

# FLOWMETERS

FLOW CONTROL EQUIPMENT



## INTRODUCING A NEW 3-GAS FLOWMETER FROM HARRIS.

The Model 32 flowmeter is calibrated to be used with argon, carbon dioxide, or nitrogen. It is an economical choice because it's unique versatility requiring stocking only one flowmeter for a multitude of different gas applications. For additional gas applications other than the direct reading argon, nitrogen and carbon dioxide see the "gas conversion" information included.

### 3 GAS FLOWMETER

MODEL SHOWN:  
32

# 32

MODEL

1 YEAR WARRANTY



### DESCRIPTION

The Harris Model 32 flowmeter is calibrated for use with three different gases: argon, carbon dioxide and nitrogen. No tools are required to change to a different gas. The outer tube contains calibrated scales for each gas. To select the gas, simply rotate the outer tube until the proper gas is displayed. The Model 32 flowmeter is compensated at 50 PSIG with flows up to 80 SCFH. The flowmeter is designed so that it can be rotated to have the inlet/outlet to the right or left depending on the configuration needed. Inlet/outlets for the Model 32 are sold separately. See the related items below to select the proper inlet/outlet.

**Capacity:** Heavy Duty

**Gauges:** None

**Seat:** Bronze

**Body:** Brass

**Certifications:** E-8

**Accuracy:** +/- 5% of full range

**Where Used:** Gas-shielded welding and other industrial applications

**Related Items:** Inlets/Outlets\*

- 1/4" – NPT (M) X 1/4" – NPT (M)  
Fitting: P/N: 9000200
- 1/4" – NPT (M) X 5/8" – 18 (M)  
Fitting: P/N: 8800527
- 1/4" – NPT (M) X 5/8" – 18 (F)  
Fitting: P/N: 9000371

**Weight:** 1.2 lbs. / .544 kg.



PART NO.	MODEL NO.	GASES	MAX. FLOW CAPACITY SCFH	COMPENSATED PSIG	MAX. INLET PSIG	INLET CONNECTION	OUTLET CONNECTION
5400839	32	Ar, CO <sub>2</sub> and N <sub>2</sub>	Ar 10-70, CO <sub>2</sub> 10- 60, N <sub>2</sub> /Air 10- 80	50	200	1/4" NPT (F)	1/4" NPT (F)

\*The Model 32 is shipped without inlet or outlet. Select desired fittings from inlets / outlets above and use PTFE teflon tape.

## HOW TO USE OTHER GASES THROUGH CALIBRATED FLOW DEVICES

Flow control devices like the Harris Model 32 can be used for gases other than those that it is calibrated for. Accurate flow rates for virtually any other gas can be determined by using the calculated scale on the flowmeter and the proper gas correction factor (C.F) for the gas being used. Harris recommends using only gases that are not flammable and are compatible with the materials use in the constructions of the flow device being used.

### OBSERVED GAS FLOW X CORRECTION FACTOR (C.F.) = ACTUAL GAS FLOW

Example: Determine actual argon flow through a flow device calibrated for Nitrogen

### NITROGEN TUBE READING X C.F. (FROM CHART) = ACTUAL ARGON FLOW

$$20 \text{ SCFH} \times 0.94 = 18.8 \text{ SCFH}$$

## CORRECTION FACTORS FOR SOME COMMON GASES AND GAS MIXTURES WHEN USING NITROGEN FLOWMETER

GAS	CORRECTION FACTOR	GAS MIXES	CORRECTION FACTOR
OXYGEN	0.94	Ar 75% / CO <sub>2</sub> 25%	0.824
ARGON	0.84	Ar 90% / CO <sub>2</sub> 10%	0.83
HE	2.64	Ar 98% / O <sub>2</sub> 2%	0.84
H <sub>2</sub>	3.74	Ar 90% / He 8% / CO <sub>2</sub> 2%	0.87
AIR	0.98	-	-
CO <sub>2</sub>	0.80	-	-

Turn to the  
**HARRIS**  
Pros

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