

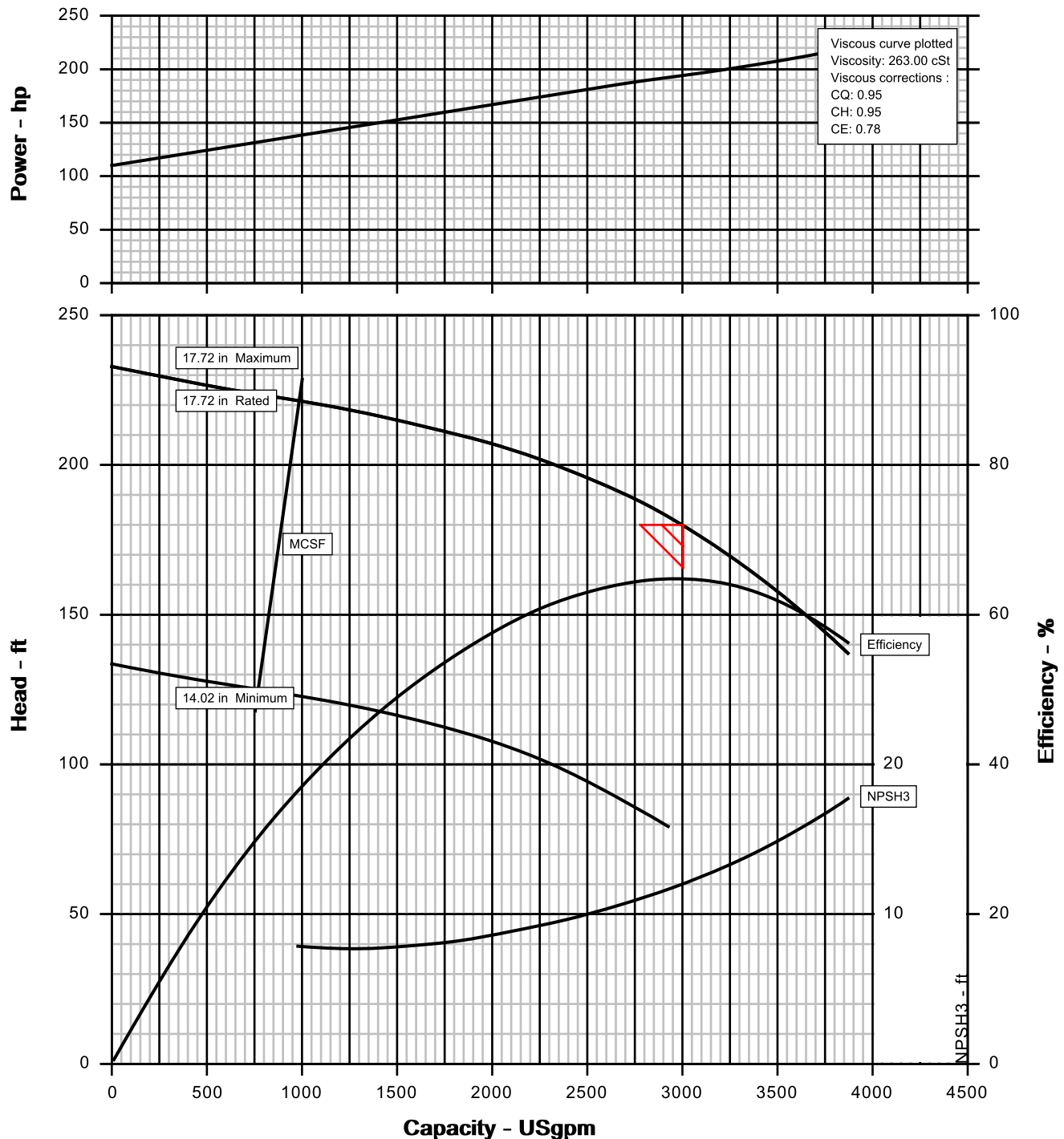


Pump size & type / Stages : 8 LPN 18 / 1
Based on curve no. : 8 LPN 18-A
Impeller diameter : 17.72 in

Customer : Steven Medina
Item number : P-435
Service : Oil
Flowserve reference : 2760969157
Date : September 17, 2020

Capacity : 3000.0 USgpm
Head : 180.00 ft
Density / Specific gravity : - / 0.925
Pump speed : 1420 rpm
Ns / Nss : 1551 / 8800 (US units)
Test tolerance : API 610 11th Edition

CURVES ARE APPROXIMATE, PUMP IS GUARANTEED FOR ONE SET OF CONDITIONS; CAPACITY, HEAD, AND POWER.

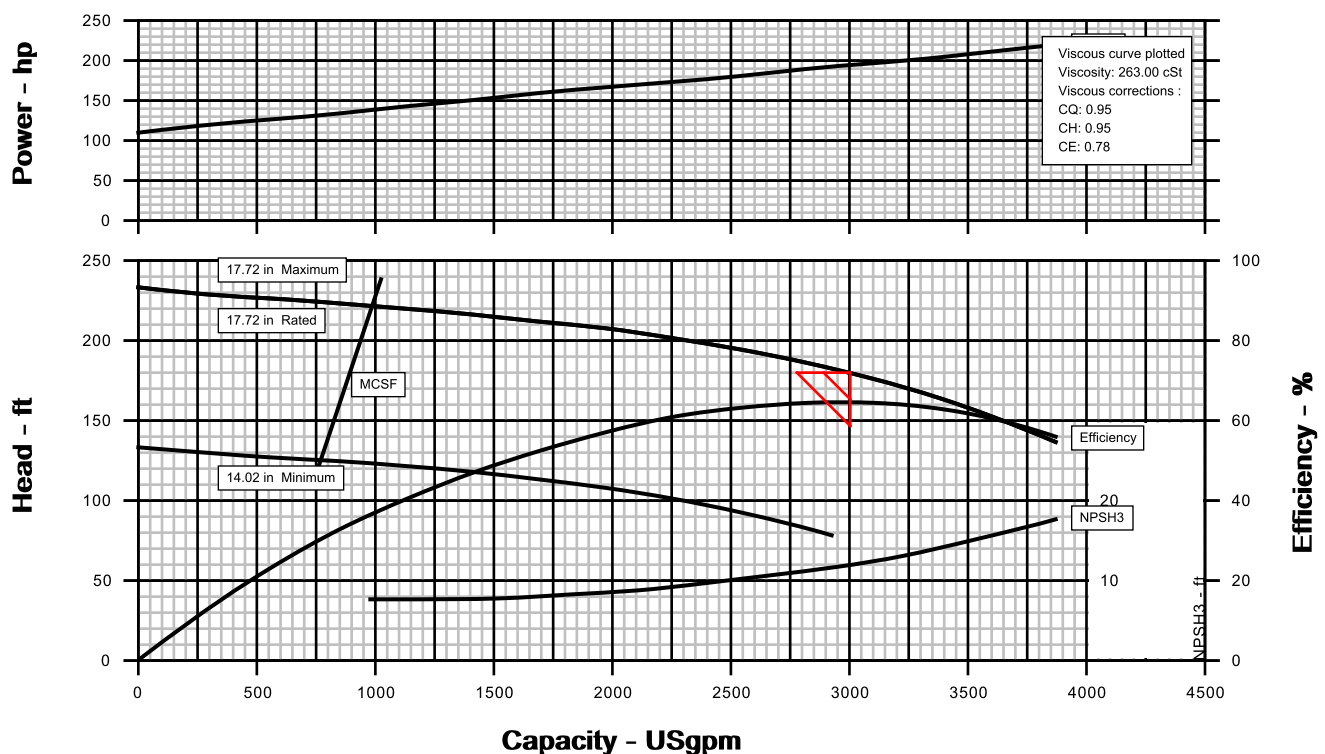


Customer	: Steven Medina	Pump / Stages	: 8 LPN 18 / 1
Customer reference	: -	Based on curve no.	: 8 LPN 18-A
Item number	: P-435	Flowserve reference	: 2760969157
Service	: Oil	Date	: September 17, 2020

Operating Conditions		Materials / Specification	
Capacity (rated/normal)	: 3000.0 USgpm / -	Material column code	: S6
Water capacity (CQ=0.95)	: 3,149.2 USgpm	Pump specification	: -
Total developed head	: 180.00 ft	Other Requirements	
Water head (CH=0.95)	: 189.01 ft	Hydraulic selection : API 610 11th Edition	
NPSHa/NPSHa less margin	: 13.1 ft / -	Construction : API 610 11th Edition	
Maximum suction pressure	: 15.0 psig	Test tolerance : API 610 11th Edition	
Liquid		Variable Speed - Maximize Efficiency	
Liquid type	: Hydrocarbon	Driver Sizing : Max Power(MCSF to EOC) using SF	
Liquid description	: Crude Oil	Seal configuration : Single Seal	
Temperature	: 210 °F	Static head : 10.00 ft	
Density / Specific gravity	: - / 0.925		
Solid Size - Actual / Limit	: - / -		
Viscosity / Vapor pressure	: 263.00 cSt / 10.23 psia		

Performance			
Hydraulic power	: 126 hp	Impeller diameter	
Pump speed	: 1420 rpm	Rated	: 17.72 in
Pump overall efficiency (CE=0.78)	: 65.1 %	Maximum	: 17.72 in
NPSH required (NPSH3)	: 11.9 ft	Minimum	: 14.02 in
Rated brake power	: 194 hp	Ns / Nss	: 1551 / 8800 (US units)
		Minimum continuous flow	: 981.1 USgpm
Maximum brake power	: 220 hp	Maximum head at rated diameter	: 232.59 ft
Driver power rating	: 250 hp / 186 kW	Flow at BEP	: 2977.5 USgpm
Casing working pressure	: 108.1 psig	Flow as % of BEP	: 100.8 %
(based on shut off @ cut dia/rated SG)		Efficiency at normal flow	: -
Maximum allowable	: 290.1 psig	Impeller diameter ratio (rated/max)	: 100.0 %
Hydrostatic test pressure	: 435.1 psig	Head rise to shut off	: 29.2 %
Estimated rated seal chamber pressure	: -	Total head ratio (rated / max) / (max / rated)	: 55.9 % / 178.9 %

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Item number	: P-435	Flowserve reference	: 2760969157
Service	: Oil	Date	: September 17, 2020

Construction					Driver Information	
Nozzles	Size	Rating	Face	Position	Manufacturer	: -
Suction	12 inch	-	-	Side	Power	: 250 hp / 186 kW
Discharge	8 inch	-	-	Side	Service factor (requested / actual)	: 1.0 / 0.0
Casing mounting	:-				Synchronous speed	: 1200 rpm
Casing split	: Axial				Orientation / Mounting	: Horizontal / -
Impeller type	: Closed				Driver type	: -
Bearing type (radial)	:-				Frame-size / material	: - / -
Bearing number (radial)	:-				Enclosure	: -
Bearing type (thrust)	:-				Hazardous area class	: -
Bearing number (thrust)	:-				Explosion 'T' rating	: -
Bearing lubrication	:-				Volts / Phase / Hz	: 480 / - / 60 Hz
Rotation (view from coupling)	:-				Amps-full load/locked rotor	: - / -
Materials					Motor starting	: Direct on line (DOL)
Casing	:-				Insulation	: -
Impeller	:-				Temperature rise	: -
Case wear ring	:-				Bearings	: -
Impeller wear ring	:-				Lubrication	: -
Inducer	:-				Motor mounted by	: -
Shaft	:-				Sound Pressure (dBA @ 1.0 m)	
Sleeve	:-				Driver, expected	: -
Baseplate, Coupling and Guard					Pump & driver, estimated	: -
Baseplate type	:-				Seal Information	
Baseplate material	:-				Arrangement	: -
Coupling manufacturer	:-				Size	: -
Coupling size	:-				Manufacturer / Type	: - / -
Coupling / Shaft guard	:-				Material code (Man'f/API)	: - / -
Weights (Approx.)					Internal neck bushing	: -
Bareshaft pump (net)	: 2248.7 lb				Gland	
Baseplate (net)	:-				Gland material	: -
Driver (net)	:-				Flush	: -
Shipping gross weight/volume	:- / -				Vent	: -
Testing					Drain	: -
Hydrostatic test	:-				Auxiliary seal device	: -
Performance test	:-				Piping	
NPSH test	:-				Seal flush plan	: -
Paint and Package					Seal flush construction	: -
Pump paint	:-				Seal flush material	: -
Base grout surface prep	: IDP Std				Aux seal flush plan	: -
Shipment type	: Other				Aux seal flush construction	: -
					Aux seal flush material	: -
Notes						
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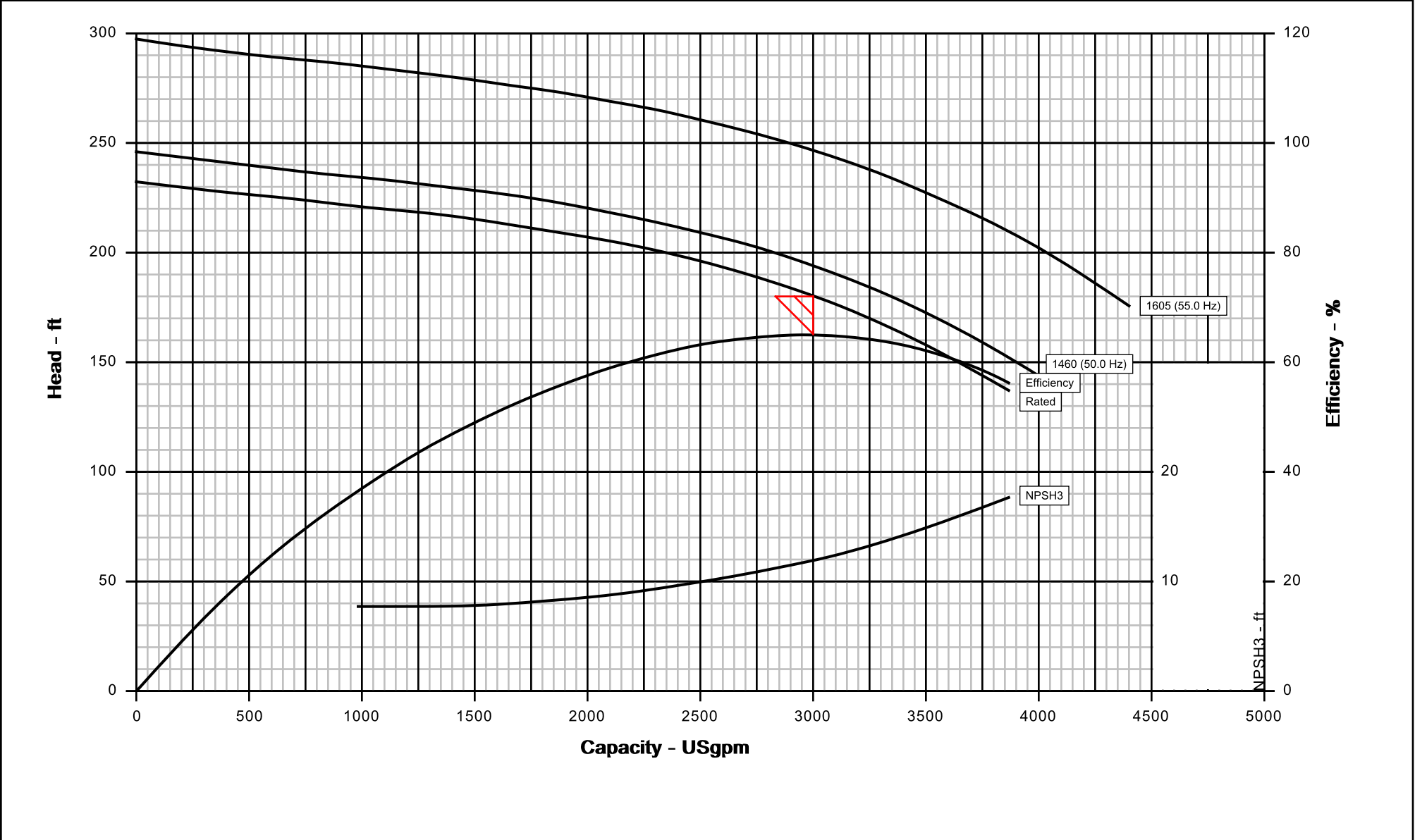
Additional information is required prior to supplying
a General Arrangement Drawing.
Please refer to Flowserve for further assistance.

Customer	: Steven Medina	Pump size & type	: 8 LPN 18	Drawing number	: -
Item number	: P-435	Pump speed / Stages	: 1420 rpm / 1	Date	: September 17, 2020
Service	: Oil	Flow / Head	: 3000.0 USgpm / 180.00 ft	Certified by / Date :	: -
Customer PO #	: -	Driver power / Frame	: 250 hp / 186 kW / -	Seal type	: -
Flowserve reference	: 2760969157	Volts / Phase / Hz	: 480 / - / 60 Hz	Seal flush plan	: -

Customer	: Steven Medina		Capacity	: 3000.0 USgpm
Item number	: P-435		Head	: 180.00 ft
Service	: Oil		Density / Specific gravity	: - / 0.925
Flowserve reference	: 2760969157		Pump speed	: 1420 rpm
Pump size & type / Stages	: 8 LPN 18	/ 1	Ns / Nss	: 1551 / 8800 (US units)
Based on curve no.	: 8 LPN 18-A			
Impeller diameter	: 17.72 in		Date	: September 17, 2020



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Flowserve reference	: 2760969157		Pump speed	: 1420 rpm
Pump size & type / Stages	: 8 LPN 18	/ 1	Ns / Nss	: 1551 / 8800 (US units)
Based on curve no.	: 8 LPN 18-A		Pump WR ² at 1420 rpm	: -
Impeller diameter	: 17.72 in		Date	: September 17, 2020



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