## ROMAC INDUSTRIES, INC

# RESTRAINED JOINT





Fast installation takes less than **3** minutes



Cast components are high strength ductile iron



Working Pressure: up to 350 PSI

#### Available in 4 configurations:



Coupling



**End Cap** 



Flanged Coupling



Tee Fitting



WIDE RANGE RESTRAINED JOINT

#### **ALPHA ADVANTAGES**

- Standard Alpha covers IPS PVC through Ductile Iron pipe diameters.
- Alpha XL accommodates Ductile Iron through Oversize Cast Iron pipe sizes.
- Alpha can be configured to transition from IPS PVC up to Oversize Cast Iron pipe diameters.
- One piece, stab-fit installation.
- Cast components are high strength ductile iron.
- Working pressure: up to 350 PSI.
- Manufactured in the U.S.A.
- Patents: US8894100, US9534714, US9915385 CA2867172
- Alpha products are approved for use on:
  - ✓ Ductile iron
  - ✓ Cast iron (Classes A, B, C & D)
  - ▼ PVC IPS size (Sch 40, Sch 80 & SDR 21)
  - ✓ PVC C900 and C909
  - ✓ HDPE: SDR 9, 11, 13.5 & 17, no pipe stiffeners required.

For other pipe materials, contact Romac.

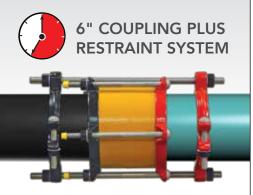
Note: The 16" Alpha XL is not compatible with HDPE and the original Alpha (with

black grippers) are not compatible with HDPE pipe

#### INSTALLATION TIME IS A FRACTION OF OTHER RESTRAINT METHODS



- 30 Minutes to install
- 29 Total parts to assemble
- **12** T-Bolts to torque
  - 9 Radial bolts to torque
- **2** Gaskets to seat



- **35** Minutes to install
- **33** Total parts to assemble
- 5 Coupling bolts to torque
- 4 Clamping bolts to torque
- **2** Gaskets to seat



NSF

- Minutes to install
- 2 Nuts to torque
- 1 Piece (stab-fit)
- 0 Guess-work



#### **KEY ALPHA COMPONENTS**



#### ROTATING END RINGS

 During installation, the end rings rotate and slide the draw hooks, gasket and grippers outward, against the pipe surface.

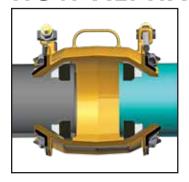
#### DRAW HOOK FASTENERS

• Stainless steel draw hooks are integrated into the gasket.

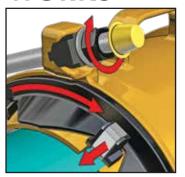
#### **INDIVIDUAL GRIPPERS**

- Individual ductile iron grippers compensate for angular deflection and out-of-round pipe.
- The grippers distribute the load evenly around the pipe circumference.

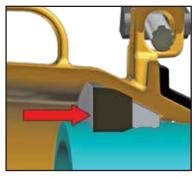
### **HOW ALPHA WORKS**



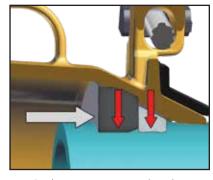
1 • Alpha is positioned over the pipe gap.



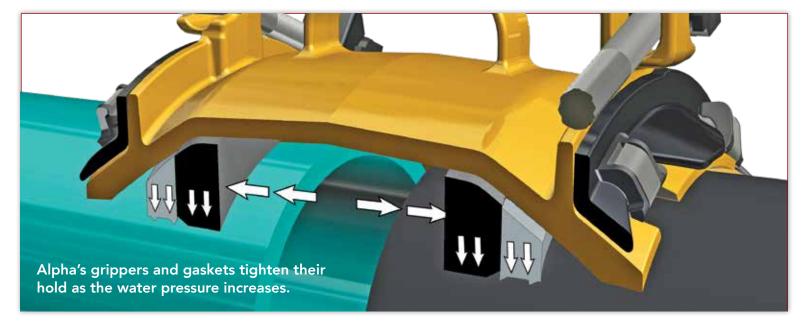
2 • Nuts are tightened, rotating the end ring.



3 • Draw hooks pull gasket and grippers outward and against the pipe.



 Gaskets compress and seal against the pipe surface.
 Gripper teeth are set.





WIDE RANGE RESTRAINED COUPLING

- With just two nuts to tighten, installation takes about three minutes, regardless of pipe diameter.
- Standard Alpha accommodates IPS PVC pipe through Ductile Iron pipe diameters.
- Alpha XL covers Ductile Iron through Oversize Cast Iron pipe sizes.
- Accommodates up to 8 degrees of deflection (4 on each side).
- The handle, located on top of the coupling, helps when positioning the coupling during installation.
- Manufactured in the U.S.A.
- Patents: US8894100, US9534714, US9915385, CA2867172





**STEP 1:** Slide ALPHA over the pipe gap.



**STEP 2:** Tighten nuts to the appropriate torque.



A restrained joint with a working pressure of up to 350 psi installed in less than 3 minutes.





#### WIDE RANGE RESTRAINED COUPLING

#### **MATERIAL SPECIFICATIONS**

CASTINGS: All cast components (end ring, center ring and bolt guide) are ductile iron, meeting or exceeding the requirements of ASTM A 536, grade 65-45-12.

**GRIPPERS:** Ductile (nodular) iron, meeting or exceeding ASTM A 536, grade 65-45-12. Machine sharpened and heat treated. Xylan 1424 coated for enhanced corrosion protection.

**GASKET:** SBR compounded for water and sewer service per ASTM D2000 - classified by UL to meet NSF61, or NBR compounded for water and sewer service in accordance with ASTM D2000 and NSF61 Certified. Other compounds available upon request.

DRAW-HOOK FASTENERS: 304L stainless steel.

RAMP RUNNERS: Reinforced nylon.

**BOLT & NUT:** 304 stainless steel, 5/8-11 bolt with heavy hex e-coated nut. Fasteners provided with anti-galling protection.

**COATINGS:** Center ring is Romacoat fusion bonded epoxy. End ring is Romabond Polyester.

ALPHA GASKET RANGE CONFIGURATIONS

**GASKET RANGE CONFIGURATION OPTIONS** 

Alpha can be configured in one of three ways.



#### STANDARD ALPHA

Standard Alpha accommodates IPS PVC through Ductile Iron pipe diameters.



#### **ALPHA XL**

Alpha XL accommodates Ductile Iron through Oversize Cast Iron pipe diameters.

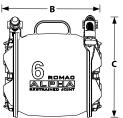


#### ALPHA TRANSITION COUPLING

In this configuration, Alpha provides a transition from IPS PVC pipe diameters up to Oversize Cast Iron pipe diameters.

#### **DIMENSIONS**







NOM. PIPE	SIDE ONE → SIDE TWO select gasket range					RESTRAINED SCIENT  Certified to NSF/ANSI 61-G			
SIZE	ALPHA RANGE	GASKET RANGE	BY	ALPHA RANGE	GASKET RANGE	A O.D.	DIMENSIONS B LENGTH	C HEIGHT	APPROXIMATE WEIGHT (lbs.)
4"	STD. ALPHA ALPHA XL	4.50 - 4.90 4.80 - 5.10	Х	STD. ALPHA	4.50 - 4.90 4.80 - 5.10	8.10	11.80	9.80	40
6"	STD. ALPHA	6.60 - 7.00 6.90 - 7.10	Х	STD. ALPHA ALPHA XL	6.60 - 7.00 6.90 - 7.10	10.40	12.00	12.00	50
8"	STD. ALPHA	8.60 - 9.10 9.05 - 9.40	Х	STD. ALPHA ALPHA XL	8.60 - 9.10 9.05 - 9.40	13.50	13.00	15.10	75
10"	STD. ALPHA	10.75 - 11.20 11.10 - 11.45	Х	STD. ALPHA ALPHA XL	10.75 - 11.20 11.10 - 11.45	15.60	13.20	17.20	95
12"	STD. ALPHA ALPHA XL	12.75 - 13.30 13.20 - 13.60	Х	STD. ALPHA ALPHA XL	12.75 - 13.30 13.20 - 13.60	17.60	13.30	19.20	100
*16"	ALPHA XL	17.40 - 17.85	Х	ALPHA XL	17.40 - 17.85	23.60	15.30	25.50	230

<sup>\* 16&</sup>quot; is not compatible with HDPE pipe.



Information contained in this document is subject to change. Contact Romac Industries for any updates.



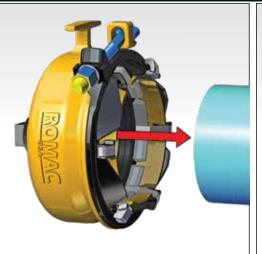


#### WIDE RANGE RESTRAINED END CAP

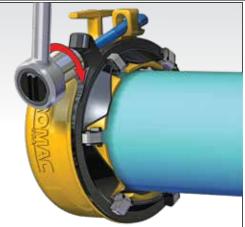
The Alpha EC provides a fast, easy way to cap plain-end pipe and has all the advantages as the original Alpha Coupling.

- With just one nut to tighten, the stab-fit Alpha End Cap installs fast.
- Standard Alpha End Caps cover IPS PVC through Ductile Iron pipe diameters.
- Alpha XL End Caps accommodate Ductile Iron through Oversize Cast Iron pipe diameters.
- Two-inch IP threaded outlet is standard.
- Designed for repeated use, the Alpha EC can also be used as a reliable pipe end seal for permanent installations.
- Made in the U.S.A.
- Patents: US8894100, US9534714, US9915385, CA2867172





**STEP 1:** Insert ALPHA End Cap onto the pipe end.



**STEP 2:** Tighten nut to the appropriate torque.



The outlet allows for blow-off and draining the line.









#### WIDE RANGE RESTRAINED END CAP

#### **MATERIAL SPECIFICATIONS**

CASTINGS: All cast components (end ring, center ring and bolt guide) are ductile iron, meeting or exceeding the requirements of ASTM A 536, grade 65-45-12.

GRIPPERS: Ductile (nodular) iron, meeting or exceeding ASTM A 536, grade 65-45-12. Machine sharpened and heat treated. Xylan 1424 coated for enhanced corrosion protection.

**GASKET:** SBR compounded for water and sewer service per ASTM D2000 - classified by UL to meet NSF61, or NBR compounded for water and sewer service in accordance with ASTM D2000 and NSF61 Certified. Other compounds available upon request.

DRAW-HOOK FASTENERS: 304L stainless steel.

**RAMP RUNNERS:** Reinforced nylon.

BOLT & NUT: R-Blue. HSLA. Xylan coated to reduce friction and provide corrosion protection. Washer is 304 stainless steel.

**COATINGS:** End cap is Romacoat fusion bonded epoxy. End ring is Romabond Polyester.

WORKING PRESSURE: up to 350 PSI.

#### **GASKET RANGE CONFIGURATIONS**

Alpha End Caps are available in two configurations.



#### STANDARD ALPHA END CAP

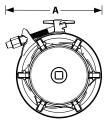
Alpha End Caps accommodate IPS PVC pipe through Ductile Iron pipe diameters.

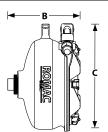


#### ALPHA XL END CAP

Alpha XL End Caps covers Ductile Iron through Oversize Cast Iron pipe diameters.









NOMINAL DIDE CIZE	ALPHA EC GA				Certified to NSF/ANSI 61-G	
PIPE SIZE	ALPHA RANGE	A O.D.	DIMENSIONS B LENGTH	C HEIGHT	APPROXIMATE WEIGHT (lbs.)	
4"	STD. ALPHA ALPHA XL	4.50 - 4.90 4.80 - 5.10	10.20	7.15	9.70	21
6"	STD. ALPHA ALPHA XL	6.60 - 7.00 6.90 - 7.10	11.35	7.75	11.90	30
8"	STD. ALPHA ALPHA XL	8.60 - 9.10 9.05 - 9.40	13.40	9.45	15.00	52
10"	STD. ALPHA ALPHA XL	10.75 - 11.20 11.10 - 11.45	15.45	9.75	17.10	63
12"	STD. ALPHA ALPHA XL	12.75 - 13.30 13.20 - 13.60	17.50	10.10	19.15	78
*16"	ALPHA XL	17.40 - 17.85	23.65	12.00	25.60	180









The Alpha FC provides the quickest way to adapt plain end pipe to flanged fittings.

- Once you've assembled the flanged joint, installation is simply inserting the plain end pipe and tightening one nut.
- Flange is compatible with flat face flanges with ANSI Class 125 and 150 bolt circles.
- Standard Alpha Flanged Couplings fit IPS PVC through Ductile Iron pipe diameters.
- Alpha XL Flanged Couplings fit Ductile Iron through Oversize Cast Iron pipe diameters.
- One nut dismantling allows for quick and easy access of valves and other fittings.
- The Alpha Flanged Coupling also accommodates flanged spool pieces for mating to valves and other fittings.
- Patents: US8894100, US9534714, US9915385, CA2867172



The o-ring style flange gasket is bonded to the flange coupling body.



**STEP 1:** Assemble the flange joint using flange bolts.



**STEP 2:** Insert pipe and tighten nut.



ALPHA FC is the fast way to connect and restrain plain end pipe to a flanged connection









#### RESTRAINED FLANGE COUPLING ADAPTER

#### **MATERIAL SPECIFICATIONS**

**CASTINGS:** All cast components (end ring, center ring and bolt guide) are ductile iron, meeting or exceeding the requirements of ASTM A 536, grade 65-45-12.

**FLANGE:** Compatible with flat face flanges with ANSI Class 125 and 150 bolt circles.

**GRIPPERS:** Ductile (nodular) iron, meeting or exceeding ASTM A 536, grade 65-45-12. Machine sharpened and heat treated. Xylan 1424 coated for enhanced corrosion protection.

**GASKET:** SBR compounded for water and sewer service per ASTM D2000 - classified by UL to meet NSF61, or NBR compounded for water and sewer service in accordance with ASTM D2000 and NSF61 Certified. Other compounds available upon request. Flange gasket is o-ring style (NBR is standard).

**DRAW-HOOK FASTENERS:** 304L stainless steel.

**RAMP RUNNERS:** Reinforced nylon.

**BOLT & NUT:** 304 stainless steel, 5/8-11 bolt with heavy hex e-coated nut. Fasteners provided with anti-galling protection.

**COATINGS:** Flange coupling body is Romacoat fusion bonded epoxy. End ring is Romabond Polyester.

WORKING PRESSURE: up to 350 PSI.

#### **GASKET RANGE CONFIGURATIONS**

Alpha Flange Couplings are available in two configurations.



#### STANDARD ALPHA FLANGED COUPLING

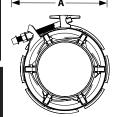
Alpha Flanged Coupling accommodate IPS PVC pipe through Ductile Iron pipe diameters.

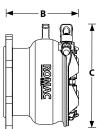


#### ALPHA XL FLANGED COUPLING

Alpha XL Flanged Coupling covers Ductile Iron through Oversize Cast Iron pipe diameters.

#### **DIMENSIONS**







NOMINAL	ALPHA FC GA				Certified to NSF/ANSI 61-G	
PIPE SIZE	ALPHA RANGE GASKET RANGE		A O.D.	DIMENSIONS B LENGTH	C HEIGHT	APPROXIMATE WEIGHT (lbs.)
4"	STD. ALPHA	4.50 - 4.90	8.10	8.40	10.20	29
	ALPHA XL	4.80 - 5.10				
6"	STD. ALPHA	6.60 - 7.00	10.40	8.50	12.30	40
	ALPHA XL	6.90 - 7.10				
8"	STD. ALPHA	8.60 - 9.10	13.40	10.10	15.00	57
	ALPHA XL	9.05 - 9.40				
10"	STD. ALPHA	10.75 - 11.20	15.50	10.40	17.30	82
	ALPHA XL	11.10 - 11.45				
12"	STD. ALPHA	12.75 - 13.30	17.50	10.90	19.90	405
	ALPHA XL	13.20 - 13.60				105

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# ALPHA TEE



#### RESTRAINED FITTING

The Alpha Tee provides a quick solution to add a branch connection off a main line.

- Faster to install than a traditional AWWA C153 MJ tee.
- Standard Alpha Tees cover IPS PVC through Ductile Iron pipe diameters.
- Cast components are high strength ductile iron.
- Accommodates up to 4 degrees of deflection per end.
- With just one nut to tighten per end, the stab-fit Alpha Tee installs quickly.
- Does not require thrust blocks.
- Working pressure up to 350psi.
- Patents: US8894100, US9534714, US9915385, CA2867172



One-bolt stab-fit connection on all three ends

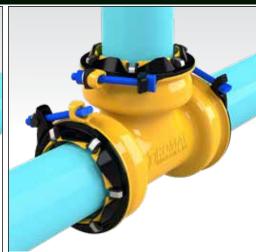




**STEP 1:** Place the fitting onto the plain end pipe.



**STEP 2:** Insert other two pipes into position and tighten nuts.



A restrained tee fitting with only three nuts to torque.







#### RESTRAINED FITTING

#### **MATERIAL SPECIFICATIONS**

**CASTINGS** All cast components (end rings, center ring, and bolt guides) are ductile iron, meeting or exceeding the requirements of ASTM A 536, grade 65-45-12.

**GRIPPERS** Ductile (nodular) iron, meeting or exceeding ASTM A 536, Grade 65-45-12. Machine sharpened and heat treated. Xylan 1424 coated for superior corrosion resistance.

**GASKETS** SBR compounded for water and sewer service per ASTM D2000, classified by UL to meet NSF61 or NBR compounded for water and sewer service per ASTM D2000, NSF61 Certified.

**DRAW HOOKS** Uncoated 304 stainless steel.

RAMP RUNNERS Nylon 66, Black, 14% Glass filled

**BOLTS AND NUTS** R-Blue. 5/8-11 bolts with heavy hex nuts. Xylan coated to reduce friction and provide corrosion resistance. Washer is 304 stainless steel.

**COATINGS** Center ring is Romacote fusion bonded epoxy, NSF 61 Certified. End rings are Romabond polyester.

**ALPHA TEE GASKET RANGES** 

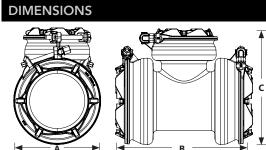
#### **GASKET CONFIGURATIONS**

Alpha Tee restrained fittings are configured with SBR gaskets (standard). NBR gaskets are available by request.



#### ALPHA TEE RESTRAINED FITTING

Alpha Tee restrained fitting covers Ductile iron, PVC (IPS, C900, C909), and HDPE (SDRs 9, 11, 13.5 and 17)





NOMINAL PIPE SIZE		BICANCII	Certified to NSF/ANSI 61-G				
PIPE SIZE	RUN	→ RUN  BRANCH  RANGE	A O.D.	DIMENSIONS B LENGTH	C HEIGHT	APPROXIMATE WEIGHT (lbs.)	
6×6×6	6.60 - 7.00	6.60 - 7.00	10.33	19.28	14.59	90	
8×8×6	8.60 - 9.10	6.60 - 7.00	13.29	21.09	17.78	135	
10×10×6	10.75 - 11.20	6.60 - 7.00	15.40	21.71	19.84	155	
12×12×6	12.75 - 13.30	6.60 - 7.00	17.52	23.52	21.15	180	

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