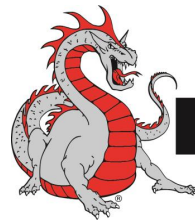


DRAGON PUMP SYSTEMS CATALOG



DRAGON®

WWW.DRAGONPRODUCTSLTD.COM | 800-231-8198

CASPER, WYOMING



ENERGY INDUSTRY EXPERTS.

- 55 years of manufacturing severe duty engineered equipment
- 30+ years of oil & gas manufacturing experience
- 25 years experience in unique custom engineered pumping systems
- U.S. owned and operated, founded in 1963



Pumping & Stimulation



Tanks & Trailers



Mobile Rigs



Production Equipment



A LEGACY OF PERFORMANCE

DESIGNED TO PERFORM AND BUILT TO LAST.

- 18+ Years - 3,000+ Systems
- Reduced Op Ex Through Innovation
- Field Proven Reliability
- Comprehensive Parts and Service Network
- Full Automation
- ISO 9001-2016
- ASME R, U
- CWI
- Portable Plants
- Skid Pumps
- Piping
- Packaging
- FAT Testing
- SS Expertise

Site Design / Construction



DRAGON PES LOCATIONS

TEXAS:

- Liberty – Manufacturing of ASME Code Vessels, Compressor Packaging, Parts & Field Service
- Los Fresnos – Manufacturing of API12F Steel Production Tanks, Parts, & Field Service
- Odessa – Pump Packaging, Parts, & Field Service
- San Angelo – Manufacturing of API12F Steel Production Tanks, Parts, & Field Service

COLORADO:

- Weld County – Parts & Field Service

NORTH DAKOTA:

- Williston - Parts, & Field Service

OKLAHOMA:

- Springer – Manufacturing of API12F Steel Production Tanks, Parts, & Field Service

UTAH:

- Provo – Manufacturing of ASME Code Vessels & LPG/NGL Tanks, Parts & Field Service

NEW MEXICO:

- Hobbs – Parts & Field Service

WYOMING:

- Casper - Pump Packaging, Vessel Packaging, LACT Unit Packaging, SWD Packaging & Design, Parts, & Field Service



U.S. OWNED AND OPERATED. FOUNDED IN 1963.

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QUICK REFERENCE

HCP Pump SWD Plants with Options

Capacity (bpd)	5,000	12,000	20,000		
Drawing #	DFT-SWD-05-810	DFT-SWD-12-810	DFT-SWD-20-810	Manufacturer	Options
Horizontal Centrifugal Pump (qty)	1	1	2	Summit	Remote Telemetry
Design Pressure (psi)	2,220	2,220	2,220		Redundant Pump / Filters
Motor Horsepower	350	700	700		LEL, H2S Detection
Charge Pump	2 X 3 X 8 25 hp	3 X 4 X 8 50 hp	3 X 4 X 13 75 hp	Peerless	Automated Bypass
Motor Horsepower	25	40	60		Stainless Steel Piping
Filter Cannister (bag qty.)	3 (single vessel)	6 (single vessel)	8 (single vessel)	FSI	Bridge Crane
Skid Size	12' X 50'	16' X 60'	16' X 65'		Large Capacity Filtration
Plant Weight (lbs /est)	53,000	62,000	71,000 / 22,000 (2 Modules)		
Programming, PLC, HMI	Yes	Yes	Yes	A&E	



Standard Plant Includes:
Carbon Steel ANSI 900 Welded and Flanged Piping / Class 1, Division 2
Electrical Classification

QUICK REFERENCE

PD Pump SWD Plants with Options

Capacity (bpd)	5,000	12,000	20,000		
Drawing #	DFT-SWD-05-810	DFT-SWD-12-810	DFT-SWD-20-810	Manufacturer	Options
Positive Displacement Pump (qty)	1	2	3	Weatherford	Remote Telemetry
Design Pressure (psi)	2,220	2,220	2,220		Redundant Pump / Filters
Motor Horsepower	250	300	300		LEL, H2S Detection
Charge Pump	2 X 3 X 8 25 hp	3 X 4 X 8 50 hp	3 X 4 X 13 75 hp	Peerless	Automated Bypass
Motor Horsepower	25	40	60		Stainless Steel Piping
Filter Cannister (bag qty.)	3 (single vessel)	6 (dual vessel)	8 (dual vessel)	FSI	Bridge Crane
Skid Size	12' X 50'	16' X 60'	16' X 65'		Large Capacity Filtration
Plant Weight (lbs /est)	56,000	64,000	76,000 / 22,000 (2 Modules)		
Programming, PLC, HMI	Yes	Yes	Yes	A&E	



Standard Plant Includes:
Carbon Steel ANSI 900 Welded and Flanged Piping / Class 1, Division 2
Electrical Classification

QUICK REFERENCE

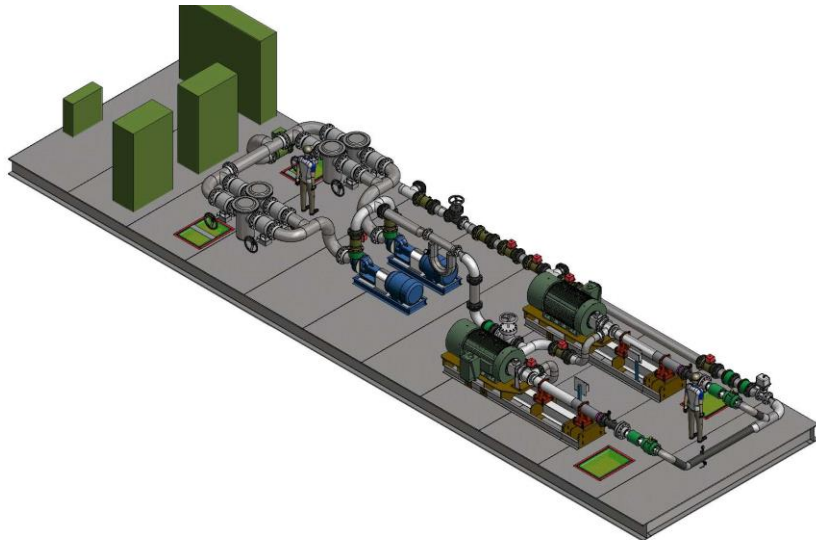
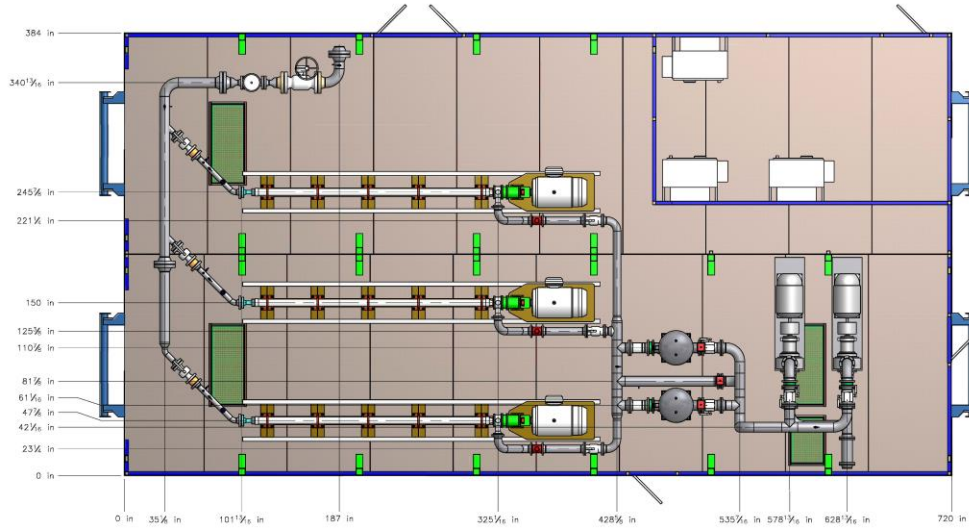
Pipeline Transfer with Options

Capacity (bph)	36-156	20-70	35-135	
Drawing #	PP-BP-100	HC-BP-100	DFT-Lact-02-BP	Options
Pump Model	M1624	L1118	L1620	Piping Packages
Design Pressure (psi)	800	800	800	Multi-Well Manifolds
Max Pressure (psi)	1,385	1,500	1,480	Pressure Transmitters
Motor Horsepower	100	20	75	Automated Bypass
Charge Pump	2 X 3 X 10	N/A	N/A	Suction Dampeners
Motor Horsepower	15	N/A	N/A	
Skid Size	9' X 3'	6' X 3'		
Weight (lbs /est)	3,100	960	2705	
Programming, PLC, HMI	Yes	Yes	Yes	

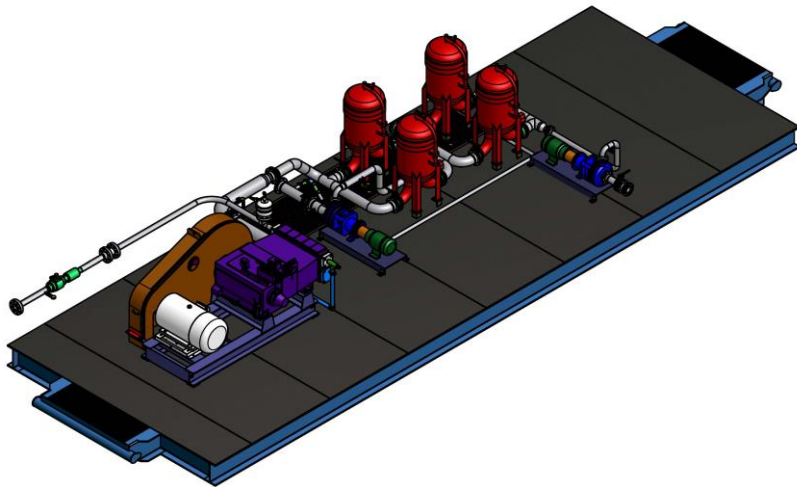
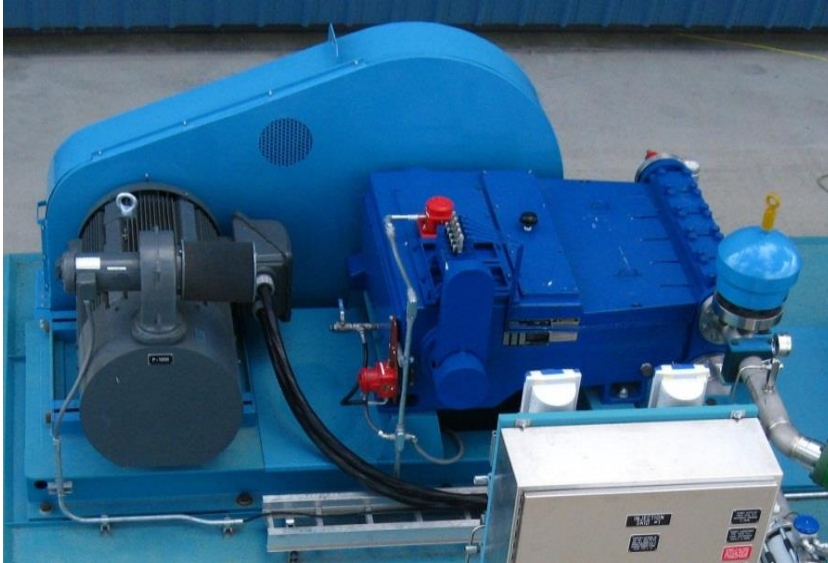
Standard Skid includes: Pump, Belt Drive, Motor, Custom VFD Drive, Discharge Dampener, ANSI 600 Suction and Discharge Headers with Isolation Valves.



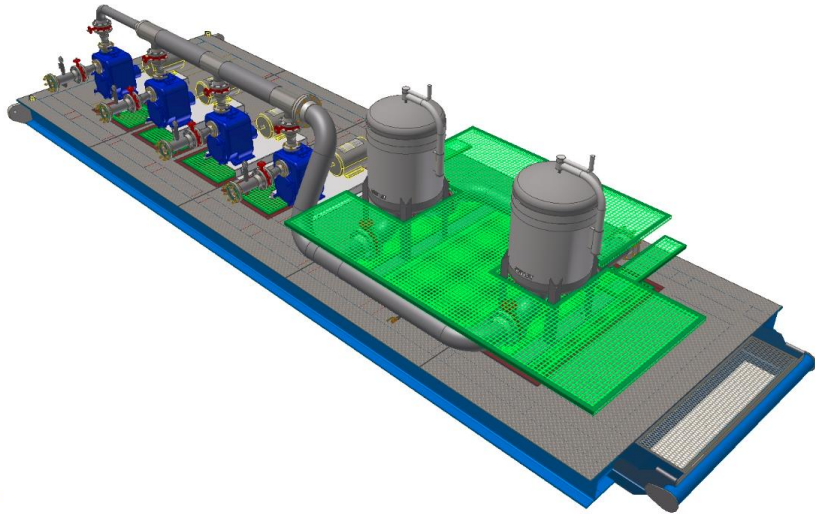
STANDARDIZED / MODULAR SWD PLANTS. 1,000 TO 20,000 BPD



STANDARDIZED / MODULAR PD PLANTS. 1,000 TO 20,000 BPD



TRUCK UNLOADING STATIONS



Self Priming High Capacity Pumps



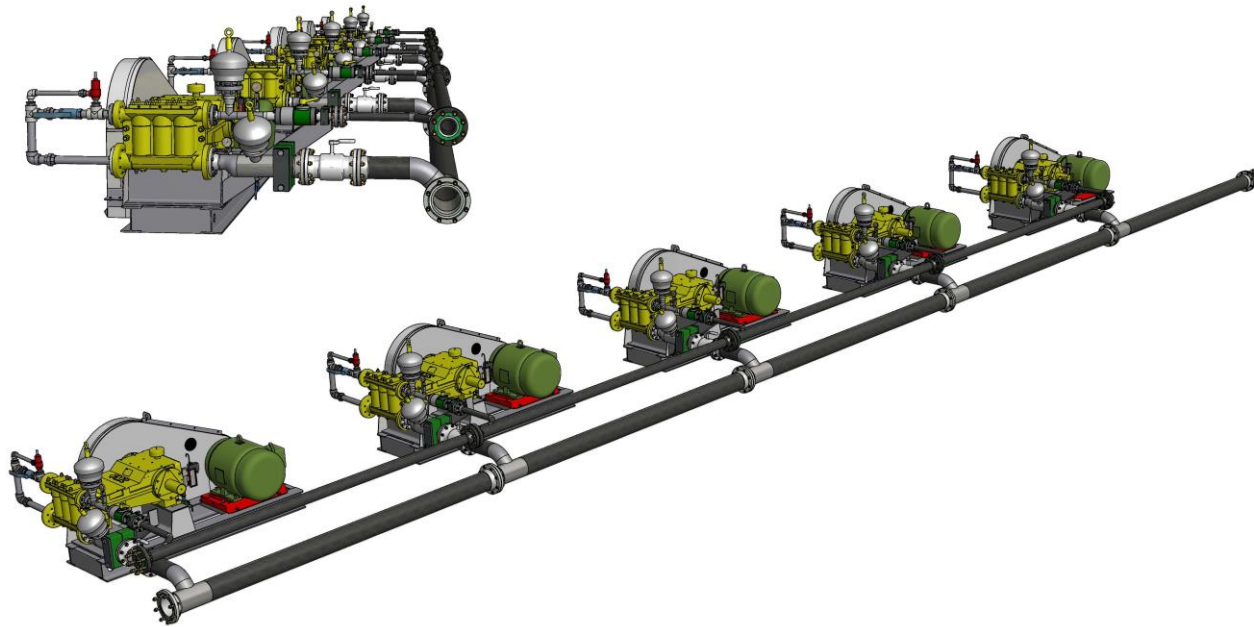
Coriolis Metering



4 Station Unload System

MIDSTREAM PUMP SYSTEMS

PD PUMP PIPELINE TRANSFER - MIDSTREAM

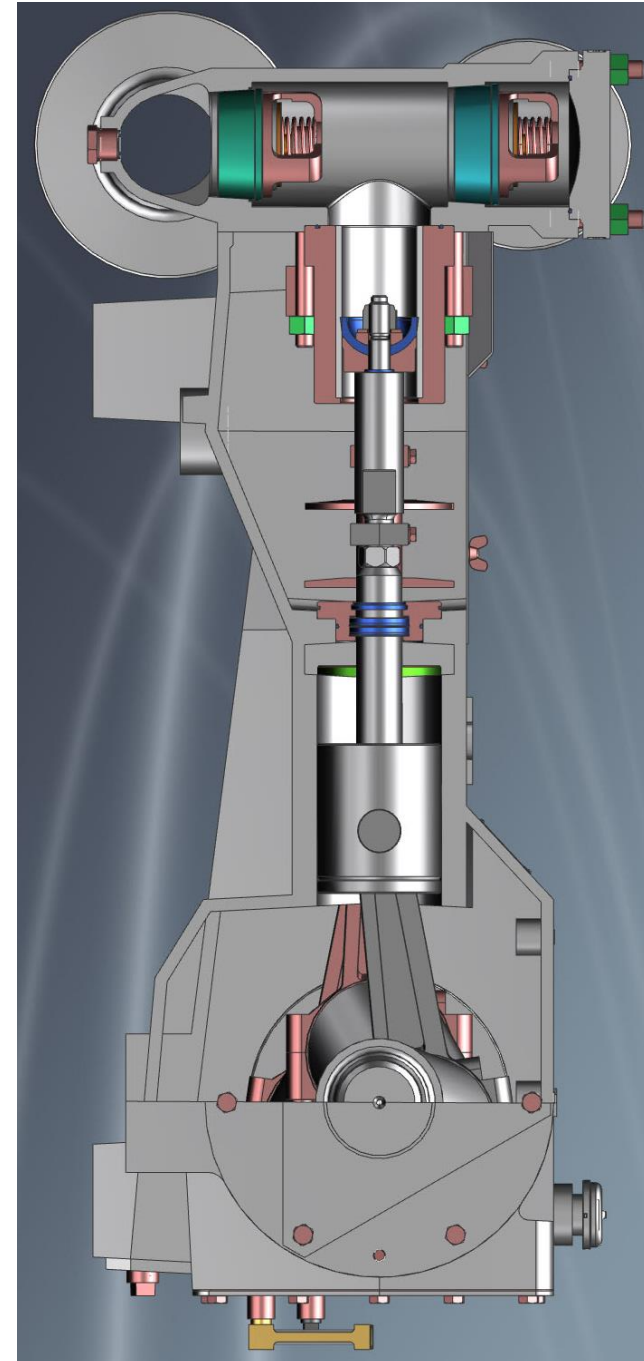


Expandable “Superpad” Building Block Modules

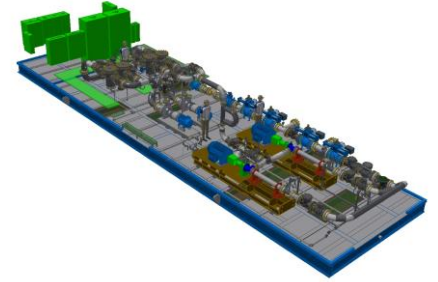
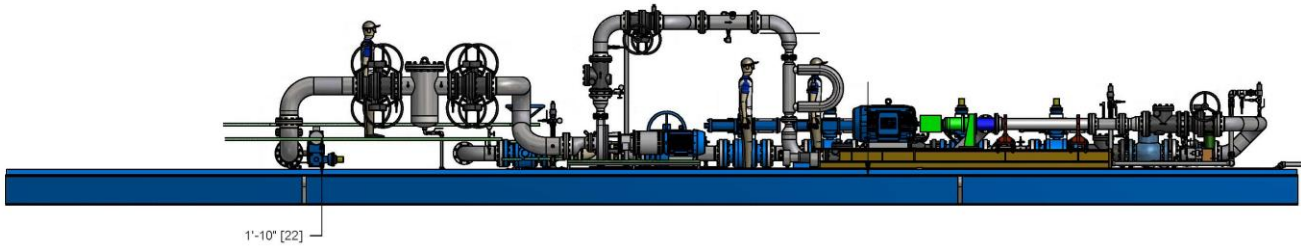


PLUNGER / PACKING ELIMINATED

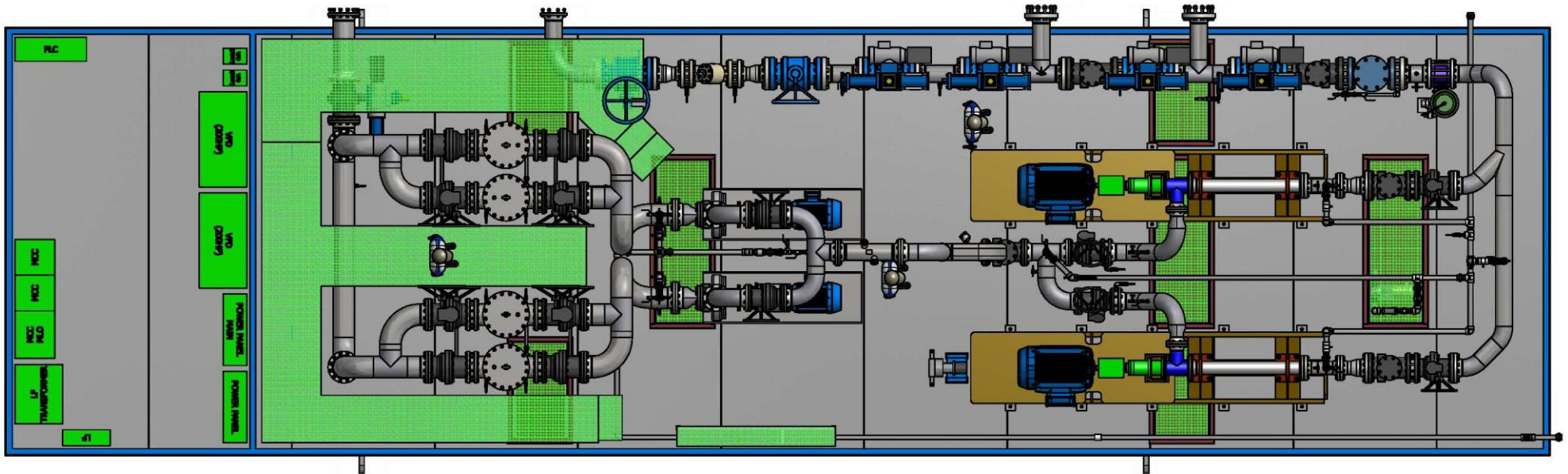
- Field repair (parts and labor) reduced by 75%
- Packing lubrication is no longer required
- Using a Ceramic liner and a proprietary Kevlar (compound) molded cup we have reduced consumable parts to 2 pieces versus conventional systems with 9-11 parts.



MIDSTREAM PIPELINE BOOSTER STATION



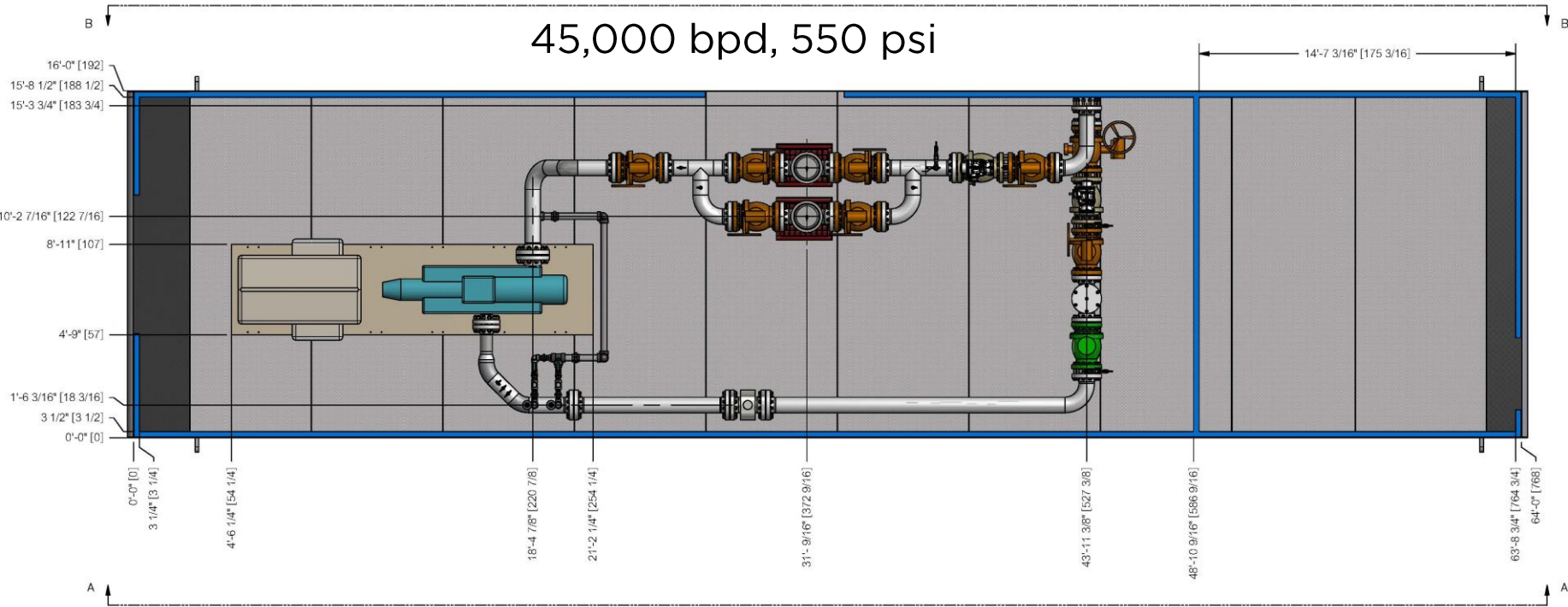
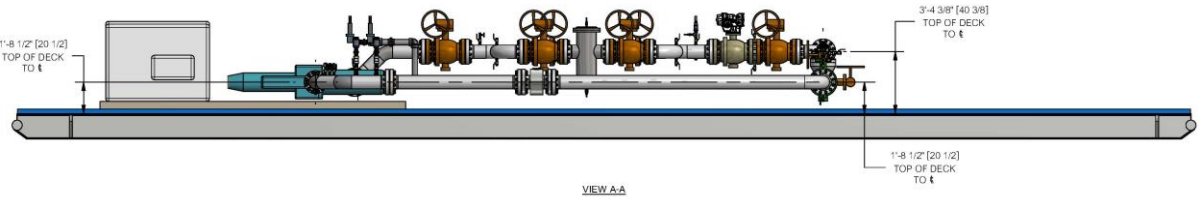
30,000 bpd, Redundant Pumps



Horizontal Centrifugal Pump



MIDSTREAM PIPELINE BOOSTER STATION

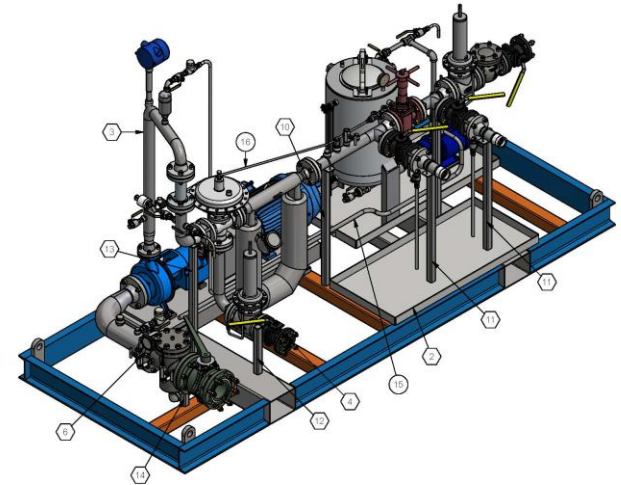


API 610 Centrifugal Pump

CONVENTIONAL LACT

CENTRIFUGAL, PROGRESSIVE CAVITY AND GEAR PUMP

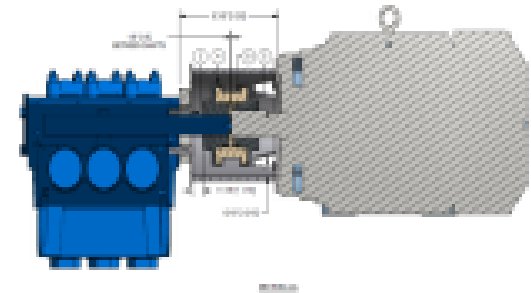
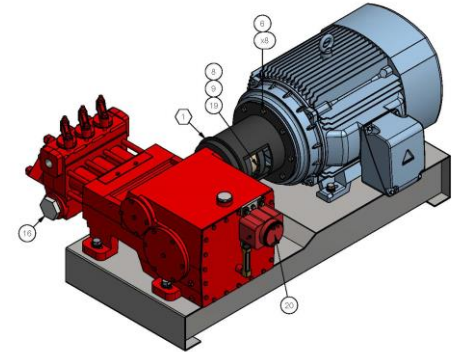
- Standardized Designs 2" to 4"
- Flow Rates 2,000 to 31,000 bpd
- All Pressure Ranges
- Portable Open or Enclosed Skids
- Prewired and Programmed, Turn Key Tested Systems
- Any Customer Preference for Instruments and Meters
- Truck and Pipeline Applications



Raise overall efficiency to 96% and minimize down time by eliminating legacy stuffing box designs. Maintenance is limited to simple oil changes, and piston cup wear. Our valve design and piston design has eliminated scheduled and unscheduled expendable op-ex.

Proven research on all phases of product development, including field testing with Coriolis Meter proving.

Collaboration with FMC to develop a state-of-the-art factory tested API 674 design while using ISO 9001 quality control standards.



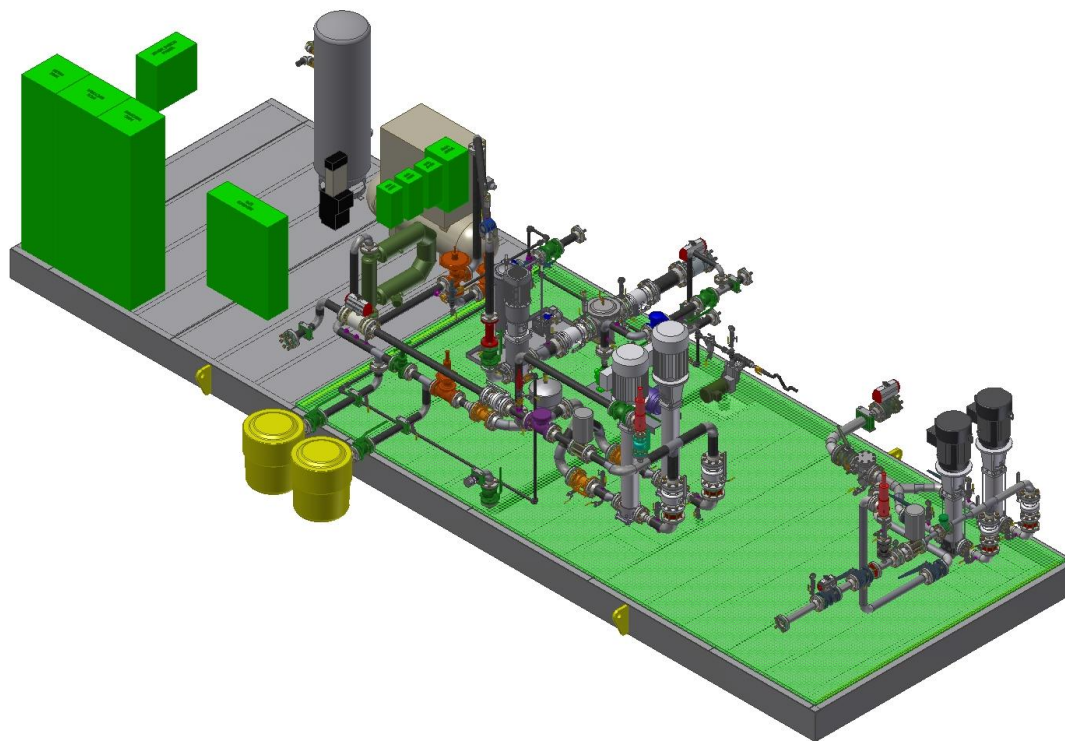
MULTI PURPOSE LACT

11,000 BPD DESIGN WITH 10:1 TURN DOWN RATIO

Combine multiple processes into a single skid and building, to offer a smaller overall foot print and minimize mechanical and electrical field interconnect.

OPTIONS:

- PD / Centrifugal Boost
- Gas Metering
- Water Transfer
- Recycle
- Air Compressor
- MCC / Site Power



SYSTEMS FABRICATION



Chemical Metering



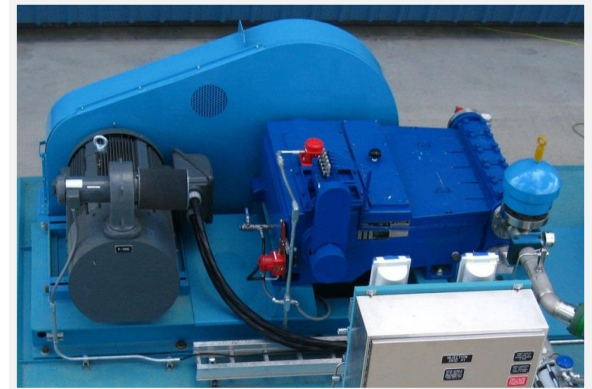
Centrifugal Packages



Truck Unload Stations



Filtration Packages



Custom
Engineered and
Fabricated
Pump Packages

PRODUCTION PUMPS AND PARTS

POSITIVE DISPLACEMENT PUMPS

- 5hp-400hp
- Electric driven with diesel and natural gas options
- Large, medium and high pressure fluid ends
- Variable frequency drive and soft start panels



ANSI CENTRIFUGAL PUMPS

- 100% interchangeable with Goulds 3196
- Stocking dealer of Pinnacle-Flo 8896
- *(Available in Carbon Steel or Stainless Steel)*
- Other ANSI centrifugal brands available upon customer request



PRODUCTION PUMPS AND PARTS

GEAR PUMPS AND PARTS

Dragon offers a full line of replacement parts for all major brands of positive displacement pumps as well as a full line of ANSI centrifugal pump parts. Dragon provides seal replacement solutions that consider both performance life and economics.

Our expert team will make sure you get the pump parts that meet your needs.



OEM PARTNERSHIPS



PUMP COMPARISON CHART

Pump Type	Reciprocating Positive Displacement	External Gear	External Gear	External Gear	Centrifugal	Progressive Cavity
Manufacturer	FMC	Viking	Northern	Roper	ANSI	Continental or Moyno
Limited In Low Lubricity Application	No	Yes	Yes	Yes	No	Yes
Longevity	Yes	No	No	No	Yes	No
Repair or Maintenance \$	Very Low	High	High	Low	Low	High
Repair Downtime	Very Low	High	High	Low	Low	High
Pump Efficiency	90%	85%	85%	85%	65%	85%
Temp or Viscosity Sensitive	Low	Med	Med	Med	High	Med
Increasing Pipeline Pressure	Broad Range	Limited Range	Limited Range	Limited Range	Mid Range	Narrow Range
Capital Expenditure	100%	30%	100%	30%	75%	65%
Operating Expenditure	Low	Med	Med	Med	Low	High

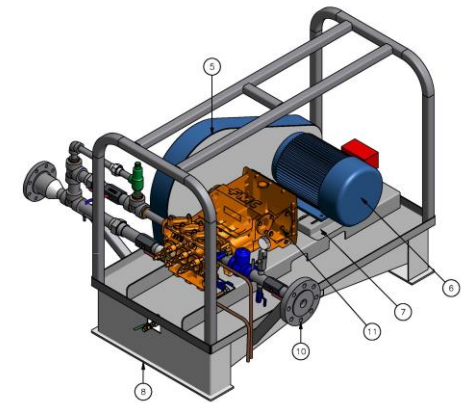
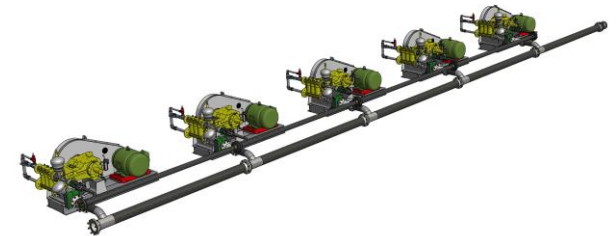
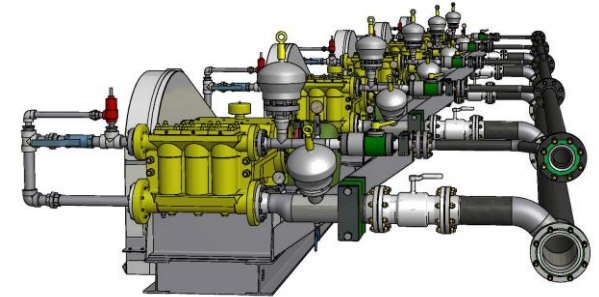


PARTS AND SERVICE ARE SIMPLIFIED

- Our technicians are trained and experienced with pump design, application and systems.
- Dragon Consumable repair inventory is seamless, predictable and repeatable.

DELIVERY BASED ON FIELD DEVELOPMENT

- We maintain inventory, including a wide range of major equipment components to meet our customers needs and schedules.



PRODUCTION TANK ACCESSORIES

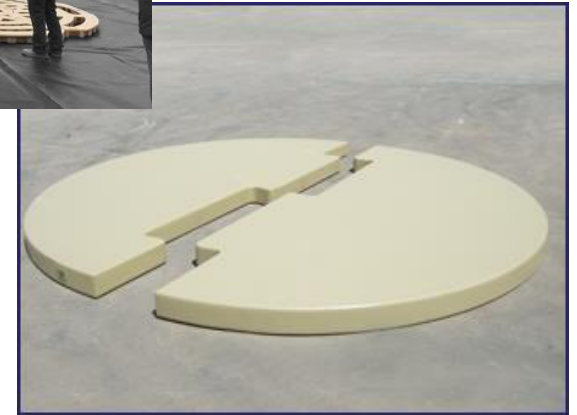
TANK PADS

TUFFBASE TANK PADS

- 12' TuffBase for 300 and 400 BBL - 4 piece
- HD 12' TuffBase 500 BBL - 4 piece
- 15'6" TuffBase 500 and 750 BBL- 7 piece
- HD 15'6" TuffBase for 1,000 BBL- 7 piece

POLYSTYRENE 2-Piece with Liner

- 10'x6" with Tank Pad Liner: HDTE, 40mil 10' diameter
- 12'x6" with Tank Pad Liner: HDTE, 40mil 12' diameter
- 15'6"x6" with Tank Pad Liner: HDTE, 40mil 16' diameter



GRADE BAND TANK RINGS

- 5'x8", GALV - 11 per 15'6" tank
- 5'x8", GALV - 9 per 12' tank



PRODUCTION TANK CATWALKS/PLATFORMS

CATWALKS/PLATFORMS

Dragon offers a wide array of custom and standard Production Tank Catwalk/Platform designs with full installation and support.

- Stairways
- Walkways
- Extensions
- Support Towers
- Y-Braces

We stock inventory at 7 locations across the U.S.



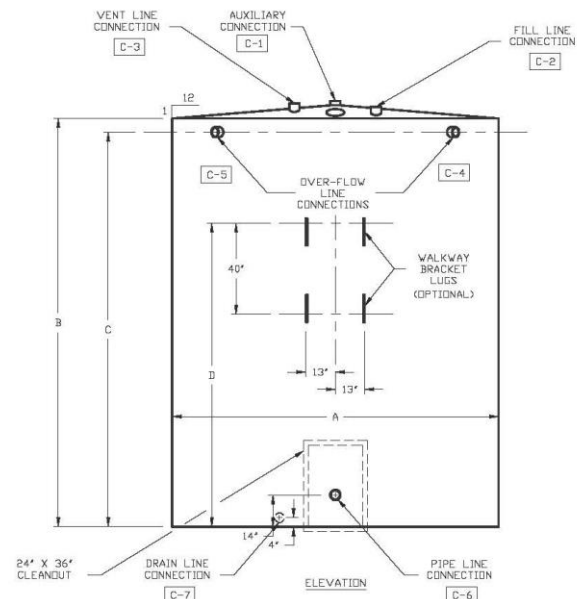
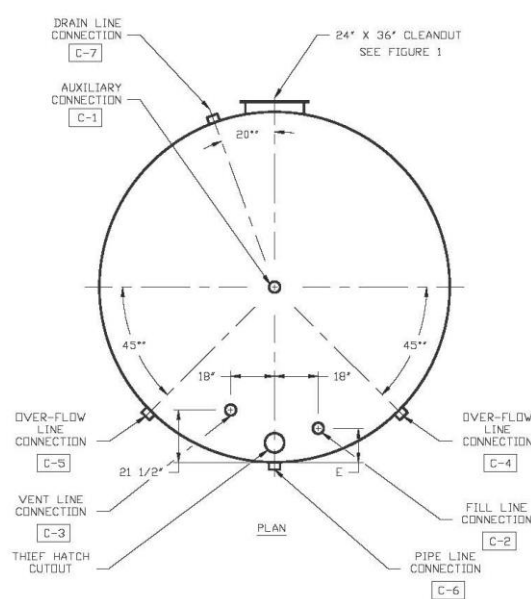
LARGEST INVENTORY IN NORTH AMERICA!

PRODUCTION TANKS / SPECIFICATIONS



PRODUCTION TANKS / SPECIFICATIONS

NOMINAL CAPACITY	DESIGN PRESSURE OZ. PER SQUARE INCH PRESS. VACUUM	APPROXIMATE WORKING CAPACITY BBL	OUTSIDE DIAMETER	HEIGHT	APPROX. WEIGHT	SITE OF CONNECTIONS C-1, C-2, C-3, C-7	SITE OF CONNECTIONS C-4, C-5, C-6
100BBL	16 1/2	79	9' 6"	8'	3,250lbs	3	3
200BBL	16 1/2	166	12'	10'	5,025lbs	3	4
210BBL	16 1/2	200	10'	15'	5,200lbs	3	4
300BBL	16 1/2	266	12'	15'	6,490lbs	4	4
400BBL	16 1/2	366	12'	20'	8,000lbs	4	4
500BBL	16 1/2	466	12'	25'	9,350lbs	4	4
500BBL	8 1/2	479	15' 6"	16'	9,960lbs	4	4
750BBL	8 1/2	746	15' 6"	24'	16,750lbs	4	4
1000BBL	8 1/2	922	15' 6"	30'	22,500lbs	4	4

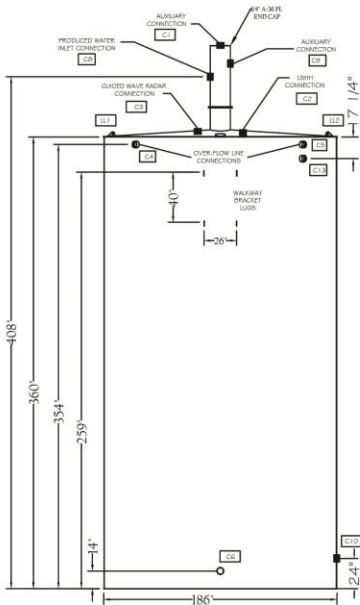


GUNBARREL TANKS / SPECIFICATIONS

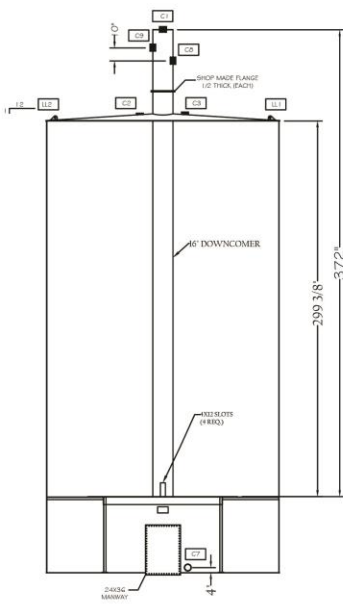


GUNBARREL TANKS / SPECIFICATIONS

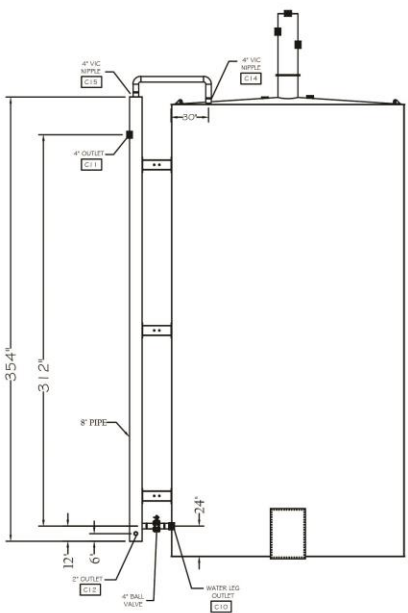
NOZZLE SCHEDULE				
ITEM	DESCRIPTION	QTY	SIZE	MATERIAL
C1	AUXILIARY LINE	1	4"	3000# COUPLING
C2	LSHH CONNECTION	1	4"	3000# COUPLING
C3	GUIDED WAVE RADAR	1	4"	3000# COUPLING
C4	OVERFLOW	1	4"	3000# COUPLING
C5	OVERFLOW	1	4"	3000# COUPLING
C6	PIPE LINE	1	4"	3000# COUPLING
C7	DRAIN LINE	1	4"	3000# COUPLING
C8	PRODUCED WATER INLET	1	4"	3000# COUPLING
C9	AUXILIARY LINE	1	4"	3000# COUPLING
C10	WATERLEG OUT	1	4"	3000# COUPLING
C11	OUTLET	1	4"	3000# COUPLING
C12	OUTLET	1	2"	3000# COUPLING
C13	OIL SKIM	1	4"	3000# COUPLING
C14	WATER LEG RETURN	1	4"	VIC NIPPLE
C15	WATER LEG RETURN	1	4"	VIC NIPPLE
TH	THIEF HATCH	1	8"	4.0OZ / 0.4VAC
MW	MANWAY	1	24X36	1 - PIECE API STD
LL1/2	LIFT LUG	2	-	1/4 PL / 5/8 PL



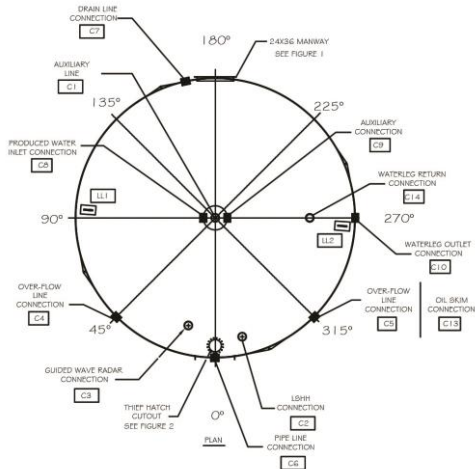
0° (TANK DETAIL)



180° (GUNBARREL DETAIL)

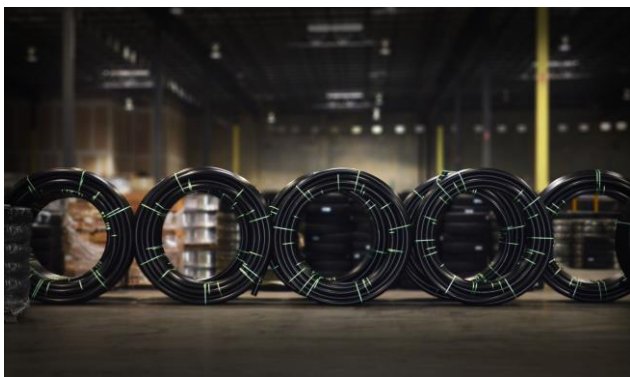


270° (WATERLEG DETAIL)



HDPE POLY PIPE

- Manufactured with bimodal, high molecular weight PE4710 resin
- Meets ASTM F2619 and F714 standards
- Applications - oil and gas gathering, crude transmission, saltwater disposal.
- 2" to 16" IPS Pipe Diameter; 7 to 17 DR
- 2" to 4" Coil Sizes; 6" to 16" in 40' or 50' Stick Length



STANDARD TRUCKLOAD QUANTITIES

>> COILED PIPE

Pipe Size	Pipe DR	Coil Length	Coils per Truck	Footage per Truck
2" IPS	7-17	2000'	16	32,000
3" IPS	7-17	1000'	13	13,000
4" IPS	7-17	800'	12	9,600

>> PIPE JOINTS (50' STANDARD)

Pipe Size	Pipe DR	Joints per Bundle	Bundles per Truck	Footage per Truck
6" IPS	7	13	9	5,850
	9	13	11	7,150
	11	20	9	9,000
	17	20	10	10,000
8" IPS	7	9	8	3,600
	9	9	10	4,500
	11-17	9	12	5,400
10" IPS	7	N/A	45 joints	2,250
	9	N/A	54 joints	2,700
	11-17	N/A	72 joints	3,600
12" IPS	7	N/A	32 joints	1,600
	9	N/A	40 joints	2,000
	11	N/A	48 joints	2,400
	17	N/A	56 joints	2,800
16" IPS	7	N/A	21 joints	1050
	9	N/A	24 joints	1200
	11-17	N/A	30 joints	1500

*2'-4" IPS joints and custom joint and coil lengths available by special order.



HDPE POLY PIPE

PRESSURE PIPE OFFERINGS



PE4710 Pressure Rating*			333 psi	317 psi	250 psi	200 psi	160 psi	138 psi	125psi
IPS SIZE	AVG OD (in)	DR	7	7.3	9	11	13.5	15.5	17
2	2.38	Min wall, in	0.339	0.325	0.264	0.216	0.176	0.153	0.140
		Avg ID, in	1.656	1.685	1.816	1.917	2.002	2.050	2.079
		Weight, lb/ft	0.950	0.920	0.770	0.642	0.534	0.470	0.431
3	3.50	Min wall, in	0.500	0.479	0.389	0.318	0.259	0.226	0.206
		Avg ID, in	2.440	2.484	2.676	2.825	2.950	3.021	3.064
		Weight, lb/ft	2.060	1.990	1.664	1.395	1.160	1.020	0.940
4	4.50	Min wall, in	0.643	0.616	0.500	0.409	0.333	0.290	0.265
		Avg ID, in	3.137	3.193	3.440	3.633	3.793	3.885	3.939
		Weight, lb/ft	3.402	3.290	2.751	2.310	1.920	1.687	1.550
6	6.625	Min wall, in	0.946	0.908	0.736	0.602	0.491	0.427	0.390
		Avg ID, in	4.619	4.701	5.064	5.348	5.585	5.719	5.799
		Weight, lb/ft	7.374	7.130	5.963	5.000	4.152	3.656	3.360
8	8.625	Min wall, in	1.232	1.182	0.958	0.784	0.639	0.556	0.507
		Avg ID, in	6.013	6.120	6.593	6.963	7.271	7.445	7.549
		Weight, lb/ft	12.498	12.070	10.110	8.470	7.040	6.197	5.690
10	10.75	Min wall, in	1.536	1.473	1.194	0.977	0.796	0.694	0.632
		Avg ID, in	7.494	7.628	8.218	8.678	9.062	9.280	9.409
		Weight, lb/ft	19.416	18.750	15.700	13.160	10.932	9.626	8.834
12	12.75	Min wall, in	1.821	1.747	1.417	1.159	0.944	0.823	0.750
		Avg ID, in	8.889	9.047	9.747	10.293	10.748	11.006	11.160
		Weight, lb/ft	27.312	26.380	22.085	18.510	15.380	13.530	12.430
14	14	Min wall, in	2.000	1.918	1.556	1.273	1.037	0.903	0.824
		Avg ID, in	9.760	9.934	10.702	11.302	11.801	12.085	12.254
		Weight, lb/ft	32.930	31.810	26.630	22.320	18.540	16.310	14.983
16	16	Min wall, in	2.286	2.192	1.778	1.455	1.185	1.032	0.941
		Avg ID, in	11.154	11.353	12.231	12.916	13.487	13.812	14.005
		Weight, lb/ft	43.010	41.550	34.780	29.150	24.220	21.300	19.570

*Pressure rating based on water at 73° F | Custom sizes available by special order.

Modern Polymers HDPE distributed by Dragon Products



MODERN
POLYMER PRODUCTS, INC.

LIBERTY, TEXAS



SPRINGER, OKLAHOMA





DRAGON[®]

WWW.DRAGONPRODUCTSLTD.COM

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