



# POWERCELL® SYSTEM

## General Specifications:

Dimensions:	87"H x 81"W x 170"D (2.21m H x 2.06m W x 4.32m D)
Weight:	18,400 lbs. complete with fluids (8.35MT)
Fuel System:	155-gallon stainless steel fuel tank with baffle, suction and return connections and electronic fuel sending unit. Equipped with fuel filters
PowerCell skid:	Galvanized Carbon Steel structure
	Fully enclosed skid
	Drain valve locations on the outboard side of the skid for engine oil, fuel and glycol.
	Forklift pockets & external lifting eyes
Enclosure:	316 Stainless Steel - Bolted to main skid, removable as one fixed structure
	Access doors front and rear of skid, complete with louvers for airflow and cooling
	Access doors on both sides of the skid, complete with louvers for airflow and cooling, equipped with gas shocks when doors are opened to prevent damage
	LED lighting inside enclosure for maintenance
	LED lighting illuminates to indicate status of unit (green – no alarms, amber – caution alarm, red – shutdown alarm).
	Red and Amber beacon lights on top of enclosure in the event a caution or shutdown alarm occurs so it can be seen during daytime operations.

<b>Electrical:</b>	
Local Control System	NEMA 4X S.S. Enclosure – 36”H x 30”W x 12”D
	7” Touchscreen HMI Mounted Display Panel
	E-Stop Push button
	HPU Hand/Off/Auto Switch
	P1622 Microcontroller Soft starter – 150 HP, including manual motor starter/protection with through-door circuit breaker disconnect
Logic Controls:	Engine On/Off
	Hydraulics On/Off
	Compressor On/Off
	Fill Mode On/Off
Data Monitoring:	Ultrasonic Continuous Level Sensor - Low Alarm (Low Shutdown, Level Drop Shutdown)
	Temperature Sensor - High Alarm (High Shutdown)
	Particle counter - High Alarm (Filter indicator and alarm, Pressures)
	Case Flow - High Alarm (Engine data, Engine alarms/diagnostic messages)
Data Van/Remote HMI System:	NEMA 4X Carbon Steel Enclosure – 12”H x 10”W x 6”D
	7” Touchscreen HMI Mounted Display Panel
	250 ft Communication/Power cable to connect to Remote Control System
	Mimics/Communicates with Local Control System
	Parallels Local Control System commands when connected
Electric Distribution Panel:	NEMA 4X S.S Enclosure 36”H x 30”W x 12”D
	Main circuit breaker/disconnect, through-door, 400A
	480x240 3Ph 45kVA Transformer – 24” x22” x22”
	Protective Circuit breaker/disconnect, through-door, 90A
	240x120 1Ph 7.5kVA Transformer – 18” x 9” x 8”
	Protective Circuit breaker, 40A, 240V
	Pole Lighting Outlets – 4 total outlets, 120V
	3-prong standard outlet, panel mount, with covers, 10A circuit breaker, 4 total
	Data Van Power, 240V/120V, complete with Circuit breaker/panel switch, 50A
	Receptacle, ADR-1034, 4 pole, x2
	Mating connector, Appleton ACP1034 with cap
	240V Outlets – 2 total outlets, 240V, complete with 3-prong NEMA L6-30, twist lock, panel mount, 30A, with covers
	Circuit breaker/panel switch, 30A each
	120V Outlets – 4 total outlets, 120V, complete with standard 3 prong outlets, panel mount, 20A, with covers
	Circuit breaker/ panel switch, 20A, 1 per 2 outlets
	120V Outlets – 4 total outlets, 120V (Pole Lights), complete with standard 3 prong outlets, panel mount, with covers
	120V Outlets – 1 total outlets, 120V, complete with 3-prong NEMA L5-20, twist lock, panel mount, 20A, with cover
	12V Local Exterior LED lighting on a 10A circuit breaker
	12V Local Interior LED lighting
	Off Switch-delay timer
	Liquid tight conduit for main power distribution cables
	12V Battery Disconnect Switch, lock out/tag out, panel mount

## Hydraulic Power Unit:

Electrical Motor	Baldor TEFC 230/460 Volt, 3Ph, 60Hz, 150HP, 1785RPM, 445TC frame
Hydraulic Pump/Motor Adapter	Magnaloy 800 Series Drive Couplings
Hydraulic Pump (Main)	Danfoss DP1 Pressure Compensated Control with displacement limiters set to approximately 75 GPM flow and pressure up to 3000 psi
Hydraulic Pump (Kidney Loop)	Gear, Fixed, delivering approximately 30 GPM
Reservoir	150-gallon capacity, JIC Design, steel construction with flow baffle, clean out covers, and internal Glyptal coating
Solenoid Operated Dump Valve	For low pressure standby mode
Flow Meter (Case Drain)	4–20 GPM rated, Hydrotechnik
Pressure Filter	Schroeder
Return Filter	Schroeder
Kidney Loop Filter	Schroeder
Heat Exchanger	Emmegi



## Pneumatic System:

### Compressor:

Manufacturer	Palfinger PRC 45V - Oil-injected rotary screw
Air Delivery	45 CFM @ 100 psi (7 bar)
Max. System Pressure	150 psi (10.3 bar)
Duty Cycle	Continuous, 100%
Drive	Spline Drive (Hydraulic Driven Motor)
Air Outlet	3/4" NPT
Integrated Valves	Automatic air pressure blow-down valve, one-way air system check valve, 200 psi air pressure relief valve

### Hydraulics:

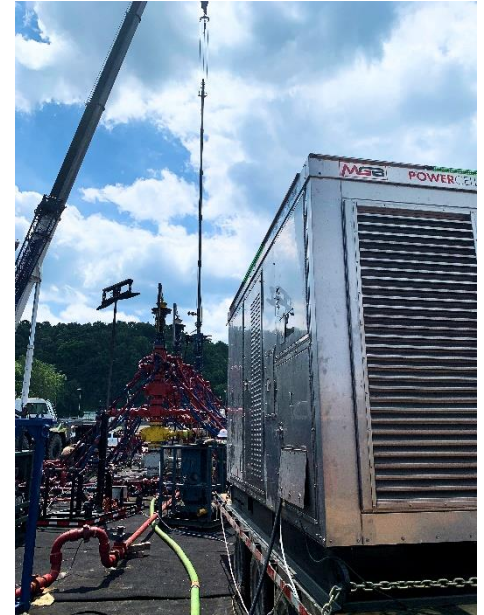
Flow Requirements	9-14 gpm (34-53 l/min.)
Normal Operating Pressure	1,900 psi (131 bar)
Max. Operating Pressure	2,345 psi (162 bar)
Inlet Port Size	#12 ORB
Outlet Port Size	#16 ORB
Hydraulic Cooler	Integrated dual chamber hydraulic and compressor oil radiator with 12 volt thermally activated 16" cooling fan

### Electrical:

Controls	LCD digital display box (system status, adjustable parameters, error reporting)
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<b>Genset System:</b>	
Engine Manufacturer	Cummins QSB7-G9 Turbocharged Inline 6 Cylinder Diesel Engine, 60Hz, 200kW Standby/180kW Prime
Emissions	Emissions-Compliance, Tier 4 Final, EPA
Voltage	277/480V, 3 Phase, Wye, 4 Wire
Alternator	60 Hz, 12 Lead, Upper Broad Range, 105C Temperature Rise
Control Panel	Genset Control-PowerCommand 2.2, complete with 1) AC Protection, 2) Engine Protection, 3) Operator/display panel, 4) Alternator data Exciter/Regulator-PMG, 3 Phase Sensor Engine Governor-Electronic, Isochronous Only Display Language-English Control Mounting-End Facing Meters-AC Output, Analog Stop Switch-Emergency Relays-Genset Status, User Configured CB or EB or TB-Right Only Circuit Breaker-400A, Left, 3 Pole, 600/690V, Solid State RMS, UL/IEC CB or EB or TB-Bottom Entry, Right Skidbase-Housing Ready Separator-Fuel/Water Engine Starter - 12 VDC Motor Battery Charging Alternator-Normal Output Engine Cooling-High Ambient Air Temperature Warning-Low Coolant Level Extension-Engine Coolant Drain Engine Coolant-50% Antifreeze, 50% Water Mixture Engine Air Cleaner-Heavy Duty Rack-Battery, 12 Volt, Lead Acid Extension-Oil Drain Remote E-Stop



## About Us



We are an engineering and manufacturing company aimed at redefining the operations of the pressure pumping industry. Our unwavering goal is to deliver best-in-class equipment with true, lowest cost of ownership.

The designs of our solutions are not merely supplementary. Detailed equipment definition and full ground-up equipment designs are essential for making frac sites as efficient and safe as possible. Each new product is designed from the bottom up to ensure that nothing is overlooked. Small changes require multiple layers of technology to match and support the design change. Our approach details each of those layers for fully synergistic development.

The solutions come with **Total Life Cycle Management System** to assure your investment pays you dividends well into the future.



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