ADVANCED MATERIALS HANDLING

# Cynergy<sup>®</sup> Process Tee Valve

Increases yield by enhancing cleanability and eliminating problems such as corrosion and metallic poisoning

## All-Teflon® PFA Process Tee Valve

Designed to protect and transport critical materials used in the pharmaceutical and biotechnology industries, Entegris has expanded their award-winning Cynergy<sup>®</sup> product line to include the first all-Teflon<sup>®</sup> PFA Process Tee valve. The valve, made from materials that meet the standard requirements of the FDA, USP, 3-A, and USDA, has a close-coupled branch to reduce dead leg and entrapment potential, while ensuring drainability and eliminating potential bacteria growth areas.

## **Cleanability Minimizes Downtime**

The Cynergy valve design, coupled with the high-lubricity characteristics of Teflon PFA, allows the valve to be easily cleaned with routine CIP cycles while minimizing downtime. In addition, the Process Tee valve has three common ports to assist in the sampling, draining, or diversion of critical process fluids. The valve design provides size and port connection configuration flexibility, enabling quick and easy customization to meet the unique needs of pharmaceutical and biotechnology manufacturers.

## **Proven Reliability**

As with all Cynergy valves, Entegris has utilized Saunders, a leader in aseptic valve technology, to incorporate its diaphragm and operator into the Process Tee valve design to enhance reliability. The valve is available with pneumatic or manual operators and welded or clamped port connections.

## Complete Nonmetallic Process System

Entegris' Cynergy products include tubing, valves, fittings, adapters, containers, supports, and welding equipment to provide the pharmaceutical and biotechnology markets with a complete nonmetallic fluid process system.



Entegris enables these industries to replace stainless steel with nonmetallic components, resulting in increased yields by enhancing cleanability and eliminating problems such as corrosion and metallic poisoning.

## **APPLICATIONS**

Ideal for use in applications where you need continuous flow through the valve and the ability to drain, sample, or divert fluid while ensuring drainability and eliminating entrapment potential, including:

- High purity corrosive chemical handling
- Water for injection (WFI)
- Purified water
- Slurries and other shear-sensitive chemistries

## VALVE DRAINABILITY

The Cynergy Process Tee valves' unique patented angled branch design facilitates complete valve drainability, ensuring the integrity of your process. In addition, the valve's weir location closely couples the through bore and branch, nearly eliminating dead leg.



# DIMENSIONS

## Manual





		DIMENSIONS						
"A" port connection (2X)	"B" port connection	C	D	E	F (closed)	F open	G	
1" Cynergy clamp	<sup>1</sup> /2" Cynergy clamp	209.8 mm (8.26")	95.2 mm (3.75")	12.4 mm (0.49")	86.4 mm (3.40")	92.5 mm (3.64")	34.5 mm (1.36")	
1" Cynergy clamp	1" Cynergy clamp	263.6 mm (10.38")	133.3 mm 5.25")	28.9 mm (1.14")	179.6 mm (7.07")	191.5 mm (7.54")	75.2 mm (2.96")	
1" Cynergy weld	1/2" Cynergy weld	114.3 mm (4.50")	57.1 mm (2.25")	12.4 mm (0.49")	86.4 mm (3.40")	92.5 mm (3.64")	34.5 mm (1.36")	
1" Cynergy weld	1" Cynergy weld	168.1 mm (6.62")	85.6 mm (3.37")	28.9 mm (1.14")	179.6 mm (7.07")	191.5 mm (7.54")	75.2 mm (2.96")	
1½" Cynergy clamp	½" Cynergy clamp	263.6 mm (10.38")	111.0 mm (4.37")	32.3 mm (1.27")	184.9 mm (7.28")	196.8 mm (7.75")	81.8 mm (3.22")	
1½" Cynergy clamp	1" Cynergy clamp	263.6 mm (10.38")	139.7 mm (5.50")	32.3 mm (1.27")	184.9 mm (7.28")	196.8 mm (7.75")	81.8 mm (3.22")	
1½" Cynergy weld	½" Cynergy weld	168.1 mm (6.62")	72.9 mm (2.87")	32.3 mm (1.27")	184.9 mm (7.28")	196.8 mm (7.75")	81.8 mm (3.22")	
1½" Cynergy weld	1" Cynergy weld	168.1 mm (6.62")	91.8 mm (3.62")	32.3 mm (1.27")	184.9 mm (7.28")	196.8 mm ( 7.75")	81.8 mm (3.22")	
2" Cynergy clamp	½" Cynergy clamp	276.3 mm (10.88")	117.3 mm (4.62")	38.9 mm (1.53")	199.1 mm (7.84")	211.1 mm (8.31")	88.6 mm (3.49")	
2" Cynergy clamp	1" Cynergy clamp	276.3 mm (10.88")	146.1 mm (5.75")	38.9 mm (1.53")	199.1 mm (7.84")	211.1 mm (8.31")	88.6 mm (3.49")	
2" Cynergy weld	1/2" Cynergy weld	174.5 mm (6.87")	79.2 mm (3.12")	38.9 mm (1.53")	199.1 mm (7.84")	211.1 mm (8.31")	88.6 mm (3.49")	
2" Cynergy weld	1" Cynergy weld	174.5 mm (6.87")	98.3 mm (3.87")	38.9 mm (1.53")	199.1 mm (7.84")	211.1 mm (8.31")	88.6 mm (3.49")	

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# DIMENSIONS (CONTINUED)

## Pneumatic



		DIMENSIONS						
"A" port connection (2X)	"B" port connection	C	D	E	F (closed)	F open	G	
1" Cynergy clamp	1" Cynergy clamp	263.6 mm (10.38")	133.3 mm (5.25")	28.9 mm (1.14")	211.6 mm (8.33")	221.5 mm (8.72")	75.2 mm (2.96")	
1" Cynergy weld	1" Cynergy weld	168.1 mm (6.62")	85.6 mm (3.37")	28.9 mm (1.14")	211.6 mm (8.33")	221.5 mm (8.72")	75.2 mm (2.96")	
1½" Cynergy clamp	<sup>1</sup> /2" Cynergy clamp	263.6 mm (10.38")	111.0 mm (4.37")	32.3 mm (1.27")	212.8 mm (8.38")	222.7 mm (8.77")	81.8 mm (3.22")	
1½" Cynergy clamp	1" Cynergy clamp	263.6 mm (10.38")	139.7 mm (5.50")	32.3 mm (1.27")	212.8 mm (8.38")	222.7 mm (8.77")	81.8 mm (3.22")	
1½" Cynergy weld	1⁄2" Cynergy weld	168.1 mm (6.62")	72.9 mm (2.87")	32.3 mm (1.27")	212.8 mm (8.38")	222.7 mm (8.77")	81.8 mm (3.22")	
1½" Cynergy weld	1" Cynergy weld	168.1 mm (6.62")	91.8 mm (3.62")	32.3 mm (1.27")	212.8 mm (8.38")	222.7 mm (8.77")	81.8 mm (3.22")	
2" Cynergy clamp	½" Cynergy clamp	276.3 mm (10.88")	117.3 mm (4.62")	38.9 mm (1.53")	227.1 mm (8.94")	237.0 mm (9.33")	88.6 mm (3.49")	
2" Cynergy clamp	1" Cynergy clamp	276.3 mm (10.88")	146.1 mm (5.75")	38.9 mm (1.53")	227.1 mm (8.94")	237.0 mm (9.33")	88.6 mm (3.49")	
2" Cynergy weld	1⁄2" Cynergy weld	174.5 mm (6.87")	79.2 mm (3.12")	38.9 mm (1.53")	227.1 mm (8.94")	237.0 mm (9.33")	88.6 mm (3.49")	
2" Cynergy weld	1" Cynergy weld	174.5 mm (6.87")	98.3 mm (3.87")	38.9 mm (1.53")	227.1 mm (8.94")	237.0 mm (9.33")	88.6 mm (3.49")	

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## SPECIFICATIONS

As with all Cynergy products, the Process Tee valve will perform to the operating conditions shown whether clamped to an equivalent fitting or to stainless steel component.

## Autoclavability

Disassemble valves and unclamp connections before autoclaving. 124°C (255°F) is the maximum autoclave temperature.

#### For Normal Continuous Operating Conditions



## **ORDERING INFORMATION**

Cynergy Process Tee Valve: part number



#### FOR MORE INFORMATION

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Corporate Headquarters 129 Concord Road Billerica, MA 01821 USA 
 Customer Service

 Tel
 +1
 952
 556
 4181

 Fax
 +1
 952
 556
 8022

 Toll Free
 800
 394
 4083

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