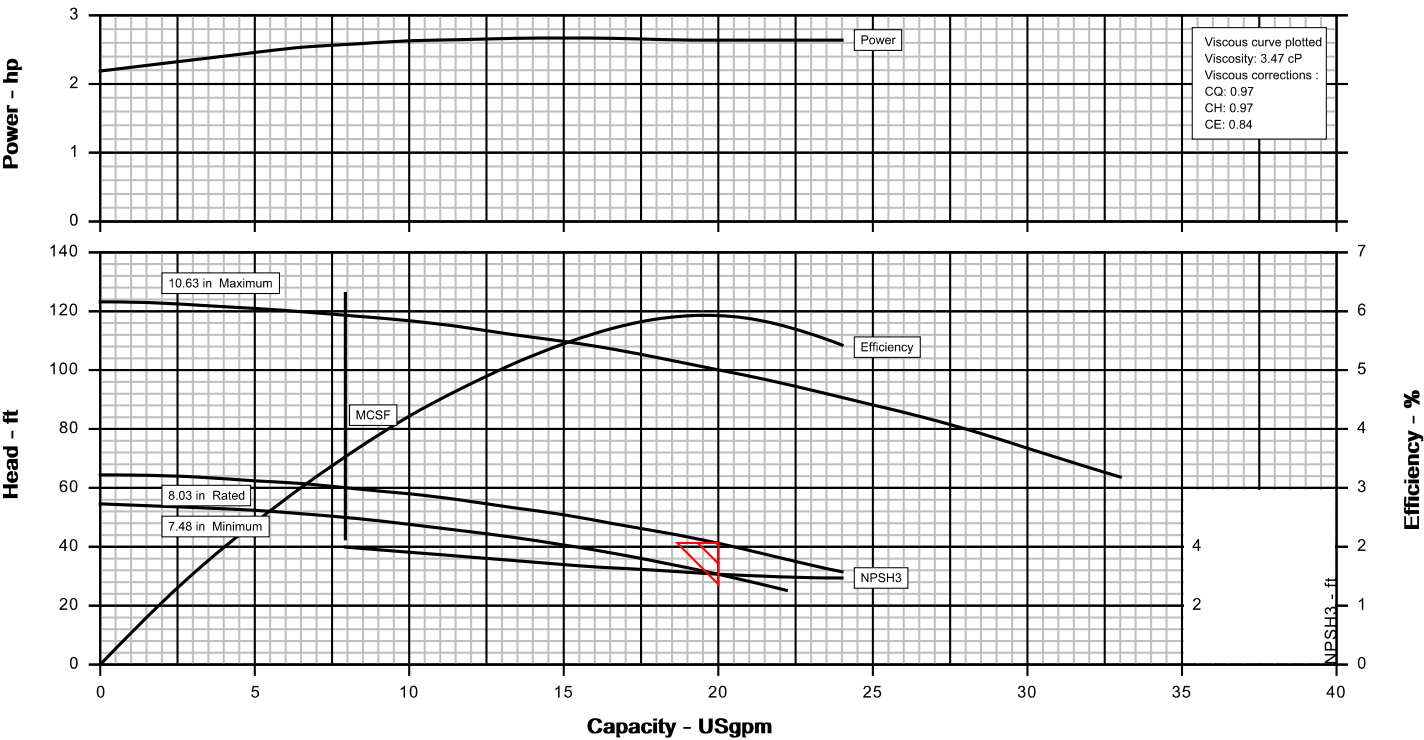


Customer	: AIR PRODUCTS & CHEMICALS INC		Capacity	: 20.0 USgpm
Item number	: 18-P-354 A/B (2021-10-28)		Head	: 41.00 ft
Service	: Slop Oil Pump		Density / Specific gravity	: - / 0.758
Flowserve reference	: 3397226692		Pump speed	: 1,740 rpm
Pump size & type / Stages	: 1HPX11A	/ 1	Ns / Nss	: 315 / 4,050 (US units)
Based on curve no.	: 1HPX11A-1-2		Test tolerance	: API 610 11th Edition
Impeller diameter	: 8.03 in		Date	: October 28, 2021



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



Customer	: AIR PRODUCTS & CHEMICALS INC	Pump / Stages	: 1HPX11A / 1
Customer reference	: A8KM-4-0601D-RQ	Based on curve no.	: 1HPX11A-1-2
Item number	: 18-P-354 A/B (2021-10-28)	Flowserve reference	: 3397226692
Service	: Slop Oil Pump	Date	: October 28, 2021

Operating Conditions		Materials / Specification	
Capacity (rated/normal)	: 20.0 USgpm / 20.0 USgpm	Material column code	: A8
Water capacity (CQ=0.97)	: 20.5 USgpm	Pump specification	: -
Total developed head	: 41.00 ft	Other Requirements	
Water head (CH=0.97)	: 42.11 ft	Hydraulic selection : API 610 11th Edition	
NPSHa/NPSHa less margin	: 10.3 ft / 7.3 ft	Construction : API 610 11th Edition	
Maximum suction pressure	: 110.0 psig	Test tolerance : API 610 11th Edition	
Liquid		Driver Sizing : Max Power(MCSF to EOC) not using SF	
Liquid type	: Other	Performance data based on standard impeller	
Liquid description	: Slop Oil (Saturated Liquid)	Seal configuration : Double Seal	
Temperature	: 136 °F	Rich amine case (SG: 1.048 cP & 3.30 cP)	
Density / Specific gravity	: - / 0.758	Governs motor sizing: Max Brake Power= 3.43 HP	
Solid Size - Actual / Limit	: - / 0.0390 in	The last above two notes, does not belong to this curve.	
Viscosity / Vapor pressure	: 3.47 cP / 19.70 psia		

Performance			
Hydraulic power	: 0.16 hp	Impeller diameter	
Pump speed	: 1,740 rpm	Rated	: 8.03 in
Pump overall efficiency (CE=0.84)	: 5.9 %	Maximum	: 10.63 in
NPSH required (NPSH3)	: 3.1 ft	Minimum	: 7.48 in
Rated brake power	: 2.64 hp	Ns / Nss	: 315 / 4,050 (US units)
		Minimum continuous flow	: 7.9 USgpm
Maximum brake power	: 2.67 hp	Maximum head at rated diameter	: 64.62 ft
Driver power rating	: 5.00 hp / 3.73 kW	Flow at BEP	: 19.7 USgpm
Casing working pressure	: 131.2 psig	Flow as % of BEP	: 101.5 %
(based on shut off @ cut dia/rated SG)		Efficiency at normal flow	: -
Maximum allowable	: 535.0 psig	Impeller diameter ratio (rated/max)	: 75.6 %
Hydrostatic test pressure	: 900.2 psig	Head rise to shut off	: 57.6 %
Estimated rated seal chamber pressure	: 27.0 psig	Total head ratio (rated / max) / (max / rated)	: 40.9 % / 244.7 %

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

