

C-2C-GCTH

Detonation protection for MESG ≥ 0.28 mm



GAS / VAPOR SCOPE
MESG ≥ 0.28 mm

CONFIGURATION
Concentric

CONNECTION
2 in. nominal

APPLICATION
Propylene oxide

C-2C-GCTH concentric detonation flame arrester.

A dedicated detonation flame arrester for propylene oxide vapor-control service and gases with a maximum experimental safe gap (MESG) of 0.28 mm and above. Selection is based on the actual gas or vapor mixture, service conditions and the specified configuration.

Defined MESG scope

The specified threshold is 0.28 mm and above. Confirm the actual mixture and service conditions with Paradox IP LLC.

Serviceable construction

Removable element construction supports cleaning and replacement. Instrument and drain ports are optional.

Bi-directional protection

Staged crimped-ribbon cells and screen sections quench the flame front and attenuate the pressure wave.

Service-specific materials

Housing, element and gasket materials must suit the process. A 316L / ePTFE gasket is specified for propylene oxide service.

DRAWINGS & INSTALLATION

Installation dimensions are under review. Request a confirmed product drawing before laying out piping, supports or installation clearances.



C-2C-GCTH / TECHNICAL DATA

Specification overview

Initial pressure is absolute (psia); hydrostatic test pressure is gauge (psig).

Model	C-2C-GCtH
Gas / vapor scope	MESG $\geq$ 0.28 mm (0.28 mm and above)
Arrester type	In-line, bi-directional detonation flame arrester
Nominal connection	2 in.; concentric configuration
Standard flange	ASME Class 150 raised face
Installation	Vertical or horizontal, subject to application review
Housing	Carbon steel; 304 / 316L stainless steel or Hastelloy options
Element	Crimped metal ribbon; 304 stainless steel with 316-series stainless steel or Hastelloy options
Propylene oxide gasket	B16.20 Teadit Style 942 Campro; 316L / ePTFE
Maximum initial pressure	22.7 psia
Operating temperature	-17 °C to +60 °C
Hydrostatic test pressure	350 psig
Flame-test basis	USCG 33 CFR; hydrogen

USCG approval: 2 in. concentric C-2C-GCtH, file 16703/2019-12-19T003937, dated January 17, 2020.

The C-2C-GCtH product package includes its air-flow capacity curve and a 19-point capacity table. SCFH means standard cubic feet per hour of air at 60 °F and 14.7 psia (standard atmospheric pressure at sea level).

For a quotation, identify C-2C-GCtH and provide gas or vapor composition, MESG, operating conditions, required flow, allowable pressure drop and material requirements.

Publication updated 2026-10-28. Technical basis: Rev. 3 / February 4, 2020.

Confirm the current technical revision, application limits and model-specific approval or acceptance before use.

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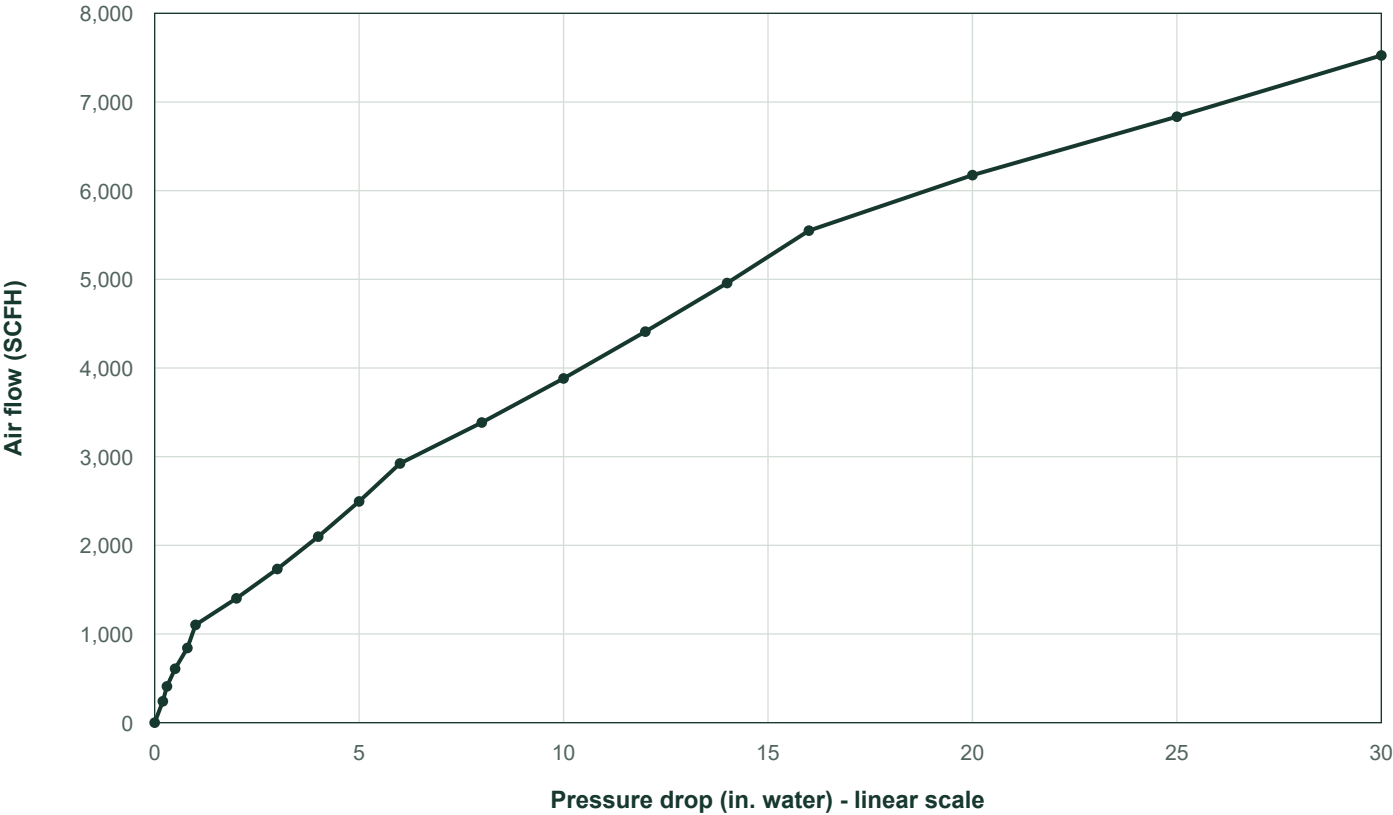
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C-2C-GCtH

MESG ≥ 0.28 mm | Air-flow capacity

AIR-FLOW CURVE



ΔP (in. water)	Flow (SCFH)
0	0
0.2	241
0.3	409
0.5	608
0.8	842
1	1,103
2	1,402
3	1,733
4	2,098
5	2,495
6	2,923
8	3,385
10	3,882
12	4,410
14	4,958
16	5,549
20	6,175
25	6,834
30	7,525

Points joined by straight segments; no extrapolation or capacity conversion applied.

Test medium: air. SCFH = standard cubic feet per hour at 60 °F and 14.7 psia (standard atmospheric pressure at sea level).

Confirm application-specific flow and pressure-drop requirements with Paradox IP LLC.