

# Genie<sup>®</sup> Direct Drive 755 Installation & Operation Instructions

#### Information Manufacturing Contact

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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
- > The wrench flats on the threaded rod must be used when lowering or raising the probe to the correct depth after it is installed
- > DO NOT use the wrench flats on the packing adjustment nut, located on the top of the base, for any installation or operation purposes
- 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.
- > Do not use regulator as a shut off devise.

# 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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U.S. Patents 8.522.630; 9.200.986





# **Technical Specifications**

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Maximum Pressure Rating	NPT: 3,750 psig (258.6 barg) Unibody flanged: Dependent upon flange ANSI classification	
<b>Temperature Ranges</b> For other temperatures, contact the factory.	Type 6 membranes: -35°F (-37°C) to 185°F (85°C) *Type 7 membrane: Up to 270°F (132°C) * Actual limit depends on sealing material chosen. Refer to Temperature Range Comparison Chart.	
Port Sizes	Outlet: 1/4" female NPT Auxillary: 1/8" female NPT (plugged from factory)	
Probe Lengths	L: 8", 12", 18", 24", 36", 48" A: ~ 20", 24", 30", 36", 48", 60" (refer to L & A dimensions on back	
Outlet Pressure Range psig (barg)	0-10 (0-0.7), 0-25 (0-1.7), 0-50 (0-3.4), 0-100 (0-6.9), 0-250 (0-17.2), 0-500 (0-35.4)	
Process Connection Requirement	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	Machined parts: 316/316L stainless steel /NACE compliant & Kevlar® threaded bushing All other metal parts: stainless steel / NACE compliant Sealing material: User defined Regulator seat material: PFA Membrane: inert	
Maximum Recommended Flow Rate Dependant on source pressure. See chart.	1000 1000	





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Figure 4



Figure 5



# Installation Instructions

### Step 1. Install to process valve

- > Customer must fit a valve on the top of the probe to their specifications
- Apply a thread sealant, such as Teflon® Tape, to the male threads on the bottom of the probe
- > This valve must remain closed until the duration of installation

#### Step 2. Pressurize the probe

• Remove NPT plug labeled gauge/vent and install line pressure gauge if desired. (Optional)

#### Step 3. Pressurize the probe

- > Rotate the regulator pressure adjustment screw fully counter clockwise until it rotates freely.
- Close the ball valve on the regulator outlet, if so equipped.
- Slowly open the 3/4" ball valve to the process (see Figure 2)

## Step 4. 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 or optional speed wrench (Part ACC-SW) only on the wrench flats of the threaded rod of the probe (Figure 5).

### Step 5. Leak testing the probe connections

- Using a leak detector, check for leaks at the following locations: 1/16" NPT probe outlet to the closed customer supplied ball valve, 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, such as our RGD resistant HNBR and RGD resistant HNBR 985, will require significantly more torque than the standard seals. These seals, at higher pressure, may require as much as 75 ft-lbs of torque to produce a leak tight seal.
- Be aware that the packing gland may need to be tighten periodically as conditions change or as the packing material wears during insertion/ retraction.

#### Step 6. Setting outlet pressure

- At this point the sample pressure can be adjusted to the desired value. This is accomplished by turning the pressure adjustment screw clockwise. To allow sample flow, slowly open external valving.
- At high supply pressure, a sudden change may be observed on the downstream pressure gauge as the valve stem moves away from the seat. Slight readjustments may be necessary until the pressure and flow have equilibrated.
- > Tighten the pressure adjustment screw lock nut firmly against the washer to prevent unintended changes in pressure adjustment.



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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	0 = PTFE/Neoprene rubber J = RGD resistant HNBR (other materials available)	le upon request)	
Membrane type	6 = Better Rejection; Rejects ALL types of liquids from vapor 7 = Highest Temps; Rejects ONLY high surface tension liquids		
Process connection	3 = 3/4" NPT $4 = 1"$ NPT $6 = 1.5"$ NPT (contact factory for flam)	ged options)	
Outlet pressure range (psig)	00 = 0-25 01 = 0-50 02 = 0-100 03 = 0-250 P4 = 0-500	09 = 0-10	
Regulator outlet port	1 = 1/4'' MNPT to $1/8''$ tube connector $4 = 1/4''$ FNPT	4 = 1/4"FNPT	
Probe insertion length (L)	8, 12, 18, 24, 36, 48 inches		

#### How to build the model number:



#### Spare Parts & Accessories (sold separately)

- Sealing material replacement\* Part # 75X-5\_0
- Complete membrane assembly replacement\*
  Part # 75X-CMA-506 (contains 1 complete assembly)
- Regulator seat cartridge assembly replacement\*- Part # 755-7\_1SS (Use for serial #48766 and greater. Contact factory for others.)
- Speed Wrench for faster installation- Part # ACC-SW
- Manifold with pressure gauge, ball valve, & relief valve for ordering information, refer to the Genie Probe Regulator Accessory Manifold product sheet
- KOZY insulated probe and valve covers- for ordering information, refer to the KOZY Assemblies product sheet
- Threaded flange contact factory for your specific requirements





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