there is no leak.</td></tr>
</table>

YN-COUPLING Performance Data

▶ Busan New Port Pier Corporation

▶ Sewage Piping Repair Work

▶ Canadian power plant cooling line

▶ PE pipe repair work

▶ Water treatment works

▶ T Piping application (Japan)

▶ Water treatment plant

▶ Spanish water purification plant facilities

▶ Russian ships FPC-GR Application

▶ Water and sewer maintenance work

▶ Ship-engine airline

▶ PVC+steel Pipe connection

YN-COUPLING Performance Data

▶ Application of ship engine

▶ Ship engine

▶ Ship engine

▶ Construction of Geumgang Boryeong Dam

▶ Ship piping

▶ GRP piping connection

▶ Nuclear plant emergency generator suction pipe

▶ Water repairing work of water fiber pipe

▶ Heat exchanger coolant piping

▶ Powder Transfer Piping

▶ Water pipeline leak repair work

▶ Busan Gijang Seawater Desalination Plant Facility

YN-COUPLING Performance Data

▶ The largest size OD 3,500mm is now awaiting for shipment (SUS 316L)
Product inspection underway at the installation site.

▶ Connecting for OD 3,500mm YN-Coupling to a Hume pipe and a GRP pipe is underway.

▶ Installation of OD 3,500mm YN-Coupling connecting Hume pipe and GRP pipe.

▶ Hydraulic testing of OD 3,500mm YN-Coupling connecting

▶ Installation of a flour conveying pipe.

▶ 800A Pipe Repair for waterworks pipe (Suitable for installation in tight spaces).

▶ Installation of HDPE seawater pipes for fish farms.

YN-COUPLING Performance Data

▶ Field of shipbuilding

▶ Installation of emergency generator pipe systems for nuclear power plants.

▶ Hydraulic pressure testing of clamps for repairing elbow pipes for Japanese railway bridges.

▶ Repair of piping for district heating power plants.

▶ Installation of a piping system for powder transport.

▶ Installation on an incinerator cooling water line.

▶ Installation on underground pump pipes for apartment.

▶ Repair work on a 350A waterworks pipe line.

▶ Repair and installation of a corroded elbow line for an underground water tank.

▶ Repair work on underground waterworks pipe line.

PIPE OUTSIDE DIAMETER COMPARISON

UNIT : mm

Nominal Diameter		KS/JIS	ASTM ANSI	ISO DIN	BS	GRP PIPE	DUCTILE PIPE	COPPER PIPE	SU PIPE	PE PIPE	PVC PIPE	HUME PIPE
15A	1/2"	21.7	21.3	21.3	21.2				22.2	21.5	22.0	
20A	3/4"	27.2	26.7	26.9	26.7			22.2	28.6	27.0	26.0	
25A	1"	34.0	33.4	33.7	34.1			28.6	34.0	34.0	32.0	
32A	1-1/4"	42.7	42.2	42.4	42.8			34.9	42.7	42.0	42.0	
40A	1-1/2"	48.6	48.3	48.3	48.4			41.3	48.6	48.0	48.0	
50A	2"	60.5	60.3	60.3	60.3			54.0	60.5	60.0	60.0	
65A	2-1/2"	76.3	73.0	76.1	26.7			66.7	76.3	76.0	76.0	
80A	3"	89.1	88.9	88.9	89.9		98.0	79.4	89.1	89.0	89.0	
90A	3-1/2"	101.6	101.6	101.6	101.6			92.1				
100A	4"	114.3	114.3	114.3	114.3		118.0	104.8	114.3	114.0	114.0	
125A	5"	139.8	141.3	139.7	159.4		144.0	130.2		140.0	140.0	
150A	6"	165.2	168.3	168.3	165.1	167.0	170.0	156.6		165.0	165.0	
200A	8"	216.3	219.1	219.1	219.1	217.0	222.0	206.4		216.0	216.0	
250A	10"	267.4	273.1	273.0	273.1	267.0	274.0	257.2		267.0	267.0	306.0
300A	12"	318.5	323.9	323.9	323.8	318.0	326.0			318.0	318.0	360.0
350A	14"	355.6	355.6	355.6	355.6	369.0	378.0			370.0		414.0
400A	16"	406.4	406.4	406.4	406.4	419.0	429.0			420.0		470.0
450A	18"	457.2	457.2	457.2	457.2	470.0				457.2		526.0
500A	20"	508.0	508.0	508.0	508.0	521.0	532.0			508.0		584.0

- KS : Korean Industrial Standards
- JIS : Japan Industrial Standards
- ASTM : American Society for Testing Materials
- ANSI : American National Standards Institute
- ISO : International Organization For Standardization
- DIN : Deutsches Institut für Normung
- BS : British standards
- GRP PIPE : Glass-Fiber Reinforcement Plastic