



INDUSTRIAL PRODUCTS DIVISION

Sales Manual Section 110  
PRODUCT SPECIFICATION

# Model 729A Flexible Probe

## GENERAL DESCRIPTION

The Model 729A Flexible Probe is a general purpose probe designed to cover most applications where non-rigid probes are required or desired. Typical applications of the flexible probe are in large tanks where rigid probes are prohibitive or where overhead room precludes the use of rigid probes.

The standard conductor on the Model 729A is made of 316 stainless steel multi-strand cable that is offered as:

- (a) A bare cable for use in dry products,
- (b) Teflon insulated cable,
- (c) Polyethylene insulated cable.

Any of these are available with or without a lower end termination fitting. This termination fitting is constructed of stainless steel or of non-metallic material that is the same as the insulating material on the cable. The stainless steel termination fitting should only be used in dry or granular products or in non-conductive low dielectric liquid products whereas the non-metallic termination fitting is to be used only in liquid products, either conductive or non-conductive.

The Model 729A Flexible Probe can be "tailored" to meet nearly any specific application by the addition of options that are readily available. These options include:

- Weights and turnbuckle for holding the probe down.
- An "eye" (termination) for tying the probe down to the bottom of the vessel when required (liquid products only).
- Flanges either welded or screwed onto the probe gland.
- Sheaths - flexible or rigid - as required.

The standard process connection for the Model 729A is a 1" NPT male thread.



## SPECIFICATIONS

**Intrinsic Safety:** Probe is intrinsically safe when used with Robertshaw instruments which have intrinsically safe probe input circuitry.

### Temperature/Pressure Ratings:

Non-Insulated Probes .....	1,000 PSI at 100°F
	0 PSI at 350°F
TFE (Teflon) Insulated .....	1,000 PSI at 100°F
	0 PSI at 350°F
Polyethylene Insulated .....	1,000 PSI at 70°F
	500 PSI at 110°F
	0 PSI at 150°F

**Gland Capacitance** ..... 20 pf

### Probe Gain

TFE Insulated .....	60 pF/ft.
Polyethylene Insulated .....	65 pF/ft.

### Maximum Cable Pull

No Term. or St. St. Term .....	2,000 lbs.
TFE or Polyethylene Termination .....	100 lbs.

- Rugged, Durable Construction
- Insulated or Non-Insulated Cable
- Available in Lengths to 100 Feet
- Optional Materials of Construction
- Intrinsically Safe (when part of Robertshaw I.S. System)

## ENGINEERING DATA

<b>Probe Conductor Material</b> .....	316 St. St. cable
<b>Probe Length</b> .....	100 feet max.
<b>Gland Connection Size</b> .....	1" NPT
<b>Probe Diameter</b>	
Non-Insulated .....	219" O.D.
Insulated .....	3/8" O.D.
<b>Gland Material, Standard</b> .....	316 St. St.

## ORDERING INFORMATION

729A – A xxx – N O

Key Model Number . \_\_\_\_\_  
 Table 1- Gland, Cable, Termination \_\_\_\_\_  
 Table 2 – Probe Active Length (L) \_\_\_\_\_  
 Table 3 - Flange Option \_\_\_\_\_  
 Table 4 - Additional Options \_\_\_\_\_

### Key Model Number

Model No.	Description
729A	General Purpose flexible probe. Designed for use in applications where the active length is too long for rigid probes, where the ability to flex is desired, or overhead space is limited. 1" NPT process connection.

**Table 1- Gland, Cable, and Termination Assy.**

Desig.	Description
A	316 St. St. gland and 7/32" cable. No term.
B	316 St. St. gland, Teflon ins. cable. No term.
C	316 St. St. gland, polyethylene insulated cable. No termination
D	316 St. St. gland, Teflon insulated cable and Teflon termination. <b>For Liquid Products.</b>
E	316 St. St. gland, polyethylene ins. cable and polyethylene termination. <b>For Liquid Products</b>
F	316 St. St. gland and cable. 316 St. St. termination. <b>For Dry Products and low dielectric non-conductive liquid products.</b>
G	316 St. St. gland, Teflon ins. cable, and 316 St. St. termination. <b>For Dry Products and low dielectric non-conductive liquid products.</b>
H	316 St. St. gland, polyethylene insulated cable, with 316 St. St. termination. <b>For Dry Products and low dielectric non-conductive liquid products.</b>

**Table 2- Probe Active Length (L)**

Desig.	Description
xxx	Specify active length in feet. Max. length is 100 feet. Insertion length is longer than the active length by the length of the termination at the end of the cable. See page 3.

**Table 3 - Flange Option**

Desig.	Description
N	None
A	Flange screwed onto probe gland.
B	Flange welded onto probe gland.

**Table 4 - Additional Options**

Desig.	Description
0	None
1	316 St. St. rigid sheath. <b>Specify Sheath Length.</b>
2	316 St. St. flexible sheath. <b>Specify Sheath Length.</b>
3	Ground wire. <b>Specify material.</b>

### Accessories

Part No.	Description
435KB210	316 stainless steel turnbuckle
904GC305-02	2 lb. 316 stainless steel weight for flanged probe. Hardware is 300 series stainless steel
904GC305-05	5 lb. 316 stainless steel weight for flanged probe Hardware is 300 series stainless steel.
904GC338-01	2.5 lb 316 stainless steel weight for non-flanged probe
904GC338-02	5 lb. 316 stainless steel weight for non-flanged probe

### Standard Flange Sizes

1" Class 150 Raised Face
1-1/2" Class 150 Raised Face
2" Class 150 Raised Face
3" Class 150 Raised Face
4" Class 150 Raised Face
1" Class 300 Raised Face
1-1/2" Class 300 Raised Face
2" Class 300 Raised Face
3" Class 300 Raised Face
4" Class 300 Raised Face

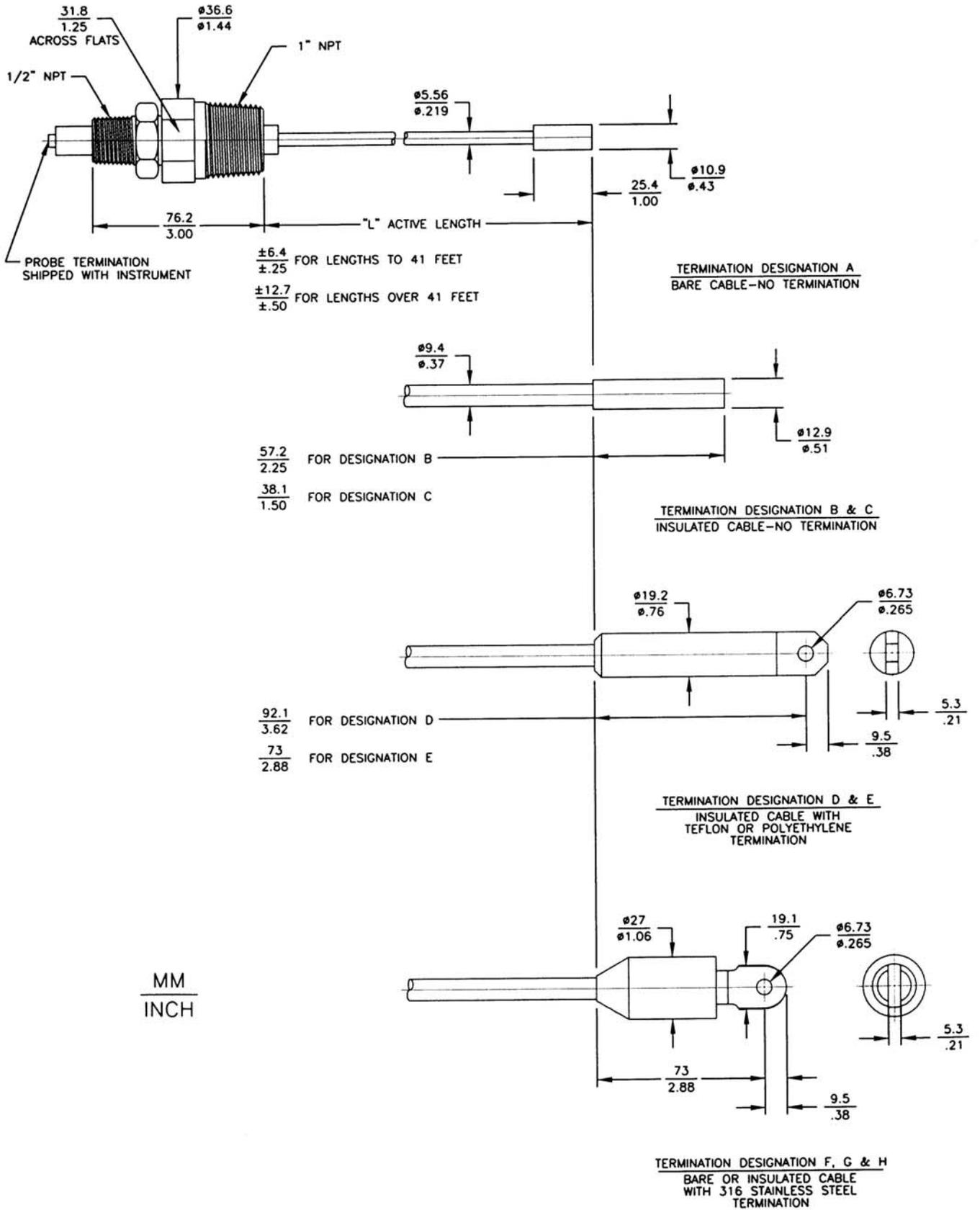
### Standard Flange Materials

Carbon Steel
316 Stainless Steel

### Ground Wire Materials

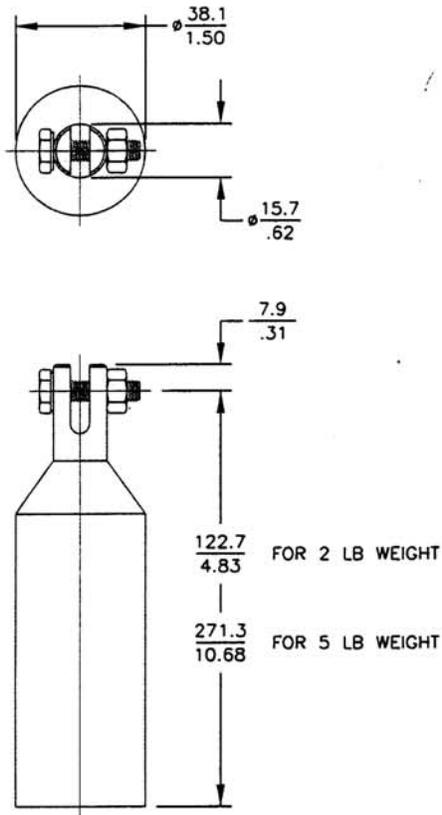
316 Stainless Steel
Monel
Hastelloy B
Hastelloy C
Tantalum

# DIMENSIONS

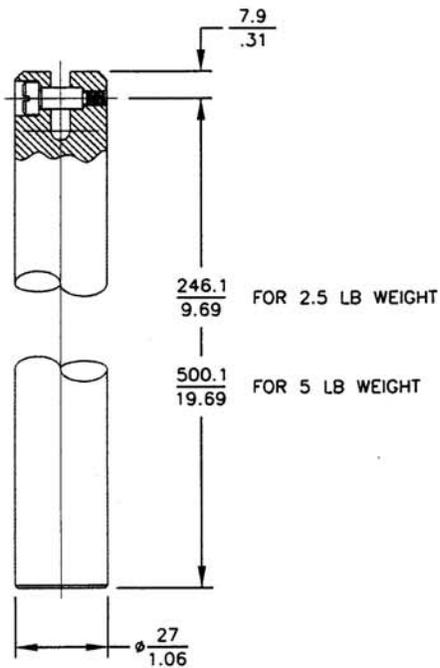


MM  
INCH

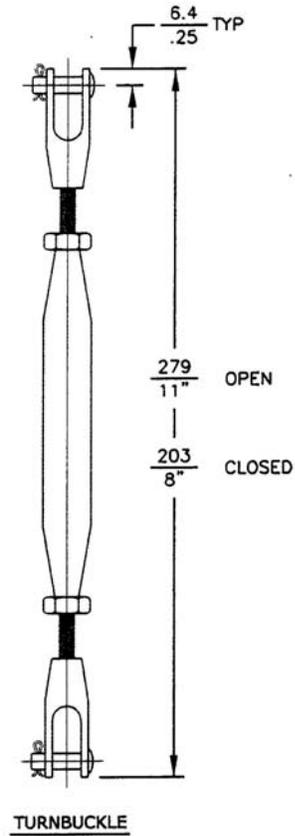
# ACCESSORIES



WEIGHT FOR FLANGED PROBE



WEIGHT FOR NON-FLANGED PROBE



MM  
INCH

*Robertshaw*

## U.S.A. and CANADA

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