

EverGreen

Minimal environmental impact well effluent burner

APPLICATIONS

- Exploration and development well testing and cleanup operations
- Operations in environmentally sensitive areas offshore and onshore
- Heavy and waxy oil production

BENEFITS

- Reduces environmental impact during well testing
- Provides an efficient and cost-effective alternative to oil storage for midsize flow rates.
- Accommodates low oil flow rates and adverse wind conditions

FEATURES

- Third-party certification of environmental performance
- Fallout-free and smokeless combustion
- Operational efficiency with up to 25% water cut
- Built in shutoff valve for fallout prevention
- Integral design of water screens
- Large operating range with optional multirate kit



Simulated EverGreen minimal environmental impact well effluent burner efficiently disposing of well effluent in an environmentally sensitive area.*

The EverGreen burner is a single-head, 12-nozzle well test oil burner for onshore and offshore exploration and development well testing and cleanup. It provides an efficient and cost-effective alternative to oil storage for midsize flow rates and where there is a lack of existing infrastructure. Typical flow rates are up to 15,000 bbl/d, but cases have exceeded 17,000 bbl/d.

With the industry's only third-party certification of performance, the EverGreen burner achieves fallout-free and smokeless combustion of liquid hydrocarbons produced during well testing. The burner geometry makes extensive use of pneumatic atomization and enhanced air induction. The burner is equipped with twin pilots, a flame-front ignition system (BRFI), and a built-in water screen to reduce heat radiation. The EverGreen burner is also fitted with an automatic shutoff valve that prevents oil spillage at the beginning and end of a burning run. A high turn-down (1:5) feature can be further extended to 1:30 using the multirate kit (BMRK) option, which enables you to flow a large range of flow rates. For onshore operations, a special skid (EBSK) is available.

The EverGreen burner is highly efficient with all types of oil, particularly heavy and waxy oils. The EverGreen burner can operate effectively with up to 25% water cut, which makes it ideal for cleanup operations. Because it eliminates liquid fallout and oil dumping at the end of a burn sequence and reduces overall emissions generation, the EverGreen system is particularly well suited for operations in environmentally sensitive areas.

Specifications

	BRNH-A	BRNH-B
Number of nozzles	12	1
Nozzles size, in [mm]	0.75 [19]	0.75 [19]
Working pressure, psi [kPa]	960 [6,619]	960 [6,619]
Test pressure, psi [kPa]	1,440 [9,929]	1,440 [9,929]
Min. operating temperature, degF [degC]	-4 [-20]	-4 [-20]
Min. oil flow rate, bbl/d [m ³ /d] at psi [kPa]	3,000 [477] at 40 [276]	250 [40] at 40 [276]
Max. oil flow rate, bbl/d [m ³ /d] at psi [kPa]	15,000 [2,385] at 240 [1,655]	1,250 [199] at 240 [1,655]
Min. oil flow rate with multirate kit, bbl/d [m ³ /d] at psi [kPa]	500 [80] at 40 [276]	na
Max. oil flow rate with multirate kit, bbl/d [m ³ /d] at psi [kPa]	15,000 [2,385] at 240 [1,655]	na
Max. water cut, %	25	25
Min. air pressure, psi [kPa]	120 [827]	120 [827]
Air flow rate requirement, ft ³ /min per bbl/d [m ³ /min per m ³ /d]	1,000 per 1,500 [28.3 per 239]	85 per 125 [2.4 per 19.9]
Water shield flow rate requirement, bbl/d [m ³ /d] at psi [kPa]	15,000 per 150 [2,385 per 1,034]	na
Heat radiation	To be simulated with ArchiTest* well test design and methodology software	na
Noise	To be simulated with ArchiTest software	na
Overall dimensions (L × W × H), ft [m]	14.8 × 4.1 × 8.2 [4.50 × 1.25 × 2.50]	11.5 × 3.1 × 4.9 [3.50 × 1.00 × 1.50]
Weight, lbm [kg]	2,072 [940]	331 [150]
Water screen, lbm [kg]	110 [50]	na
Transportation package, lbm [kg]	353 [160]	na
Accessories (optional)		
BRFI	Available	Available
BMRK, 500–15,000 bbl/d [80–2,400 m ³ /d]	Available	na
EBSK	Available	na

Connections, Codes, and Certifications

Connection	Oil Inlet	Air Inlet	Water Inlet	Propane Pilot Inlet	Flame-Front Ignition Inlet
BRNH-A	3-in figure 206 female	4-in figure 206 female	3-in NPT [†]	½-in NPT	1-in NPT
BRNH-B	2-in figure 206 female	2-in figure 206 female	na	½-in NPT	1-in NPT

Applied Code

Applied Code	Certification
BRNH	ANSI/ASME B31.3, H2S (NACE MR 0175)
BRFI	Third-party certifications, ATEX (Explosion proof: EExd [‡] IIB T4), CE marked

All specifications are subject to change without notice.

[†] National pipe tapered threads

[‡] Induction motors certified for explosive areas