

Technical Note

Sanitary Turbine Flow Sensor Installation

This bulletin describes installation requirements for satisfactory performance and reliability of sanitary turbine flow sensors. Sensor warranty is applicable only for installations complying with these requirements.

It is very important to have 10 straight pipe diameters upstream and 5 straight pipe diameters downstream OF THE SAME SIZE as the internal bore of the flow sensor. Otherwise, excess pressure drop and turbulence can cause severe damage to the bearings and rotors in these fragile and expensive sensors. Therefore, any flow sensors with 3/4 and 1-1/2" Tri-Clamp flanges with reduced internal size (see highlighted dimensions below) must have reduced size piping connecting them. Special transition pieces are available from Hoffer Flow Controls if necessary.

Thornton Pulse Input Part No.	Thornton Smart Part No.	Linear Range GPM	Tri-Clamp Fitting	Internal Size	Hoffer Part Number
33336	325-001	0.35 - 3.5	3/4"	1/4"	HO 3/4X1/4-.35-3.5-C-1(RPM51E240)-TRI
33337	325-002	0.35 - 3.5	1-1/2"	1/4"	HO 1-1/2X1/4-.35-3.5-C-1(RPM51E240)-TRI
33338	325-003	0.75 - 7.5	3/4"	3/8"	HO 3/4X3/8-.75-7.5-C-1(RPM51E240)-TRI
33339	325-004	0.75 - 7.5	1-1/2"	3/8"	HO 1-1/2X3/8-.75-7.5-C-1(RPM51E240)-TRI
33340	325-005	1.25 - 9.5	3/4"	1/2"	HO 3/4X1/2-1.25-9.5-C-1(RPM51E240)-TRI
33341	325-006	1.25 - 9.5	1-1/2"	1/2"	HO 1-1/2X1/2-1.25-9.5-C-1(RPM51E240)-TRI
33342	325-007	1.75 - 16	3/4"	5/8"	HO 3/4X5/8-1.75-16-C-1(RPM51E240)-TRI
33343	325-008	1.75 - 16	1-1/2"	5/8"	HO 1-1/2X5/8-1.75-16-C-1(RPM51E240)-TRI
33344	325-009	2.5 - 29	1-1/2"	3/4"	HO 1-1/2X3/4-2.5-29-C-1(RPM51E240)-TRI
33345	325-010	4 - 60	1-1/2"	1"	HO 1-1/2X1-4-60-C-1(RPM51E240)-TRI
33346	325-011	6 - 93	1-1/2"	1-1/4"	HO 1-1/2X1-1/4-6-93-C-1(RPM51E240)-TRI
33347	325-012	8 - 130	1-1/2"	1-1/2"	HO 1-1/2X1-1/2-8-130-C-1(RPM51E240)-TRI
33348	325-013	15 - 225	2"	2"	HO 2X2-15-225-C-1(RPM51E240)-TRI
33376	325-014	25-400	3"	3"	HO 3X3-25-400-C-1(RPM51E240)-TRI
33377	325-015	40-650	4"	4"	HO 4X4-40-650-C-1(RPM51E240)-TRI

In addition, a turbine flow sensor must not be subjected to water hammer or excessive speed during steam cleaning or when displacing air from the system during startup. Steam and air provide much less lubrication and cooling of small bearing surfaces which can easily overheat and be destroyed. Refer to the instruction manual (available at www.hofferflow.com) for maximum allowed steam flows under these conditions.

For the most current product information visit:

www.thorntoninc.com

Mettler-Toledo Thornton, Inc.
 36 Middlesex Turnpike
 Bedford, MA 01730 USA
 Telephone: +1-781-301-8600
 Toll-Free: 1-800-510-PURE

Customer/Technical Service
 Telephone: +1-781-301-8690
 Toll-Free: 1-800-642-4418
 Cust Service Fax: +1-781-271-0214
 Tech Service Fax: +1-781-271-0675

email: info@thorntoninc.com
www.thorntoninc.com

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