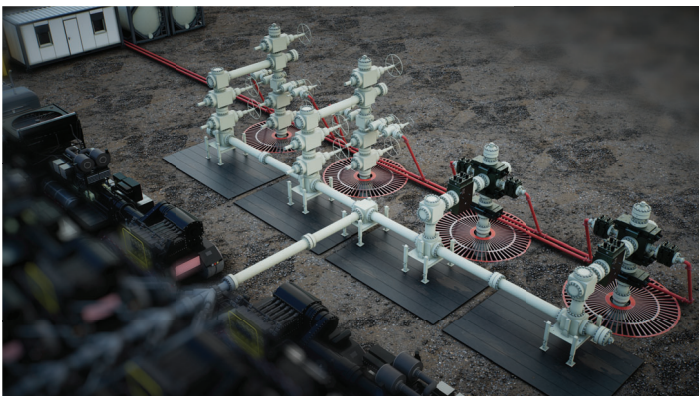




VANGUARD SGV

REDEFINING VALUE FOR FRAC VALVES

- Innovative design features independent up and downstream sealing
- Grease-free systems
- Redundant and sand tolerant seals in each valve eliminate NPT
- Compact Hydraulic Design drives efficiency and safety
 - Enhanced logistics efficiency, 50% fewer truckloads
 - Integrated tree and zipper in single lift
 - Enhanced nipple-up/nipple-down efficiency
 - Eliminate working at heights
 - Eliminate manual work in red-zone
 - Actuation may be manual via hand pump or fully automated.



The Vanguard SGV allows for a rapid rig-up and simple site layout using a mono-bore zipper system based on hoses connections and mounting all control valves to the respective trees. Note that no grease system is required.

Shown above the Vanguard SGV 7-1/16" 15psi RWP tree is shown in the foreground. The compact height allows all connections to be made-up without working at heights.





TECHNICAL SPECIFICATIONS FOR VANGUARD SGV

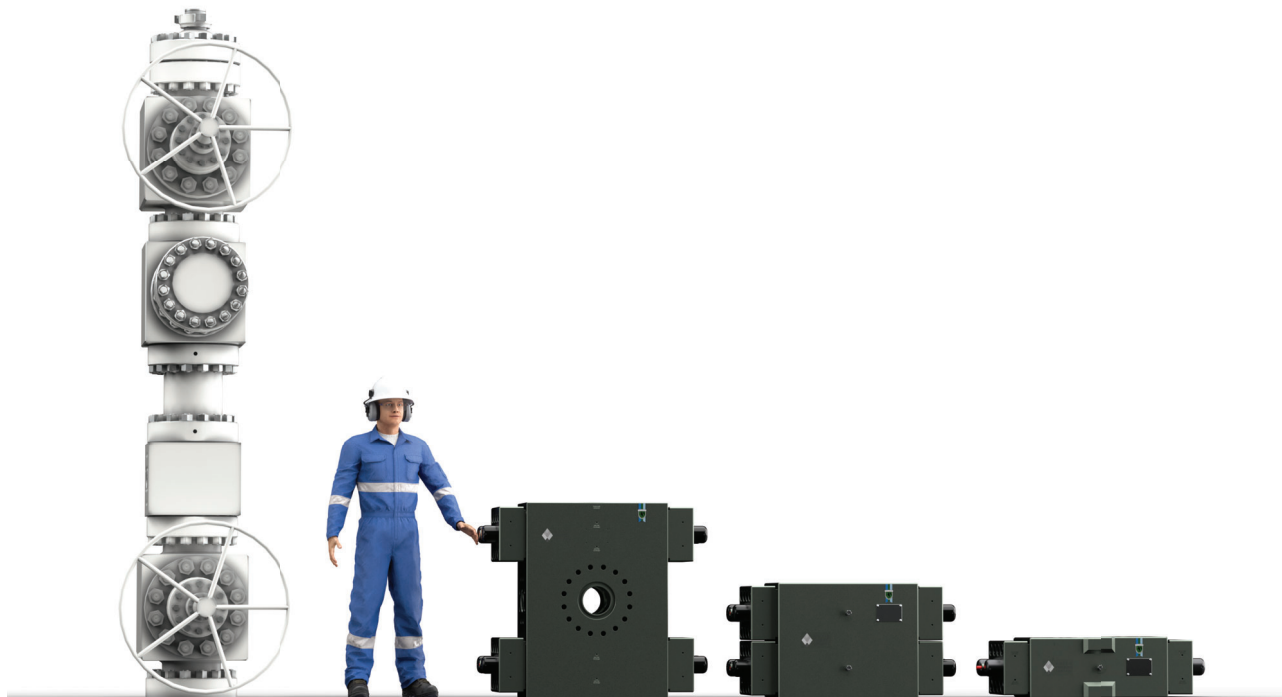
StackLite SGV Model Number:	Vanguard SGV 7-15M-DD-250
SGV Operator type:	Stemless Hydraulic Gate Valve, Pressure Balanced

Design Data	
Bore Diameter Size	7-1/16 inches
Working Pressure Rating:	15,000 PSI
Design Standard	API 6A
Temperature Class	API 6A Class U (0F to 250F) *(API 6A Class P+U (-20F to 250F) and API 6A Class L+U (-50F to 250F))
Seal Configuration:	Redundant top and bottom seals, Bi-directional.
Sour Service	Yes, NACE MR0175
Product Specification Level	PSL 2, PSL3, PSL3G, PSL4 on request
Material Class:	DD standard, EE, FF, HH, etc specified per customer requirements
Differential Pressure Breakout	Valve is designed to be opened under full differential
Performance Requirement	PR2, PR2F

Performance Data	
Maximum Hydraulic Function Pressure	15,000 psi
Actuator Volume	Hydraulic actuation with position indicator; 2.7 gal
Acceptable Hydraulic Fluid	All common water or oil-based control fluid

*available on request

Vanguard SGV - Frac Valve - Highly Compact Solution (7-15M)



Conventional 7-15M Stack
13.9 ft # tall

6 ft Tall Person

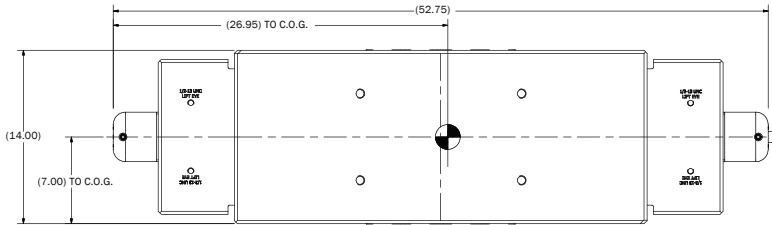
Vanguard SGV Double is 3.6 ft tall w/ 7-15M side inlet

Vanguard SGV Double is 2.2 ft tall

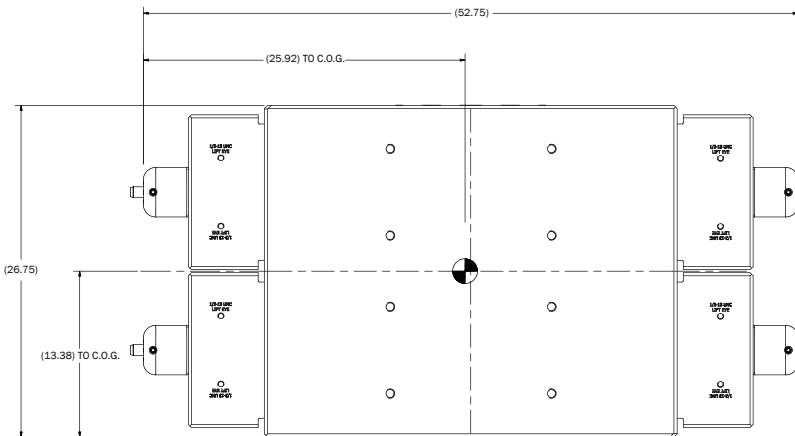
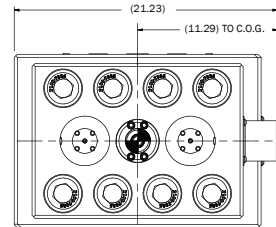
Vanguard SGV Single is 1.2 ft tall



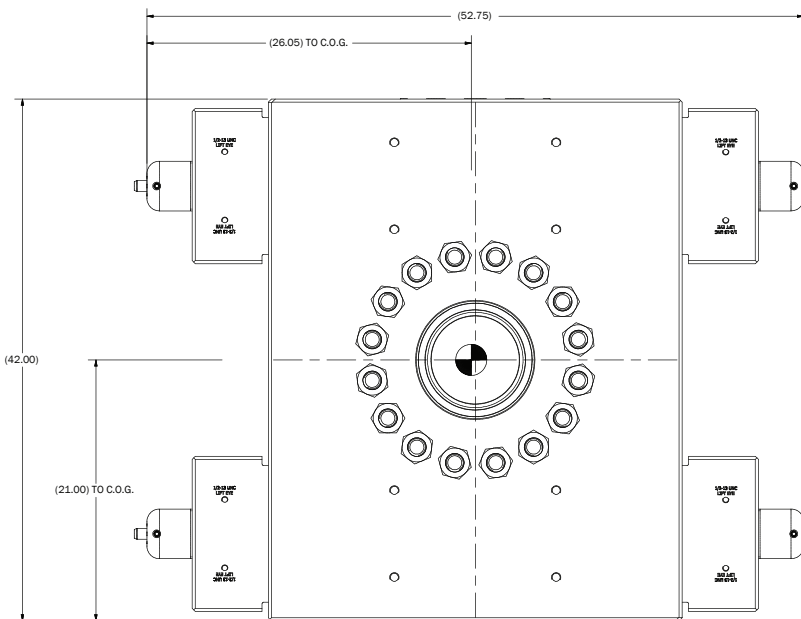
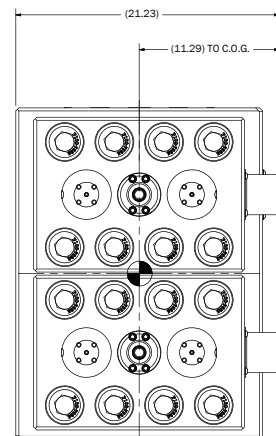
TECHNICAL DATA FOR VANGUARD SGV



Note weight = 3,163 lbs



Note weight = 5,972 lbs



Note weight = 8,589 lbs

