GENIE® 760
Direct Drive Probe™

Genie® Direct Drive 760
Installation & Operation Instructions

(Angled Option)

Manufacturing Contact Information

A+ Corporation, LLC
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Gonzales, LA 70737

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Safety Warnings

Failure to abide by any of the safety warnings below may result in equipment failure or serious injury and death.

- Do not exceed any equipment pressure ratings
- The probe must be installed to the process line by means of the appropriate size NPT female full port ball valve
- Only the lowest wrench flats on the base, nearest to the NPT male threads, can be used when installing into the process ball valve
- **DO NOT** use the wrench flats on the packing adjustment nut, located on the top of the base, for installation into process ball valve.
- Not designed for external fire.
- Prior to use in a system, a properly sized relief device is to be installed which limits the use to 110% of the MAWP.
- This product may vent while being installed, operated, or maintained. The user should follow company safety practices concerning Personal Protective Equipment (PPE) as well as any and all OSHA, state and local regulations.

Tools Required

- 1-3/8” open end wrench
- 7/16” open end wrench
- (2) 7/8” open end wrenches
- 1-3/16” open end wrench

Fittings Required

- Appropriate size female full port ball valve

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Technical Specifications

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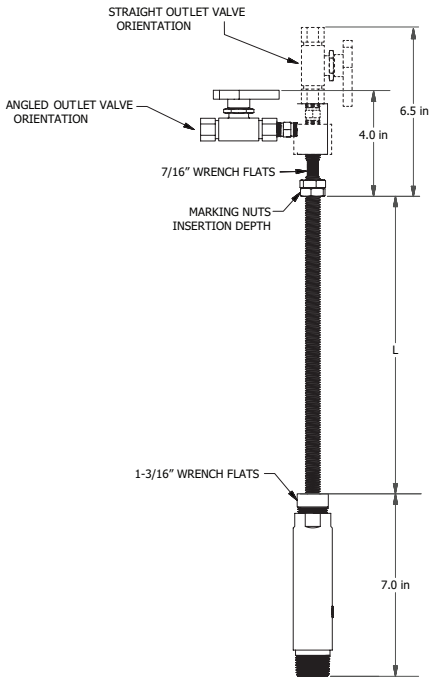
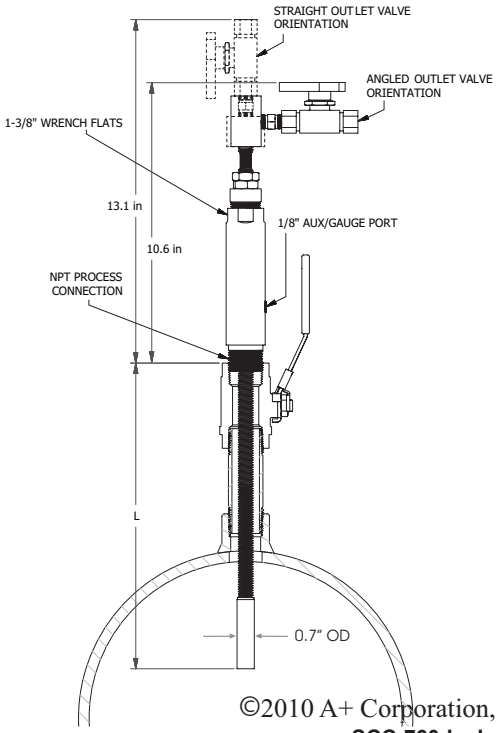
Maximum Pressure Rating	**NPT:** 3,750 psig (258.6 barg)
Temperature Range	-40 °F (-40 °C) to 300 °F (149 °C) Actual limit depends on sealing material chosen. Refer to Temperature Range Comparison Chart.
Port Sizes	**Outlet:** 1/4" FNPT **Auxiliary:** 1/8" female NPT (plugged from factory)
Probe Insertion Lengths For other lengths contact the factory.	**L:** 8", 12", 18", 24", 36", 48" Refer to dimensions on back.
Process Connection Requirements	3/4", 1" or 1.5" NPT full opening threaded or flanged valve Ball, gate and double block and bleed valves are all suitable for use as long as their inner diameter is not less than 3/4". 1" NPT or larger process connection required for seal welding.
Wetted Materials For Silcotek™ coatings, contact the factory.	***Machined parts:** 316/316L stainless steel / ISO 15156-3 compliant and Kevlar® threaded bushing **All other metal parts:** stainless steel / ISO 15156-3 compliant **Sealing material:** User defined * Other materials available on request.

Dimensions

Uninstalled



Installed



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Installation Instructions

Step 1. Install to process valve

- Be sure the ball valve to the process line is closed
- Apply a thread sealant, such as Teflon® Tape, to the male threads on the bottom of the probe
- Install the probe to the process ball valve using a 1-3/8" open end wrench **ONLY** on the lowest wrench flats on the base, nearest to the NPT male threads (see Figure 1)

Step 2. Pressurize the probe

- Be sure the valve on top of the probe (outlet) is closed
- Slowly open the ball valve to the process (see Figure 2)

Step 3. Lowering the probe to proper depth

- Decide the depth needed for the probe (D1) by determining from the top of the full port process ball valve to the desired end of the probe in the pipeline (see Figure 4)
- Apply the depth (D1) to the probe from the top of the base up the threaded rod to determine the lowering stopping point (see Figure 3)
- Install the 2 depth marking nuts on the threaded rod at the predetermined lower stopping point. Using 2 7/8" open end wrenches, rotate the upper nut clockwise and the lower nut counterclockwise simultaneously until the nuts are locked firmly in place.
- Lower the probe to the proper depth by using a 7/16" open end wrench only on the wrench flats of the threaded rod of the probe (Figure 5).

Step 4. Leak testing the probe connections

- Using a leak detector, check for leaks at the following locations: 1/4" NPT probe outlet, process connection, probe packing seal, and additionally any other connection made during the probe installation.
- If leaking occurs through the probe packing gland, use a 1 3/16" open end wrench to tighten the packing seal plug until the leak stops. DO NOT OVERTIGHTEN.
- The amount of torque required to seal the packing gland will vary with process conditions and the sealing material. Seals with higher durometer require significantly more torque than lower durometer seals. These seals, at higher pressure, may require as much as 80 ft-lbs of torque to produce a leak tight seal. This table (left) shows the durometer hardness of elastomers available for Genie® Direct Drive™ Probes.
- Be aware that the packing gland may need to be tighten periodically as conditions change or as the packing material wears during insertion/retraction.

20 ft-lbs of torque [MIN]

LOWER DUROMETER
Neoprene
Fluoroelastomer (FKM) Perfluoroelastomer (FFKM)
RGD resistant HNBR
RGD resistant HNBR 985 FKM Compound VG109-90 Peroxide Cured Buna
HIGHER DUROMETER

80 ft-lbs of torque [MAX]

Figure 1

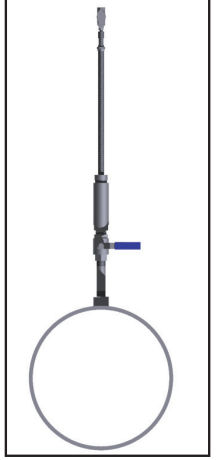


Figure 2

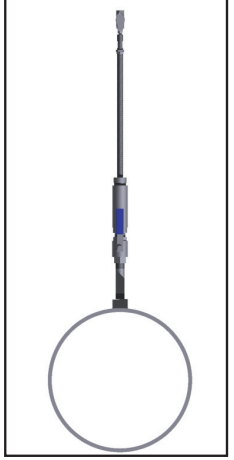


Figure 3

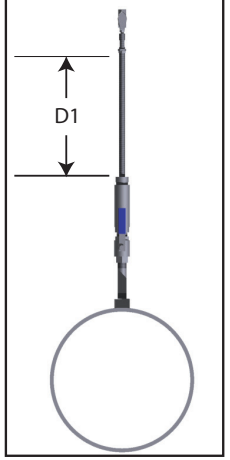


Figure 4

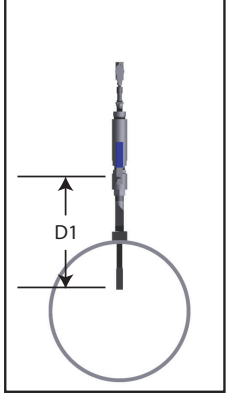
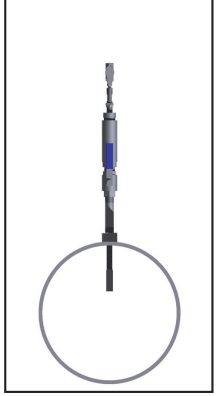


Figure 5



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Model Numbering & Additional Part Numbers

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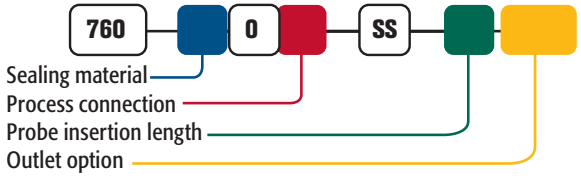
Your model number is determined by your specific needs. Choose options below.

Sealing material	J9 = RGD resistant HNBR 985 (Typically used with liquefied gases) 0 = Neoprene rubber	(other materials available upon request)
Process connection	3 = 3/4" NPT	4 = 1" NPT 6 = 1.5" NPT
Probe insertion length (L)	8, 12, 18, 24, 36, 48 inches	
Outlet option	Blank = Angled, with valve V = Straight, with valve	NV = Angled, no valve VNV = Straight, no valve (133PA option)
Sealing material replacement (Packing Gland)	Part # 760-5J90 for RGD resistant HNBR 985	Part # 760-570 for PTFE/Neoprene rubber (sold separately)
Speed wrench	Part # ACC-SW (sold separately)	
Optional gauge	Part # ACC- Q14KC (0-4,000 psig, sold separately)	

How to build the model number:



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