

Installation Instructions for Line Mounted Romet Meters

RM600-RM56000

This bulletin covers the general installation of all Romet Rotary Meters

Caution:

- Rough handling of the meter must be avoided to prevent damage. A Romet rotary meter is a precise gas volume measuring instrument manufactured to very tight tolerances.
- Always transport the meter capped at both ends and without oil in order to prevent damage, dirt or oil contamination of the meter.
- Always add oil after the meter has been correctly installed.

Installation Considerations:

- The piping and flange position of the meter set should be such that there is adequate area spacing between the meter and any pipe, wall or other obstruction. This spacing will allow for the addition or removal of devices, such as, a meter module, batteries or any other auxiliary instrument (eg. ROMET AdEC™)
- Furthermore all full faced pipe flanges installed (raised flanges are not recommended) must be level and spaced so that the meter together with the top and bottom gaskets can be positioned between the flanges easily with the least amount of air gap (maximum 1/16" per linear foot of flange) before tightening. If the meter is not level, it is possible to improperly fill the oil reserves or over-stress the meter after tightening the flange bolts. This condition may cause the meter to read incorrectly or result in complete meter failure.
- Care must also be taken to ensure that the piping and flanges are aligned correctly in relation to the meter (maximum 1/16" in all directions). DO NOT use the meter to correct misaligned piping or flanges. Excessive misalignment or distance between piping or flanges may overstress the meter body when the flange bolts are tightened. Severe over-stress may cause the meter to read incorrectly or result in complete meter failure. The use of a spool piece to help level and align the pipe flanges with the meter can be helpful.
- A meter bypass is recommended to facilitate any future maintenance or calibration considerations.
- To protect the meter (and any other critical component) from internal damage, the meter set must be free of foreign materials (weld beads, rust scale, grease, etc) The use of a filter upstream of the meter is strongly recommended. Typical filters include the IMAC Gasket Strainer or flanged and threaded 'T' Strainers.

Installation Instructions:

- A quick check of the rotary meter should be performed before installation. First remove the capping from each end of the meter openings. Blow air lightly into the meter inlet (making sure the meter outlet is not obstructed) The meter impellers should rotate freely and eventually come to a gradual stop. Should the impellers stop suddenly or not rotate at all, it will be necessary to carefully remove any obstruction before installation. If this is not possible the meter should be returned to the service shop for further examination.
- Mount the meter in correct orientation. Ensure that gas will be flowing in the direction of the arrow on meter pressure body (see diagram 1). Meters should be installed using hardware sizes listed in diagram 2. The use of incorrect hardware may result in meter error or failure. All bolts should be tightened in an X pattern, in stages, up to a typical torque value of 20 ft lbs. Some Romet meters are supplied with nipped connections at the inlet and outlet. These meters are built and tested with the connecting nipples in place. Care must be taken to avoid further tightening or loosening of these nipples to prevent meter damage.
- After the meter has been installed, approved meter oil must be added to all appropriate oil reservoirs to prevent meter damage. Depending on the meter type and mounting position (vertical or horizontal) the required oil volumes will be different. Do not over or under-fill oil reservoirs. For the thrust cover end and all the magnetic housing (not on all meter types) oil must be added so that the oil reaches the center of the correct oil level gauge (OLG) in use. For the module cover, the oil must reach the appropriate Red oil level line. **DO NOT FILL ELECTRONIC SECTIONS WITH OIL.** Note: After meter start up, some oil levels may drop a little or form a thin bubble layer due to oil splash. Do not mix oil types.
- Ensure all oil plugs (and other connections) are properly tightened and secured before pressurizing the meter set.
- When the meter installation has been completed the meter set should be pressurized SLOWLY (maximum 5 psi per second) up to allowable pressure. This will help avoid over-speed or slamming of the meter. Should the installation be subject to sudden "Instant On-Off" loads, a properly sized restricting orifice or venturi flow nozzle should be installed
- **Check for any gas leaks or other possible problems.** After start up, the readout counter or drive should be running smoothly and in the correct direction when the required gas flow rate has been reached.

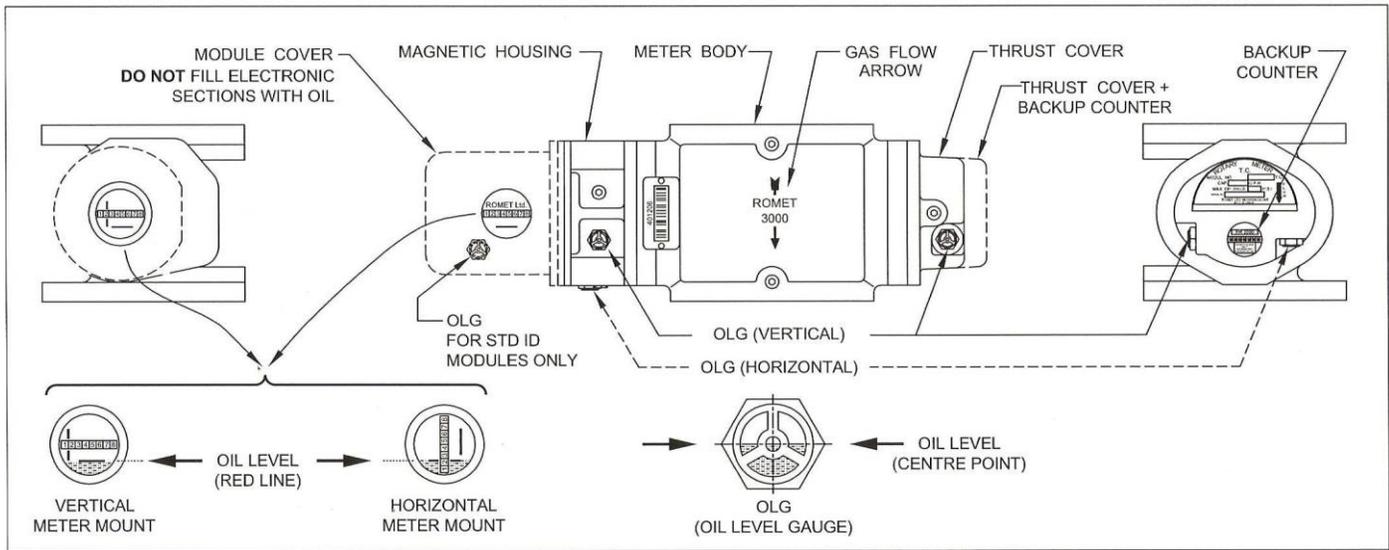
•Pete's Plugs may be installed to facilitate future oil changes while meter is pressurized. Other optional accessories & services are available such as strainers, gaskets, valves Teflon tape, flange kits, meter flow reverse, meter repair, and more.



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Oil Table:

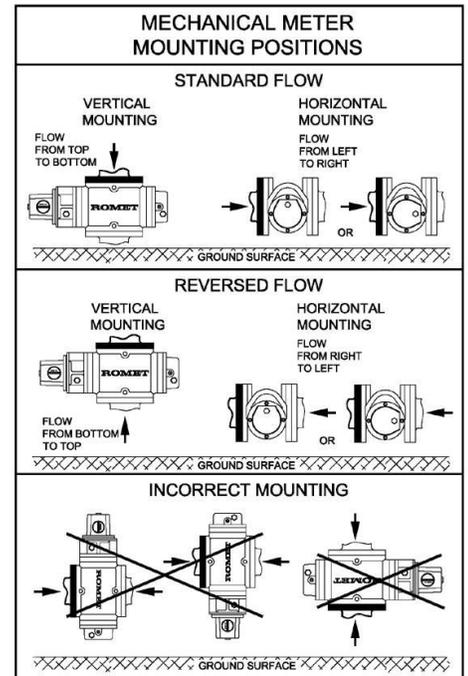
Standard Counter & Instrument Drive								
	RM600-RM1500		RM2000-RM5000		RM7000-RM23000		RM25000-RM56000	
	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Vertical
Counter Module	6.3 oz.	6.3 oz.	6.3 oz.	6.3 oz.	6.3 oz.	6.3 oz.	6.3 oz.	6.3 oz.
Magnet Housing	1.8 oz.	1.8 oz.	2.3 oz.	3.5 oz.	3.5 oz.	11.6 oz.	10.5 oz.	32.4 oz.
Thrust End	0.9 oz.	2.1 oz.	0.9 oz.	2.5 oz.	1.4 oz.	8.8 oz.	10.5 oz.	38.2 oz.
Temperature Compensated & Temperature Compensated Instrument Drive								
	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Vertical
Counter Module	n/a	n/a	5.6 oz.	8.8 oz.	8.4 oz.	20.8 oz.	n/a	n/a
Magnet Housing	n/a	n/a	2.3 oz.	3.5 oz.	3.5 oz.	11.6 oz.	n/a	n/a
Thrust End	n/a	n/a	0.9 oz.	2.5 oz.	1.4 oz.	8.8 oz.	n/a	n/a

*ECM2 Series and AdEM Series modules being electronic do not require oil.

Hardware Specification Table:

Meter Model	Flange/Gasket (Full-Face)	Bolts and washers (Steel, Zinc Plated or PTFE Coated)
RM600-RM1500	1.5" NPT Threaded	N/A
RM1000-RM1500	ANSI 125/150 2"	5/8" – 11 x 1.5" long Hex Head SAE Grade 5
RM2000-RM3000	ANSI 125/150 2"	5/8" – 11 x 1.75" long Hex Head SAE Grade 5
RM5000-RM7000	ANSI 125/150 3"	5/8" – 11 x 1.75" long Hex Head SAE Grade 5
RM11000-RM23000	ANSI 125/150 4"	5/8" – 11 x 1.75" long Hex Head SAE Grade 5
RM25000-RM56000	ANSI 125/150 6"	3/4" – 10 x 2.5" long Hex Head SAE Grade 5

*All bolts should be installed with approved anti-seize grease and standard steel zinc plate flat washers.



To install in meter in a reversed flow configuration, flow configuration must be switched by factory