



KAM Controls
 3939 Ann Arbor Drive
 Houston, TX 77063
 T.: +1 713 784 0000
 F.: +1 713 784 0001

KAM® OOD Application Data sheet

Customer Information

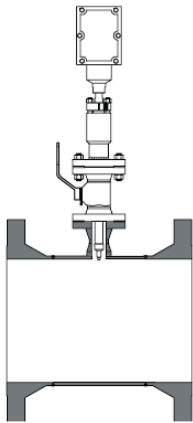
Date: _____
 Name: _____ Company: _____
 Street Address: _____
 City: _____ State: _____ Postal code: _____
 Email: _____
 End user name and location: _____
 Project name: _____

Please fill out the following fields to the best of your ability.

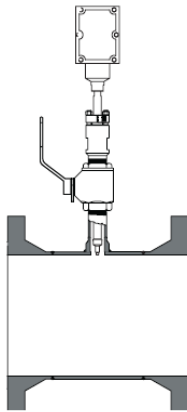
Describe the application (e.g. saltwater disposal, leak detection, coolant line, etc.): _____
 Laboratory test method used to correlate with the KAM® OOD: _____
 Target oil: Crude oil Fuel oil Lube oil Diesel Other (Specify): _____

Pipeline and installation type (please specify units)

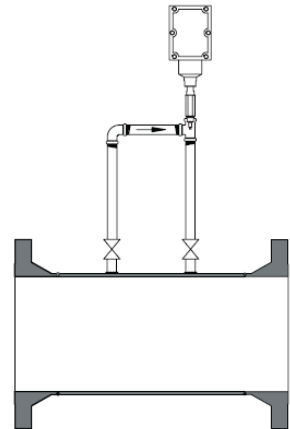
Pipeline Diameter: _____ Pipeline schedule: _____ ANSI Rating: _____



Flanged Insertable
 Flange size:
 Flange type:
 Shaft Length*:
 Quantity req. ____



2" MNPT Insertable
 Shaft Length*:
 Quantity req. ____



FT Flow Through
 MNPT:
 Quantity req. ____

*See Shaft Length Calculator on page 3 of this document to determine appropriate length.

Wetted materials:

Additions:

Local Display: Yes No Marine coat: Yes No
 AC Power Adapter: Yes No NACE: Yes No



Process Conditions

Please note: proper mixing is required for accurate OOD performance. In order for KAM to properly quote an OOD, please fill out all flow conditions fields to the best of your ability. Should pipeline mixing be required, the quote will include an appropriate solution to fulfill this requirement (SMS, SMP, or ML).

	Minimum	Normal	Maximum	Units
PPM range				
Flow rate				
Oil density or gravity range*				
Oil viscosity*				
Operating temperature				
Operating pressure**				
Salinity				
Ambient temperature				

*At operating temperature

** If above 110 PSI, a KAM IT Insertion Tool will be required for installation and included in quote

Required accuracy (min. 5ppm): _____

Pipe flow: Vertical up Vertical down Horizontal

Will the meter’s electronics be exposed directly to sunlight or high temperatures? Yes No
(If yes, a KAM Sunshade may be required and included in quote)

Additional Details

Commissioning & startup assistance: Yes No

If yes, please specify: _____

FAT test required: Yes No

Certifications required (if applicable): _____

Comments / Additional Information:

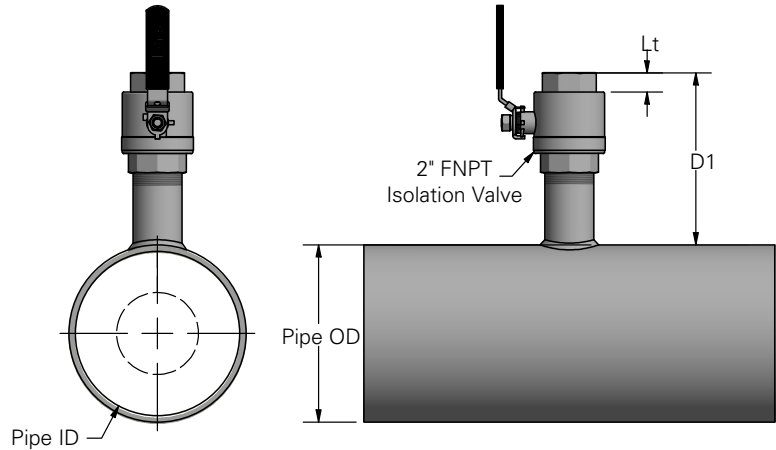
Shaft Calculator

Determine the minimum shaft length for proper insertion in the pipeline.

Off-the-shelf lengths are 20", 24", 30", 36" for insertable models. Fixed insertion models are 7" and 12".

OOD 2" MNPT Insertable

- ___ D1 (See drawing)
- + ___ Pipe Wall Thickness
- + ___ OOD Factor (3.1")
- + ___ Seal Housing Factor (5.95")
- ___ Lt (See drawing)
- = Total / min. shaft length



Legend:

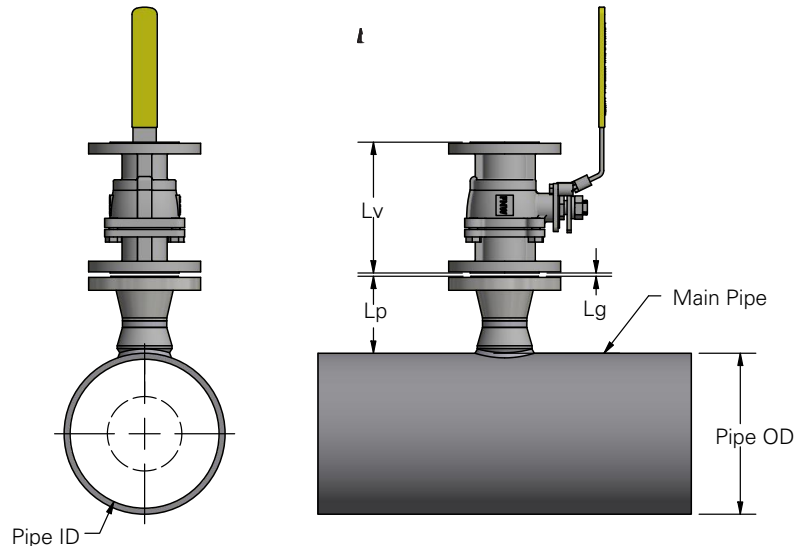
D1: Port Length + Valve Length

Lt: 2-NPT Thread Engagement (Range: 0.436" to 0.756")

*For NPT, thread engagement needs to be considered in length measurement.

OOD Flanged Insertable

- ___ Lp (See drawing)
- + ___ Lv (See drawing)
- + ___ Lg x 2 (See drawing)
- + ___ Pipe Wall Thickness
- + ___ OOD Factor (See below)
- + ___ Seal Housing Factor (6.45")
- = Total / min. shaft length



Legend:

Lp: Port Length

Lv: Valve Length

Lg: Gasket Width (Typical 0.175")

OOD Factor		
Class Rating	2" Size	3" Size
150#	2.30"	2.50"
300#	2.42"	2.67"
600#	2.80"	3.05"
900#	3.30"	3.30"

OOD Factor includes a 1" insertion distance from the Pipe ID
For 4" Connection Contact Kam

Typical Valve Lengths (Lv)		
Class Rating	2" Valve	3" Valve
150#	7.00"	8.00"
300#	8.50"	11.12"
600#	11.0"	14.00"
900#	14.50"	15.25"