

PAQUETE DE PRESION BALANCEADA A BASE DE ESPUMA

INCLUYE:

*BOMBA DE ENGRANES CON MOTOR ELECTRICO UL Y TABLERO DE CONTROL. UL/ FM

*BOMBA DE ENGRANES CON MOTOR DIESEL Y TABLERO DE CONTROL. UL/FM

*VALVULA BALANCEADORA

*PROPORCIONADOR DE ESPUMA

*VALVULAS DE ALIVIO DE PRESION POR CADA BOMBA

*VALVULAS DE BOLA

*VALVULAS CHECK

*ARREGLO DE TUBERIA EN ACERO AL CARBON O BRONCE

*CABEZAL DE TUBERIA AGUA ESPUMA EN ACERO AL CARBON.

TODO ENSAMBLADO PARA TRABAJAR COMO PAQUETE, MONTADO EN UN PATIN (SKID)



ARRANQUE, PUESTA EN MARCHA Y CAPACITACION PARA OPERARIOS DEL COBERTIZO CI



AURORA® EDWARDS® SERIES MODEL 300 PUMP

Features

The Aurora Edwards Series Model 300 Rotary Gear Pump has several unique features that make Aurora Edwards Series the right choice for many pumping requirements:

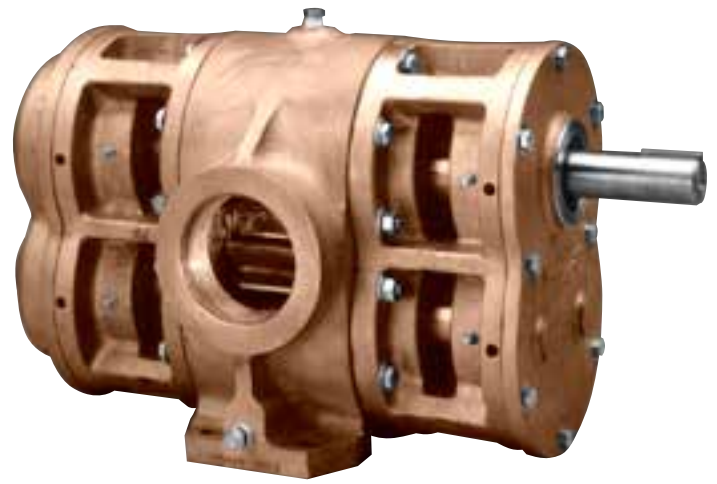
- Rotors synchronized by timing gears – they never touch
- Casing liners
- Shafts are supported on both ends by bearings – not bushings
- Pump drive flexibility – direct drive in most cases
- Dry running capability
- Inexpensive repairs
- Self priming
- Electric, diesel engine or water turbine drive

Applications

Fire Protection

- Fire-fighting foam concentrate pumping
- Water mist pumps
- UL-listed/FM approved or non-listed applications
- Stationary or mobile systems

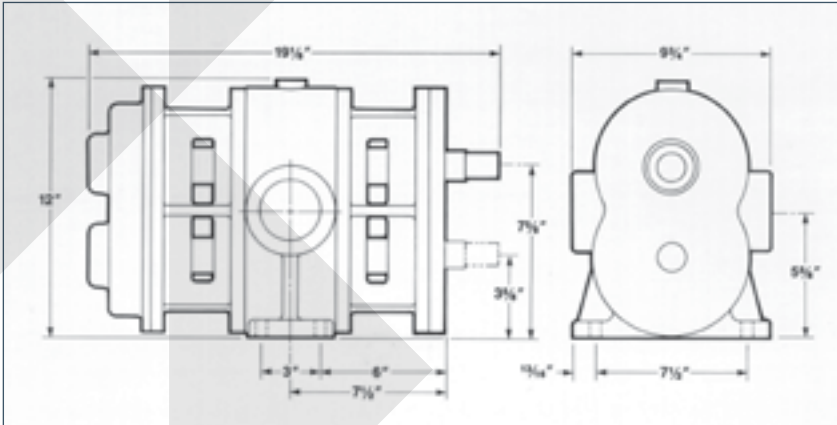
Aurora Edwards Series manufactures pumps to adapt to existing or new drive equipment. We custom build complete pumping packages. Our expertise includes complete assemblies with motors, engines, pumping skids and electrical apparatus with controls. Please feel free to contact us regarding your requirements.



Model 300 Pump Specifications	
Materials of construction	Bronze
Options	Hydraulic drive bracket, flanges
Sealing	Teflon lip seals
Temperature	200°F maximum
Discharge pressures	To 300 psig
Ports	3" x 3" NPT (female) standard
Pump drives	Hydraulic, electric, gas or diesel engine, PTO
RPM range	Up to 1,200 rpm continuous Up to 2,200 rpm intermittent

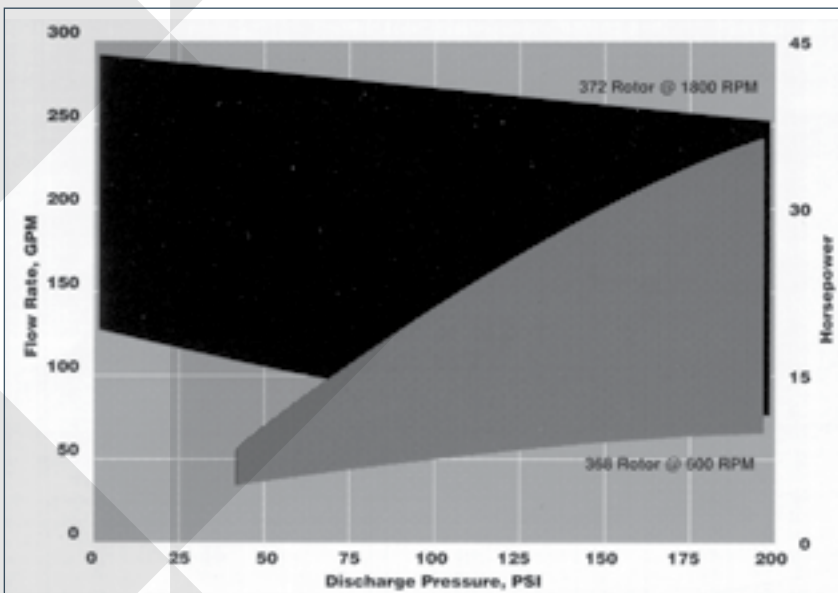
Dimension Details and Performance Data

Approximate Overall Dimensions:



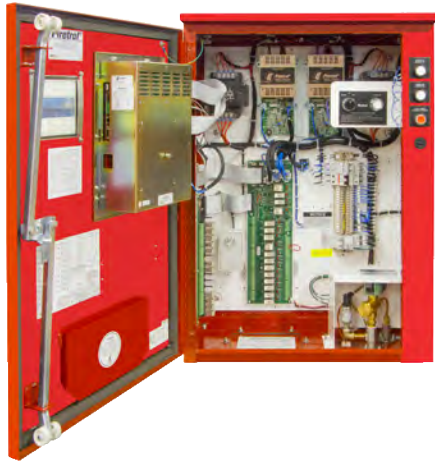
Average weight - Pump only: 250#

Performance Characteristics (standard duty):



800 AIRPORT ROAD, NORTH AURORA, ILLINOIS 60542 WWW.AURORAPUMP.COM

Because we are continuously improving our products and services, Pentair reserves the right to change specifications without prior notice.
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Description – Firetrol® combined automatic and manual Mark IIxG based diesel engine fire pump controllers are intended for starting and monitoring fire pump diesel engines. They are suitable for use with both mechanical and electronic type engines. The controller is available for 12 or 24 volt negative ground systems, using lead acid or Nickel-Cadmium batteries. The controller monitors, displays and records fire pump system information.

Approvals – Firetrol fire pump controllers are listed by Underwriters' Laboratories, Inc., in accordance with UL218, *Standard for Fire Pump Controllers*, CSA, *Standard for Industrial Control Equipment (cUL)*, and approved by Factory Mutual. They are built to meet or exceed the requirements of the approving authorities as well as NEMA and the latest editions of NFPA 20, *Installation of Centrifugal Fire Pumps*, and NFPA 70, *National Electrical Code*.

Standard Features – The following are included as standard with each controller:

- AC Line & Battery circuit breakers
- Manual-Off-Auto selector switch
- Manual test push-button
- Two manual crank push-buttons
- Two 10 Amp battery chargers with 4 stage charging cycle, selectable AC voltage (110 / 220), selectable DC voltage (12 / 24), and selectable battery type (Lead Acid, Ni-Cad 9/18 Cell, Ni-Cad 10/20 Cell)
- Door mounted display/interface panel featuring a 128 x 64 pixel backlit LCD graphical display, Membrane Type User Control Push-buttons and easy to read LED Indicators for:
 - AC POWER AVAILABLE
 - ALARM
 - MAIN SWITCH IN AUTO
 - MAIN SWITCH IN MANUAL
 - SYSTEM PRESSURE LOW
 - ENGINE RUNNING
 - ENGINE FAIL TO START

- ENGINE TEMPERATURE HIGH
- ENGINE OIL PRESSURE LOW
- ENGINE OVERSPEED
- ENGINE ALTERNATE ECM
- ENGINE FUEL INJECTOR MALFUNCTION
- FUEL LEVEL LOW
- AUTOMATIC SHUTDOWN DISABLED
- CHARGER MALFUNCTION
- BATTERY #1 TROUBLE
- BATTERY #2 TROUBLE
- Minimum Run Timer / Off Delay Timer
- Programmable Daylight Saving Time Option
- Weekly Test Timer
- Engine Run Time Meter
- Digital Pressure Display
- USB Host Controller and Port
- Solid State Pressure Transducer
- Data Log
- Event Log (3000 events)
- Simultaneous Display of Battery Voltages, Charging Rates, AC Volts, Pressure and Alarm Messages
- Disk Error Message
- Disk Near Full Message
- Pressure Error Message
- Fail to Start Message
- Low Suction Pressure Message
- Crank Cycle Status Indication (Displays Cranking Battery, Number of Starting Attempts and Crank/Rest Time Remaining)
- 300 psi (20.7 bar) wet parts (solid state pressure transducer, solenoid valve, plumbing) for fresh water applications
- NEMA Type 2 enclosure (IEC IP22)
- Each standard controller comes with user set options for:
 - AC Power Loss Start
 - Interlock Alarm
 - Low Pressure Aud.
 - Low Suction
 - Main Sw. Mis-Set
 - Manual Test
 - Pump Run Alarm
 - Remote Start
 - User Defined Input
 - Weekly Test Setup
 - Low Pump Rm Temp
 - Low Reservoir
 - Relief Valve Open
 - High Fuel Level
 - High Reservoir
- Also included (as required) are Audible/Visible alarm notifications for:
 - Electronic Engine Control Module (ECM) Warning
 - Electronic Engine Control Module (ECM) Failure
 - Low Engine Temperature
 - High Raw Cooling Water Temperature
 - Low Raw Water Flow (Clogged Stainer)
 - Fuel Spill (Interstitial Space Liquid Intrusion)
 - Low Suction Pressure (At Variable Speed Suction Limiting Engine Controls)

Product Description - Options & Modifications

Special Enclosures

- E Enclosure, NEMA Type 4 (IEC IP 66), Painted Steel
- F Enclosure, NEMA Type 4X (IP66), #304 Stainless Steel, Brushed Finish
- FD Enclosure, NEMA Type 4X (IP66), #316 Stainless Steel, Brushed Finish
- FDB Enclosure, NEMA Type 4X (IP66), #316 Stainless Steel, 12 Gauge, Seam Welded, Brushed Finish
- FDP Enclosure, NEMA Type 4X, #316 Stainless Steel, Painted Finish
- FXP Enclosure, NEMA Type 4X (IP66), #304 Stainless Steel Painted Finish
- G Enclosure, NEMA Type 12 (IP54), Painted Steel
- T Enclosure, NEMA Type 3R (IP24), Painted Steel

Mounting Legs

- N31 Mounting Legs, Standard 12 Inch, Painted Steel
- N31S Mounting Legs, Standard 12 Inch, Stainless Steel

Anti-Condensation Space Heaters

- H Space Heater, 120V Externally Powered with Circuit Breaker
- J Space Heater, 120V Externally Powered with Circuit Breaker and Thermostat
- K Space Heater, 120V Externally Powered with Circuit Breaker and Humidistat
- L Space Heater, 240V Externally Powered with Circuit Breaker
- M Space Heater, 240V Externally Powered with Circuit Breaker and Thermostat
- N Space Heater, 240V Externally Powered with Circuit Breaker and Humidistat

Pressure Transducers, Solenoid Valves, Plumbing

- B Wetted Parts Including Pressure Sensor, 600 PSI (42 Bar), Fresh Water
- C Wetted Parts Including Pressure Sensor, 300 PSI (21 Bar), Sea Water
- D Wetted Parts Including Pressure Sensor, 600 PSI (42 Bar), Sea Water

Alarms

- AC Alarm Output Contacts, Extra, Engine Running (3 Sets)
- AJ Alarm Output Contacts, Engine Overspeed
- AK Alarm Output Contacts, Low Oil Pressure
- AL Alarm Output Contacts, High Water Temperature
- AM Alarm Output Contacts, Fail To Start
- AN Alarm Output Contacts, Battery / Charger Failure
- AP Alarm Output Contacts, Main Switch In Manual
- AR Alarm Output Contacts, Main Switch In Off
- AS Alarm Output Contacts, Main Switch In Auto
- AT Alarm Output Contacts, Pump Room Trouble¹
- AV Alarm Output Contacts, Low Pump Room Temperature¹
- AW Alarm Output Contacts, Reservoir Low¹
- AY Alarm Output Contacts, Low Suction Pressure¹
- COM Alarm, Audible/Visible/Output Contacts, Low Suction Pressure with Manual Reset Option. Pressure Switch Not Included¹

- CPL Alarm Output Contacts, Overpressure (for use with PLD engines only)
- CTS Alarm, Audible/Visible/Output Contacts, Low Suction Pressure with Manual Reset Option and Pressure Switch
- ECMFR Alarm Output Contacts, Electronic Engine ECM Failure
- ECMWR Alarm Output Contacts, Electronic Engine ECM Warning
- EE Alarm Output Contacts, Extra, Engine Trouble (1 Set)
- EF Alarm Output Contacts, Extra, Main Switch Not In Auto (1 Set)
- EH Alarm Output Contacts, Relief Valve Discharge¹
- EJ Alarm, Audible/Visible, Flow Meter On¹
- HRTR Alarm Output Contacts, High Raw Water Temperature
- EK Alarm Output Contacts, Flow Meter On¹ (Requires option -EJ)
- LETR Alarm Output Contacts, Low Engine Temperature
- LRFR Alarm Output Contacts, Low Raw Water Flow (Clogged Strainer)
- JR Visible Indicator, Jockey Pump Operating (Requires Jockey Pump To Be Ordered With Option -AC)
- LSPR Alarm Output Contacts, Low Suction Pressure (at Variable Speed Suction Limiting Engine Controls)
- JT Alarm, Audible/Visible, Jockey Pump Trouble (Requires Jockey Pump To Be Ordered With Option -KH)
- LC Alarm Output Contacts, High Fuel Level¹
- LE Alarm Output Contacts, Fuel Spill
- LG Alarm Output Contacts, Reservoir High¹
- PE Alarm Output Contacts, Low System Pressure (Pump On Demand)

Miscellaneous

- AZ Thermostat, Low Pump Room Temperature, Mounted and Wired
- BA AC Input, 220-240V
- EL Series Pumping Operation, High Zone Controller
- EM Series Pumping Operation, Mid Zone Controller
- EN Series Pumping Operation, Low Zone Controller
- IEC Marking, CE With External Wet Parts
- IECI Marking, CE With Internal Wet Parts
- OSP Marking, OSHPD Seismic Certification, State of California (Requires Option -SEI)
- S Tropicalization
- SEI Marking, Seismic Certified (in accordance with IBC)
- USBX Data Port, External USB
- ZPA Scheduled Service Message
- ZPM Data Port, Serial Modbus RTU Over 2-Wire or 4-Wire RS485
- ZPN Data Port, Serial Modbus RTU Over Ethernet TCP/IP

- FTA1100-K1 Low fuel level switch, 16" max insertion length²
- FTA1100-K1-X High/Low fuel level switch - specify levels/tank dimensions
- FTA1100-K2 Low fuel level switch, 25" max. insertion length²
- FTAK21 380-480 volt operation (transformer)²
- Export packaging (Wooden crating to conform to IPPC Standards)

¹ - Initiating switches by others

² - Shipped loose for installation by the customer

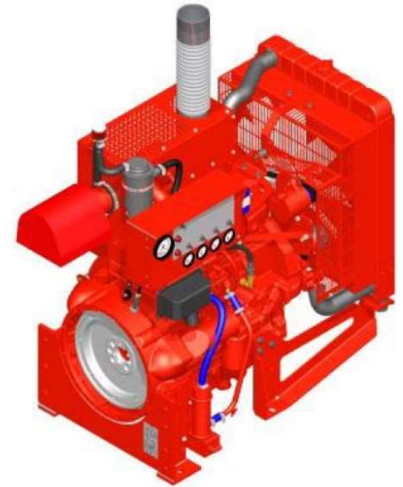
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FM-UL-cUL APPROVED RATINGS BHP/KW

JU4R MODEL ◆	RATED SPEED								US-EPA (NSPS) Available Until ●				
	1760		2100		2350		2600			2800		3000	
UF09	39	29	48	36	52	39							12/31/10
UF11					52	39	55.5	41					12/31/10
UF13									66.5	50	66.5	50	12/31/13 +
UF19	58.5	44	64.5	48	68	51							12/31/10
UF21					68	51	70.5	53					12/31/10
UF23									76.5	57	78	58	12/31/13 +
UF40	94	70	105	78	106	79							12/31/10
UF49	106	79	123	92	117	87							12/31/10
UF51					119	89	119	89					12/31/09
UF53									135	101	133	99	12/31/12 +



Picture shown represents a JU4R-T engine model

● USA EPA (NSPS) Emissions Compliant. Applies to John Deere model year per Table 4 of 40 CFR Part 60 Sub Part IIII.

◆ All Models are available for Export

+ Not Available in California

SPECIFICATIONS

ITEM	JU4R MODELS									
	UF09	UF11	UF13	UF19	UF21	UF23	UF40	UF49	UF51	UF53
Number of Cylinders	4									
Aspiration	NA					T				
Rotation*	CW									
Overall Dimensions – in. (mm)	52.5 (1333) H x 52.7 (1339) L x 28.6 (726) W					59.9 (1522) H x 55.5 (1410) L x 28.6 (726) W				
Crankshaft Centerline Height – in. (mm)	14 (356)									
Weight – lb (kg)	956 (434)					982 (445)				
Compression Ratio	17.6:1					17.0:1				
Displacement – cu. in. (L)	275 (4.5)									
Engine Type	4 Stroke Cycle – Inline Construction									
Bore & Stroke – in. (mm)	4.19 x 5.00 (106 x 127)									
Installation Drawing	D548									
Wiring Diagram AC	C07651									
Wiring Diagram DC	C072145									
Engine Series	John Deere 4045 Series									
Speed Interpolation	Optional									

Abbreviations: CW – Clockwise NA – Naturally Aspirated T – Turbocharged L – Length W – Width H - Height

*Rotation viewed from Radiator / Front of engine

CERTIFIED POWER RATING

- Each engine is factory tested to verify power and performance.
- Although FM-UL ratings are shown at specific speeds, Clarke engines can be applied at any intermediate speed. To determine the intermediate speed power; make a linear interpolation from the Clarke FM-UL power curve. Contact Clarke or your Pump OEM Representative to obtain details.

ENGINE RATINGS BASELINES

- Engines are to be used for stationary emergency standby fire pump service only. Engines are to be tested in accordance with NFPA 25.
- Engines are rated at standard SAE conditions of 29.61 in. (752.1 mm) Hg barometer and 77°F (25°C) inlet air temperature [approximates 300 ft. (91.4 m) above sea level] by the testing laboratory (see SAE Standard J 1349).
- A deduction of 3 percent from engine horsepower rating at standard SAE conditions shall be made for diesel engines for each 1000 ft. (305 m) altitude above 300 ft. (91.4 m)
- A deduction of 1 percent from engine horsepower rating as corrected to standard SAE conditions shall be made for diesel engines for every 10°F (5.6°C) above 77°F (25°C) ambient temperature.



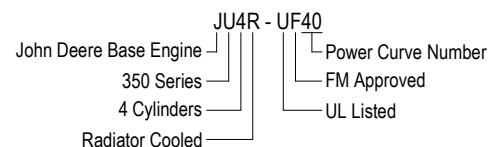
Radiator cooling package is made from common commercial materials of construction and is not suitable for a marine environment. If engine is being installed in a marine environment, consult Clarke for a suitable radiator cooling package.

ENGINE EQUIPMENT

EQUIPMENT	STANDARD	OPTIONAL
Air Cleaner	Direct Mounted, Washable, Indoor Service with Drip Shield	Disposable, Drip Proof, Indoor Service Outdoor Type, Single or Two Stage (Cyclonic)
Alarms	Overspeed Alarm & Shutdown, Low Oil Pressure, Low & High Coolant Temperature, Low Raw Water Flow, High Raw Water Temperature	Low Coolant Level, Low Oil Level, Oil Filter Differential Pressure, Fuel Filter Differential Pressure, Air Filter Restriction
Alternator	12V-DC, 42 Amps with Poly-Vee Belt and Guard	24V-DC, 40 Amps with Poly-Vee Belt and Guard
Coupling	Bare Flywheel	Listed Driveshaft and Guard, UF09/UF11/UF13/UF19/UF21/UF23 – CDS10-SC; UF40 – CDS20-SC; UF49/UF51/UF53 – CDS30-S1
Engine Heater	115V-AC, 1000 Watt	230V-AC, 1000 Watt
Exhaust Flex Connection	For NA Engines - SS Flex, NPT(M) Connection, 3" For T Engines - SS Flex, 150# ANSI Flanged Connection, 4"	For NA Engines – SS Flex, 150# ANSI Flanged Connection, 4" For T Engines - SS Flex, 150# ANSI Flanged Connection, 5"
Exhaust Protection	Blankets on UF09/UF11/UF13/UF19/UF21/UF23; Metal Guards on Manifolds and Turbocharger on UF40/UF49/UF51/UF53	
Flywheel Housing	SAE #3	
Flywheel Power Take Off	11.5" SAE Industrial Flywheel Connection	
Fuel Connections	Fire Resistant, Flexible, USA Coast Guard Approved, Supply and Return Lines	SS, Braided, cUL Listed, Supply and Return Lines
Fuel Filter	Primary Filter with Priming Pump	
Fuel Injection System	Stanadyne, Direct Injection	
Fuel Solenoid	12V-DC Energized to Stop (ETS)	12V-DC Energized to Run (ETR); 24V-DC Energized to Run (ETR); 24V-DC Energized to Stop (ETS)
Governor, Speed	Constant Speed, Mechanical	
Instrument Panel	English and Metric, Tachometer, Hourmeter, Water Temperature, Oil Pressure and Two (2) Voltmeters	
Junction Box	Integral with Instrument Panel; For DC Wiring Interconnection to Engine Controller	
Lube Oil Cooler	Engine Water Cooled, Plate Type	
Lube Oil Filter	Full Flow with By-Pass Valve	
Lube Oil Pump	Gear Driven, Gear Type	
Manual Start Control	On Instrument Panel with Control Position Warning Light	
Overspeed Control	Electronic with Reset and Test on Instrument Panel	
Radiator/Fan	Plate-Fin, Vertical Flow, Engine Mounted with Blower Fan	
Run – Stop Control	On Instrument Panel with Control Position Warning Light	
Starters	Two (2) 12V-DC	Two (2) 24V-DC
Throttle Control	Adjustable Speed Control, Tamper Proof	
Water Pump	Centrifugal Type, Poly Vee Belt Drive with Guard	

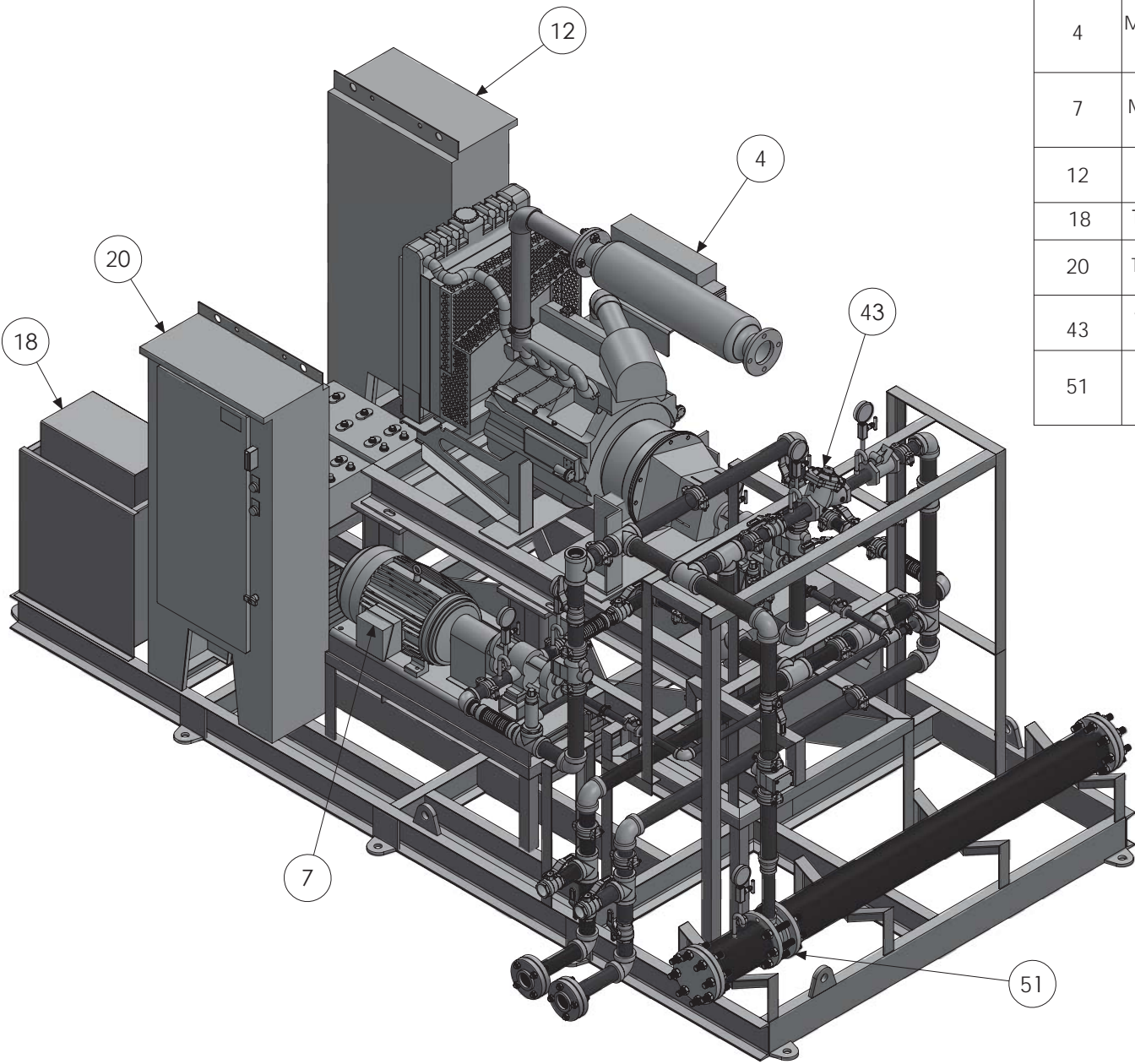
Abbreviations: DC – Direct Current, AC – Alternating Current, NA – Naturally Aspirated, T – Turbocharged, SAE – Society of Automotive Engineers, NPT(F) – National Pipe Tapered Thread (Female), NPT(M) – National Pipe Tapered Thread (Male) ANSI – American National Standards Institute, SS – Stainless Steel

MODEL NOMENCLATURE: (8 Digit Models)



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LISTA DE EQUIPOS

NO.	EQUIPO
4	Bomba para manejo de espuma Marca Edwards con Motor Diesel Mca. UL/FM
7	Bomba para manejo de espuma Marca Edwards con Motor electrico . UL/FM
12	Tablero de control diesel UL/FM
18	Tanque se almacenamiento Diesel UL 142
20	Tablero de control eléctrico, UL/FM.
43	Válvula de diafragma UL
51	Proporcionador de espuma UL.

NO.	FECHA	REVISIÓN	MATERIAL	ÚLTIMA REVISIÓN: 21/04/15	REVISIÓN ACTUAL: 21/04/15
ING. M.M.E	21/04/15		VARIOS	TOLERANCIAS: LINEAL: ANGULAR:	ACABADO: N/A
ING. E.T.M	21/04/15		CANTIDAD: 1 PZA	BRILLO:	
ING. E.T.M	21/04/15				
MEDIDA RECTANGULAR: 4000 X 2000 X 2000			ARREGLO GENERAL-DESPIECE		
<small>ESTE DIBUJO Y LA INFORMACIÓN QUE CONTIENE ES PROPIEDAD DE EDWARDS INC. Q.V. SE ENDEBORA EN CADA CASO CONSERVAREMOS EL DERECHO DE NO REPRODUCIRLO NI COPIARLO PARA FINE COMERCIALES O SI NO DEBELO DE INMEDIATO AL SER REQUERIDO.</small>			<small>10-100-000</small> EQ-EBPB-E001		
ACOTACION: #888888 (DWG)			ESCALA: 1:10		