

## Material Specifications for Standard OMEGA® Couplings

Refer to individual product listings for material availability for each product line.

	FT-PMC, FT-PLC, FT-SMC, Tentube, Shutoff Valves 1/8" & 1/4" Flow	FT-HFC-12, FT-PMC-12, FT-PLC-12, FT-SMC-12 1/8, 1/4, & 3/8" Flow	FT-MC Chrome-Plated Brass 1/8" & 1/4" Flow	FT-FFC-35 & FT-HFC-35 Polysulfone .375" flow & .5" flow
Connector Housing	Delrin Acetal	Polypropylene	Brass-Nickel/Chrome-Plated	Polysulfone
Latch	301 Stainless Steel	301 Stainless Steel or Polypropylene	301 Stainless Steel	Polysulfone
Locking Pin	303 Stainless Steel	303 Stainless Steel	303 Stainless Steel	
Shutoff Valve	Delrin Acetal	Polypropylene	Delrin Acetal	Polysulfone (HFC-35)
External Springs	302 Stainless Steel	302/316 Stainless Steel	302 Stainless Steel	316 Stainless Steel (HFC-35)
Internal Springs	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel (HFC-35)
Panel Nut	Brass-Nickel Plated	Brass-Nickel Plated or Polypropylene	Brass-Nickel Plated	Polysulfone (HFC-35)
PTF Nut	Brass-Nickel Plated	Brass-Nickel Plated	Brass-Chrome Plated	
O-Ring	70 Durometer Buna-N	70 Durometer EPR	70 Durometer Buna-N	70 Durometer Buna-N, EPR, or Medical Grade Silicone
O-Ring Lube	Silicone Food Grade	Silicone Food Grade	Silicone Food Grade	Food Grade

## Regulatory Approvals for OMEGA Products

### FDA & USDA

The U.S. Food and Drug Administration publishes, through the Code of Federal Regulations, standardized criteria which govern the acceptability of materials used in food processing. The U.S. Department of Agriculture publishes similar standards that mirror F.D.A. criteria. Neither agency approves or disapproves products for particular applications.

Most CPC products can be specified in a way that complies with applicable F.D.A. or U.S.D.A. standards. In all cases, standard O-Ring seals are replaced with special materials.

### NSF

NSF International, based in Ann Arbor, Michigan, develops and publishes consensual criteria that govern the acceptability of materials and equipment used in food and beverage processing.

They also test to verify the performance and conformity of materials or devices to their published criteria.

OMEGA has listed, and continues to list, many of its product lines under the criteria of NSF Standard C-2, which governs components used in food and beverage contact applications.

All OMEGA Customer Service for specific details regarding your application.

### ISO 9001 CERTIFICATION

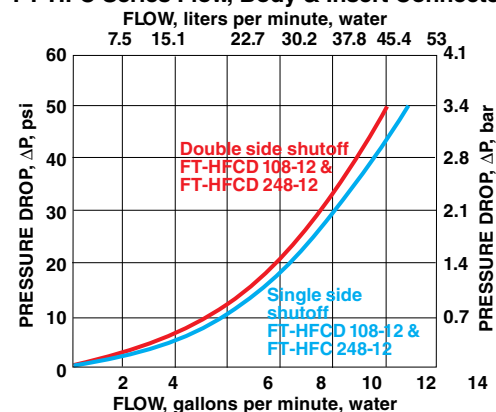
ISO 9001 certification is a process which verifies the consistency with which organizations deliver the products their customers have ordered. Companies having ISO 9001 certification have satisfied independent registration authorities that they can deliver what the customer expects every time the

customer orders the product.

OMEGA Engineering has been approved and certified under the ISO 9001 standard.

Contact OMEGA Quality Management for more information.

**FT-HFC Series Flow, Body & Insert Connected**



## CV Values for High Flow Couplings

### FT-INSERTS

BODIES	HFC	HFCD	HFC	HFCD	HFC	HFCD	HFC	HFCD	HFC	HFCD	HFC	HFCD	HFC	HFCD
	226-12	226-12	228-12	228-12	236-12	236-12	238-12	238-12	246-12	246-12	248-12	248-12	2212-12	2212-12
FT-HFC 106-12	1.27	1.27	1.62	1.51	1.14	1.14	1.46	1.36	1.80	1.58	1.70	1.65	-	-
FT-HFC 108-12	1.28	1.34	1.62	1.51	1.15	1.24	1.46	1.36	1.81	1.54	1.72	1.56	-	-
FT-HFC 166-12	1.07	1.00	1.17	1.14	0.96	0.90	1.05	1.03	1.33	1.26	1.30	1.24	-	-
FT-HFC 168-12	1.25	1.23	1.61	1.52	1.13	1.11	1.45	1.37	1.79	1.60	1.68	1.56	-	-
FT-HFC 176-12	1.07	1.00	1.17	1.14	0.96	0.90	1.05	1.03	1.33	1.26	1.30	1.24	-	-
FT-HFC 178-12	1.25	1.23	1.61	1.52	1.13	1.11	1.45	1.37	1.79	1.60	1.68	1.56	-	-
FT-HFC 1712-12	-	-	-	-	-	-	-	-	-	-	-	-	3.94	-
FT-HFC 1712-12	-	-	-	-	-	-	-	-	-	-	-	-	-	2.04

## Flowrate Information for Couplings

The graphs at right show the flowrate for OMEGA® 1/8" FT-MC/PMC and 1/4" FT-LC/PLC flow couplings. The tests were conducted with pipe thread bodies and hose barb inserts. Each coupling was tested in straight thru, single end shutoff and double end shutoff models with water at 21°C (70°F).

To determine flowrates for specific coupling configurations use the formula below.

$$Q = C_V \sqrt{\Delta P}$$

Q = Flowrate in gallons per minute  
 C<sub>V</sub> = Average constant of various rates, see charts below  
 ΔP = Pressure drop across coupling.  
 S = Specific gravity of liquid

### Example:

Coupling Body = MC 10-04

Coupling Insert = MC 20-04

C<sub>V</sub> = .4 (see chart)

ΔP = 40

S = 1 (water)

$$Q = C_V \sqrt{\frac{\Delta P}{S}} = .4 \sqrt{\frac{40}{1}} = 2.5 \text{ gallons per minute}$$

## C<sub>V</sub> Values for Subminiature Couplings

BODIES	SMM-01	SMM-02	SMM-01	SMM-02
SMF-01	.03	.03	SMFD-02	.028 .08
SMFD-01	.025	.025	SMPT-02	.03 .19
SMF-02	.03	.19	SMPTD-02	.028 .08

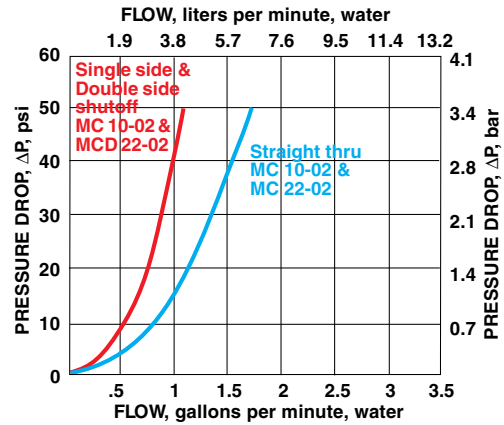
## C<sub>V</sub> Values for 1/8" Flow Couplings

BODIES	FT-INSERTS																			
	MC 20-04	MCD 20-04	MC 20-06	MCD 20-06	MC 22-02	MCD 22-02	MC 22-04	MCD 22-04	MC 24-02	MCD 24-02	MC 24-04	MCD 24-04	MC 26-02	MC 23-04	MC 21-04	MCD 23-04	MC 22-03	MCD 22-03	PMC 22-01	PMCD 22-01
FT-MC 10-02	.40	.18	.50	.19	.25	.16	.50	.19	.50	.20	.51	.19	.50	.50	.38	.24	.30	.17	.03	.027
FT-MCD 10-02	.27	.18	.31	.18	.24	.16	.28	.20	.26	.20	.29	.18	.26	.26	.27	.24	.25	.17	.03	.027
FT-MC 10-04	.40	.21	.50	.24	.26	.18	.50	.24	.50	.20	.51	.24	.50	.50	.38	.26	.30	.19	.03	.027
FT-MCD 10-04	.29	.19	.32	.23	.25	.17	.30	.23	.27	.21	.28	.23	.27	.28	.29	.24	.25	.18	.03	.027
FT-MC 12-04	.40	.18	.50	.18	.25	.16	.40	.18	.40	.16	.36	.18	.40	.40	.38	.21	.30	.17	.03	.027
FT-MCD 12-04	.21	.17	.22	.17	.20	.16	.22	.17	.21	.17	.20	.17	.21	.22	.21	.18	.21	.16	.03	.027
FT-MC 16-02	.23	.15	.28	.18	.19	.14	.27	.15	.27	.15	.28	.18	.27	.27	.23	.16	.20	.14	.03	.027
FT-MCD 16-02	.19	.15	.19	.15	.17	.14	.19	.15	.18	.15	.18	.15	.18	.19	.19	.15	.18	.14	.03	.027
FT-MC 16-04	.33	.23	.44	.24	.24	.18	.44	.23	.44	.20	.38	.24	.38	.44	.33	.26	.26	.19	.03	.027
FT-MCD 16-04	.23	.17	.26	.21	.22	.16	.26	.21	.26	.19	.25	.21	.21	.26	.23	.24	.22	.16	.03	.027
FT-MC 17-03	.25	.20	.30	.20	.20	.17	.30	.20	.30	.19	.28	.20	.28	.30	.25	.18	.21	.17	.03	.027
FT-MCD 17-03	.20	.17	.20	.17	.19	.15	.21	.17	.19	.17	.20	.17	.19	.20	.20	.16	.19	.16	.03	.027
FT-PMC 17-01	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.025	.023
FT-PMCD 17-01	.027	.027	.027	.027	.027	.027	.027	.027	.027	.027	.027	.027	.027	.027	.027	.027	.027	.027	.023	.023

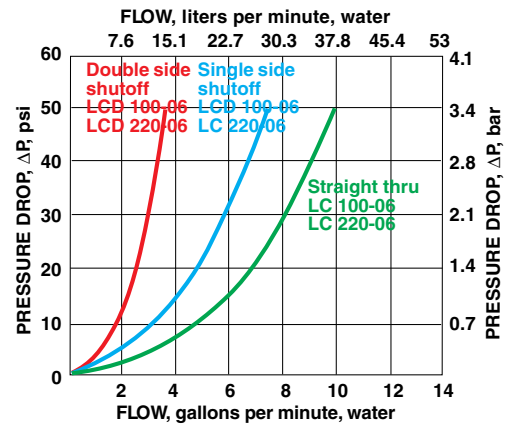
## C<sub>V</sub> Values for 1/4" Flow Couplings

BODIES	FT-INSERTS													
	LC 200-04	LCD 200-04	LC 200-06	LCD 200-06	LC 220-04	LCD 220-04	LC 220-06	LCD 220-06	LC 240-04	LCD 240-04	LC 240-06	LCD 240-06	LC 260-04	LCD 260-04
FT-LC 100-04	.40	.36	1.05	.58	.83	.56	1.40	.82	1.40	.75	1.40	.77	.83	.81
FT-LCD 100-04	.36	.31	.73	.48	.66	.41	.82	.50	.80	.45	.77	.45	.81	.81
FT-LC 100-06	.40	.36	1.05	.60	.83	.56	1.40	.81	1.40	.76	1.40	.76	.83	.83
FT-LCD 100-06	.37	.31	.81	.47	.70	.43	1.02	.51	.98	.46	.99	.48	.98	.98
FT-LC 120-06	.38	.36	.84	.63	.74	.56	1.14	.75	1.14	.70	1.14	.72	.74	.74
FT-LCD 120-06	.38	.33	.78	.49	.68	.44	.84	.49	.81	.43	.82	.44	.81	.81
FT-LC 160-04	.38	.37	.87	.54	.95	.51	1.00	.70	.95	.64	1.00	.66	.95	.95
FT-LCD 160-04	.37	.31	.61	.44	.57	.41	.78	.44	.78	.43	.75	.46	.78	.78
FT-LC 160-06	.38	.37	1.00	.57	.95	.53	1.40	.80	1.40	.71	1.40	.73	1.40	1.40
FT-LCD 160-06	.38	.32	.71	.49	.63	.42	.89	.51	.96	.45	.92	.49	.97	.97

FT-MC/PMC Series Flow, Body & Insert Connected



FT-LC/PLC Series Flow, Body & Insert Connected





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