Artificial Lift Services

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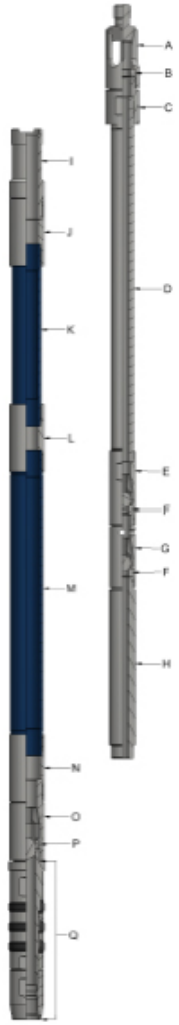
Q2–GAS COMPRESSION PUMP

Design

For extreme gas handling demands, the QALS Gas Compressor Pump is effective in overcoming gas locking in deep wells. It's robust construction and 2-stage compression design efficiently moves gas through the pump: this is particularly important when pumping beneath a packer. The use of a mercury style plunger, with its increased wall thickness and spray-metal coating, greatly increases rigidity and wear resistance over other 2-stage designs. Maximum gas handling performance is available at extreme depths, up to 13,000 ft. Upgraded materials can also be selected to combat damage due to corrosive well bore conditions.



The first stage of compression occurs on the down stroke. Gas containing fluid is compressed between the standing valve and the lower travelling valve until the lower travelling valve opens and fluid is forced through the port assembly into the annular compression chamber between the lower barrel and the upper plunger. The second stage of compression occurs during the upstroke as the fluid is forced back through the port assembly, through the upper travelling valve and into the upper plunger. From there it can be lifted out of the pump and up to the tubing.

Features

- 2-stage compression provides enhanced compression
- Mercury style plunger for improved rigidity and wear resistance.
- Precision plunger to barrel fits and highly wear resistance finishes for both compression stages
- Upgradable materials available for enhanced corrosion resistance

Advantages

- Eliminates gas lock
- Eliminates gas/fluid pound
- Reduces compression rod loading and stress
- Increases oil and gas production through increased pump efficiency
- Ability to pump from beneath packer
- Stronger, improved design compared to other pumps for gas handling applications
- Can be ran at extreme depths, up to 13,000 ft
- Rigid design enables increased downhole plunger travel

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Specifications

Item	QTY	Description	Part number		
			Tubing Size & Pump Bore		
			2-3/8" x 1-1/4"	2-7/8" x 1-3/4"	2-7/8" x 1-3/4"
Plunger Assembly					
A	1	Cage, Top Open	33H	33M	33M
B	1	Seat Only (Optional)	11H	11M	11M
C	1	Coupling, Pull Tube to Cage	49H4	49L2	49L2
D	1	Plunger, Pin End, Q-Hard, GC, Top[1]	102DQ(L)-SP	102FQ(L)-SP	102HQ(L)-SP
E	1	Cage, Closed, Pin End Plunger	39F	39H	39K
F	1	Valve, Ball & Seat	12F	12H	12K
G	1	Cage, Closed, Double Valve Ported	38F-P	38H-P	38K-P
H	1	Plunger, Pin End, Q-Hard, Bottom[1]	102FQ(L)	102HQ(L)	102KQ(L)
Barrel Assembly					
I	1	Guide, Top Plunger, Modified	71E101-M	71K103-M	97K-M
J	1	Coupling, Extension, RH	45D03	45F03	45H03
K	1	Barrel, RH, Heavy Wall[1]	16D(L)	16F(L)	16H(L)
L	1	Coupling, Extension, RH	-	45F03	-
		Bushing Adapter / Coupling Extension	24DF-GC	45F03	24HK-GC
M	1	Barrel, Heavy Wall, RX/THOS[1]	18F(L)	-	18K(L)
		Barrel, RH, Heavy Wall[1]	-	16H(L)	-
N	1	Coupling, Extension, RH	-	45H03	-
O	1	Cage, Closed Barrel	37H	37M	37M
P	1	Valve, Ball & Seat	12H	12M	12M
Hold-Down Assembly					
Q	1	Bottom Hold-Down Assembly	See Hold Down Parts Section		
Seating Nipple[2]					
	1	Nipple, Seating	See Seating Nipple Parts Section		

Notes:

1. Specify length in feet.
2. Not shown in the assembly.
3. Available with other Metal Ring Friction Hold- Down.
4. **"U"** in the part number represents **Material**.
5. Contact sales for detailed length and material options

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