



Process Tech Tips

with Dan Purkat

Husky 1050e FAQs



PROVEN QUALITY. LEADING TECHNOLOGY.



Q: Why specify a **Husky1050e** instead of an AODD?

A: Electric operation is preferred, lack of available air, more control is desired (electronic and pressure), improved metering accuracy, replacement of existing electric pump.



Q: How do I specify a **Husky 1050e**?

A: The fluid section material and internal wetted components are specified the same as an AODD. At that point, we need to determine if the end user has compressed air available and what input voltage they require.

*Note: all cart mounted units are specified with a **BLDC** motor and **GMC**.*



Q: Why does the **Husky 1050e** require compressed air? (most frequently asked question)

A: An air compressor is needed to maintain fluid outlet pressure, allows the pump to stall under pressure (**Graco exclusive**), ability to reduce pulsation, and increases diaphragm life.

Process & Transfer Equipment Division (PTE)



Q: How do I determine the correct pressure setting?

A: Using the **Pressure Loss Calculator**, determine the pressure loss across the outlet line and set pressure to 10 psi above that result.
Note: max inlet air pressure is 80 psi



Step One - Calculate the Fluid Specific Gravity (Gram/cc).

0	Density (Pounds/ Gal.)	0	Fluid Specific Gravity (Grams/cc)
---	------------------------	---	-----------------------------------

Step Two - Calculate expected fluid flow rate.

Fluid pressure required at the Dispense point	5	psi
Dispense Point Orifice Size	0	In.
Fluid Specific Gravity	1	Gram/cc
Fluid Flow Rate	0.00	gpm

Step Three - Calculate the friction loss in the line.

Flow Rate	30	gpm
Overall fluid line length	100	ft.
Line I.D.	1	in.
Fluid Viscosity	1	cps.
Fluid Specific Gravity	1	grams/cc
Vertical Rise	15	ft.
Head Pressure	68	ft.
Pressure Loss	30	psi
Volume of fluid in the line	4.08	gallons
Fluid Velocity	735	ft/min

Step Four - Select a pump based on the following information.

Fluid pressure required at the Pump outlet	35	psi
Fluid flow rate required at the Pump outlet	30.00	gpm

Recommended cycle rate for a continuous duty pump circulation system (PCS) is 12 cpm.
 Recommended cycle rate for an intermittent duty, dead headed spray system is 20 cpm.

THE INFORMATION IN THIS SPREADSHEET IS FOR REFERENCE USE ONLY

PROVEN QUALITY. LEADING TECHNOLOGY.



Q: How much air does the **Husky 1050e** consume?

A: When using in standard flow mode, the **Husky 1050e** will consume approximately 0.2 CFM/H.

Note: more air will be consumed when used in low pulsation mode based upon the desired outlet fluid pressure.

Process & Transfer Equipment Division (PTE)



Q: What input voltages are available?

A: Units fitted with AC motors can be supplied with **208-230 VAC** single-phase or **460 VAC** three-phase input. If **120VAC** single phase voltage is desired, a unit with a **BLDC** and **GMC** must be specified.

Note: all AC motors are convertible 230/460 VAC and are prewired for 460VAC.

PROVEN QUALITY. LEADING TECHNOLOGY.

Q: Can I get a **Husky 1050e** pump with a **BLDC** motor without a **Graco Motor Control (GMC)**?

A: No. The **GMC** is needed to not only control flow rates, batch sizes, etc., but also to convert the AC input voltage to DC.





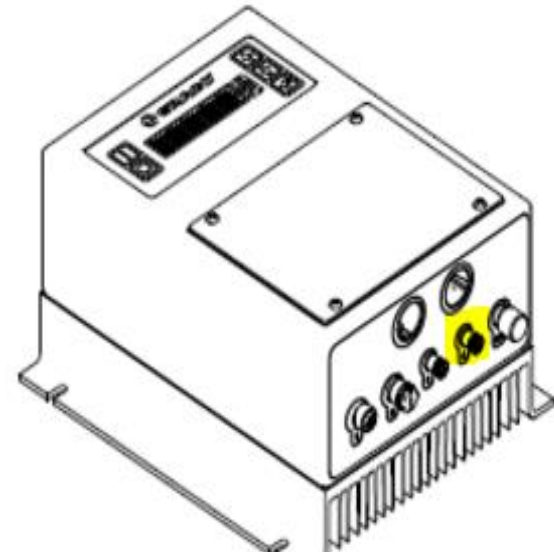
Q: If I specify an AC motor, why do I need a **VFD**?

A: A **VFD** is required not only for speed control (*to control the fluid flow of the pump*) but also for the soft start required for the 2HP, three-phase motor (*we use a 20 second to 60 Hz ramp for our life and performance testing*).

Q: How do I control the pump remotely?

A: Using port 4 on the **GMC**, the pump will accept a **digital Start/Stop** input and an **analog 4-20mA** input to control pump speed. **VFDs** will also accept these inputs.

Note: See page 21 and 32 of manual 334188.



Q: Can I monitor my batches/pump speed (from **GMC** LED readout) remotely?

A: No. The **GMC** currently has no data output provision, it will only accept PLC **input**. It is important to remember, however, that the **GMC** can be remotely mounted. Such as, in a control room next to a PLC where batches, etc. can be monitored.



Q: Can I get a **Husky 1050e** without a motor?

A: Yes, the **Husky 1050e** is available without a motor with a **NEMA** or **IEC** flange gearbox (**NEMA 56C** or **IEC 90 flange face**).

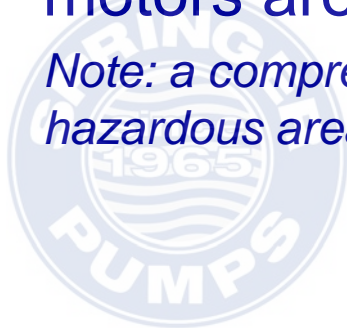
*Note: a **Husky 1050e** ordered without a motor cannot be specified with a compressor. A compressor, if needed, must be ordered separately.*



Q: Is there an explosion-proof **Husky 1050e** option?

A: Yes, Graco can fit the **Husky 1050e** with an **ATEX** certified or **Class 1, Division 1** explosion-proof motor. However, these units cannot be specified with a compressor as the compressor motors are not explosion-proof.

Note: a compressor can be ordered separately and mounted outside the hazardous area.



Q: What is the maximum amp draw of the **Husky 1050e**?

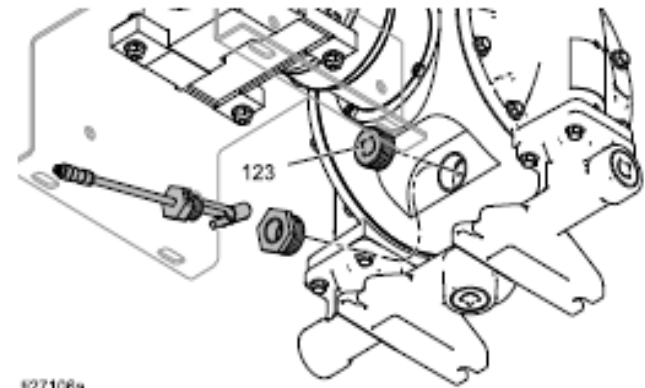
A: The max amp draw of the **Husky 1050e** is as follows:

- **Motor**

- BLDC with GMC: 16A
- AC motor (230VAC three-phase): 5.7A
- AC motor (460VAC three-phase): 2.85A
- AC motor ATEX (230VAC three-phase): 5.44A
- AC motor ATEX (460VAC three-phase): 3.14A
- AC motor CL 1, DIV 1(230VAC three-phase): 5.2A
- AC motor CL 1, DIV 1(460VAC three-phase): 2.6A

- **Compressor**

- 120VAC: 3.1A
- 240VAC: 1.3A



627106a

Q: Is a leak detector necessary?

A: Realistically, yes. A leak detector will alert the **GMC** or **VFD** of a leak and discontinue operation of the pump. This is especially important if the product being pumped is reactive or corrosive to the internal components of the center section.

Q: How do I wire the leak detector?

A: With the BLDC motor and GMC it is as simple as plugging the M8 cable into port 3 on the GMC. With AC motors, the leads must be wired into the VFD. **Black** wire to terminal 1, **Blue** wire to terminal 4, and a jumper wire between terminals 4 and 13A. This information is available in manual 334188, page 19.

Note: Leak detectors require an extension cable (except when wiring a cart mounted unit) . Cables are available in 10, 25, and 50 ft lengths.