

In-Line Static Mixers

Mix fluids as you pump them through a pipe line

- These economical, long-lasting, in-line mixers are more convenient than most motorized mixers
- In-line mixers prevent overmixing and undermixing, and resist fouling in your pipes or tubes
- Virtually maintenance free and need no spare parts

In-line mixers are efficient and can withstand large pressure changes—up to 1500 psi with smallest sizes. Mixing elements in pipe and tube mixers are securely attached to the mixer walls, so internal pressure changes cannot collapse elements and stop flow.

Teky's Tips



With in-line static mixers, the mixer does not move through the fluid—the fluid moves through the mixer. As this illustration shows, mixing takes place around the centerline and in the direction of flow.

1. Pump pushes a stream of liquid into the mixer.
2. The stream of liquid is then split and forced to the opposite outside walls.
3. A vortex is created along the centerline axis of the pipe.
4. The vortex is sheared and the process recurs with the opposite rotation. This clockwise/counterclockwise motion mixes the liquid to ensure a homogeneous end product.

Reynolds equation: $Re = \frac{3157QS}{\mu D}$

- Re = Reynolds number
- Q = Flow rate (gallons per minute)
- S = Specific gravity
- μ = Viscosity (centipoise)
- D = Inside pipe diameter (inches)

Reynolds number	Elements required
>1000	6
500 to 1000	12

Note: If the Reynolds number is less than 500, contact your local representative for assistance.

Disposable In-Line Mixers

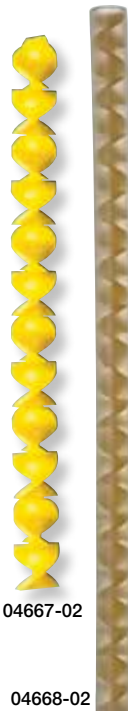
Ideal for your one-time mixing applications, these disposable polyacetal mixers are available unmounted or mounted in polypropylene tubing. Adjust unmounted mixer length to get optimal mixing action—shorten by cutting or extend by using more than one mixer.

Unmounted Mixers can be used with any standard tubing having the same tubing ID as the element OD given in the table. They work well with flexible tubing.

Element OD/ tubing ID, in. (mm)	Number of elements	Mixer length, in. (mm)	Catalog number	Price/ pk of 10
3/16 (5)	12	2 3/8 (60)	GY-04667-02	
	24	4 3/8 (118)	GY-04667-12	
1/4 (6)	12	3 (76)	GY-04667-04	
	24	6 (152)	GY-04667-14	
3/8 (10)	12	4 3/4 (121)	GY-04667-06	
	24	9 1/2 (241)	GY-04667-16	
1/2 (13)	12	5 (127)	GY-04667-08	
	24	10 (254)	GY-04667-18	

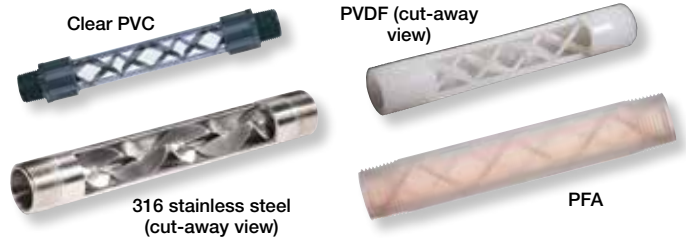
Mounted Mixers can be used with any compression fitting with the same tubing OD.

Tubing OD, in. (mm)	Number of elements	Mixer length, in. (mm)	Catalog number	Price/ pk of 10
5/16 (8)	12	3 1/2 (89)	GY-04668-02	
	24	5 3/4 (146)	GY-04668-12	
3/8 (10)	12	4 1/4 (108)	GY-04668-04	
	24	7 1/4 (184)	GY-04668-14	
1/2 (13)	12	6 1/2 (165)	GY-04668-06	
	24	11 1/4 (286)	GY-04668-16	
3/8 (16)	12	8 1/2 (216)	GY-04668-08	
	24	14 1/2 (368)	GY-04668-18	



Pipe Mixers

Install these mixers directly into your process line to achieve a 100% mixed output—mixing elements are welded inside the pipe. All mixers have threaded ends. Choose PVC, 316 stainless steel, PVDF, or PFA. The clear PVC mixers are ideal for a visual check of your mixing processes. Models with removable elements are available on request—contact your local representative for details.



NPT(M)	Pipe ID, in. (mm)	No. of elements	Mixer length, in. (mm)	Catalog number	Price
Clear PVC schedule 40 pipe mixers					
3/8"	0.473 (12)	6	6 1/2 (165)	GY-04669-85	
		12	11 (279)	GY-04669-87	
1/2"	0.602 (15.3)	6	7 (178)	GY-04669-89	
		12	12 (305)	GY-04669-91	
3/4"	0.804 (20.4)	6	9 (229)	GY-04669-92	
		12	15 (381)	GY-04669-93	
1"	1.029 (26.1)	6	11 (279)	GY-04669-94	
		12	18 (457)	GY-04669-95	
1 1/2"	1.590 (40.4)	6	15 (381)	GY-04669-96	
		12	28 (711)	GY-04669-97	
2"	2.047 (52)	6	19 (483)	GY-04669-98	
		12	35 (889)	GY-04669-99	
Standard PVC schedule 80 pipe mixers					
1/2"	0.62 (15.7)	6	5 (127)	GY-04669-00	
		12	10 (254)	GY-04669-06	
3/4"	0.742 (18.8)	6	7 (178)	GY-04669-02	
		12	14 (356)	GY-04669-08	
"	0.957 (24.3)	6	10 (254)	GY-04669-04	
		12	19 (483)	GY-04669-10	
1 1/2"	1.50 (38.1)	6	15 (381)	GY-04669-78	
		12	26 (660)	GY-04669-79	
2"	1.939 (49.2)	6	18 (457)	GY-04669-83	
		12	33 (838)	GY-04669-81	
316 stainless steel schedule 40 pipe mixers					
1/4"	0.364 (9.2)	6	3 (76.2)	GY-04669-05	
		12	6 (152)	GY-04669-07	
3/8"	0.493 (12.5)	6	4 (101)	GY-04669-09	
		12	8 (203)	GY-04669-11	
1/2"	0.62 (15.7)	6	5 (127)	GY-04669-12	
		12	10 (254)	GY-04669-18	
3/4"	0.82 (20.8)	6	7 (178)	GY-04669-14	
		12	13 (330)	GY-04669-20	
1"	1.05 (26.7)	6	9 (229)	GY-04669-16	
		12	17 (439)	GY-04669-22	
1 1/2"	1.61 (40.9)	6	13 (330)	GY-04669-23	
		12	26 (660)	GY-04669-24	
2"	2.067 (52.5)	6	17 (432)	GY-04669-25	
		12	33 (838)	GY-04669-26	
PVDF schedule 80 pipe mixers					
1/2"	0.546 (13.9)	6	5 (127)	GY-04669-28	
		12	9 (229)	GY-04669-29	
3/4"	0.742 (18.8)	6	6 (152)	GY-04669-30	
		12	12 (305)	GY-04669-34	
1"	0.957 (24.3)	6	8 (203)	GY-04669-32	
		12	15 (381)	GY-04669-36	
1 1/2"	1.50 (38.1)	6	12 (305)	GY-04669-38	
		12	24 (610)	GY-04669-40	
2"	1.939 (49.2)	6	16 (406)	GY-04669-42	
		12	31 (787)	GY-04669-44	
PFA schedule 80 pipe mixers					
1/2"	0.546 (13.9)	6	5 (127)	GY-04668-20	
		12	9 (229)	GY-04668-22	
3/4"	0.742 (18.8)	6	6 (152)	GY-04668-24	
		12	12 (305)	GY-04668-26	
1"	0.957 (24.3)	6	8 (203)	GY-04668-27	
		12	15 (381)	GY-04668-29	