



Spec Sheet 203-001

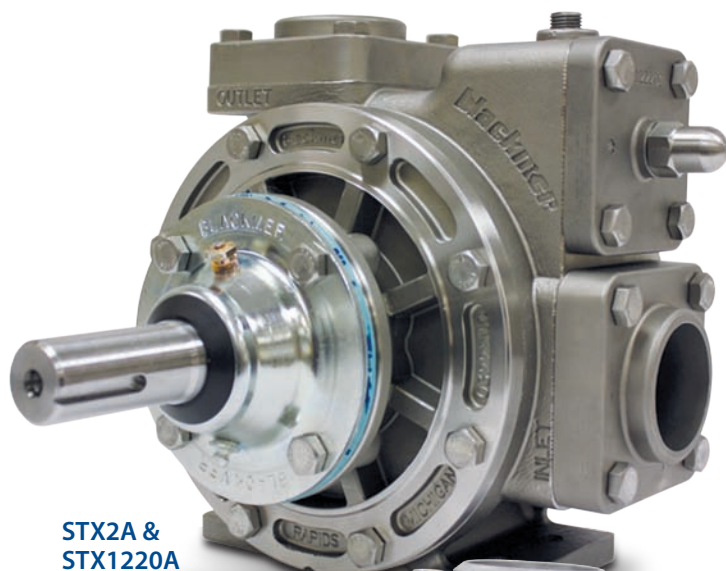
Section: 203

Effective: September 2017

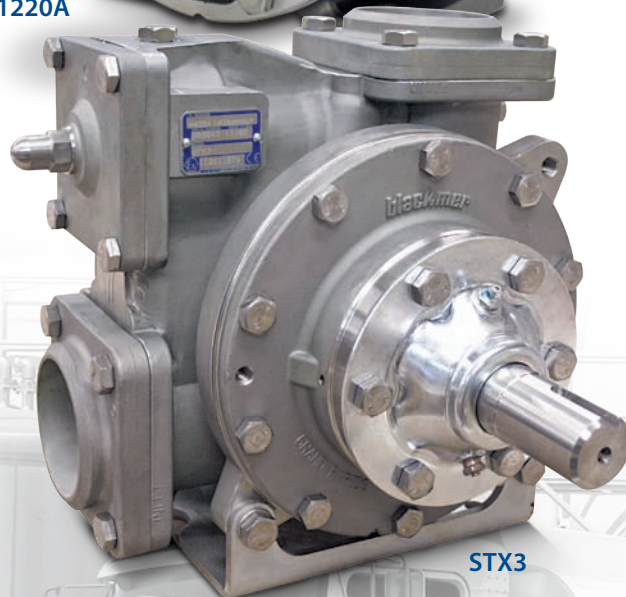
Replaces: March 2012



STX Series Stainless Steel Transport Pumps



STX2A &
STX1220A



STX3

Design

Blackmer's STX Series pumps are made from 316 stainless steel with external ball bearings, non-metallic Duravanes, PTFE elastomers, and Blackmer chemical mechanical seals. The pumps feature an adjustable relief valve, weld flanges and are self-priming. The STX3 has a versatile mounting bracket.

Application

Typical applications are solvents, chemicals, sulfates, vegetable oils, urea and many acids.

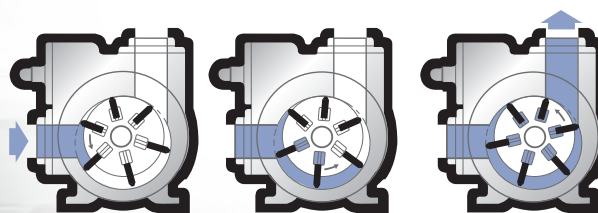
The STX3 offers flow rates up to 250 gpm (946 L/min) with differential pressures up to 125 psi (8.6 bar) and maximum speed of 800 rpm. The STX1220A offers flow rates up to 92 gpm (348 L/min) and maximum speed of 1,200 rpm, and the STX2A provides flow rates to 60 GPM (227 L/min) and maximum speed of 780 rpm.

Benefit

Blackmer's STX3 offers fast fluid off-loading. A typical off-loading of a 6,000 gallon (22,700 liter) tanker can be unloaded as quickly as 24 minutes.

Blackmer's non-metallic vanes self-compensate for wear and allow the STX Series pumps to run dry for short periods of time for self-priming and blowing lines clean, without pump damage.

The STX Series is designed to offer easy maintenance because the internal wear is limited almost completely to the sliding vanes, which can be replaced with ordinary hand tools.



How Blackmer's sliding vane action works

Characteristic Flow Rates

Pump Model	Pump Speed	Pump Capacity @ 50 psid (3.45 bar) with 30 ssu (1 cSt) Fluid			Maximum Fluid Viscosity at rpm Shown	
	rpm	US gpm	L/min	m³/h	ssu	cSt
STX2A	780	50	189	11.3	30	1
	520	30	113	6.8	1,000	210
	350	16	60	3.6	4,600	970
STX1220A	1,200	82	310	18	100	22
	1,000	72	273	16	100	22
	700	49	185	11	100	22

Pump Model	Pump Speed	Pump Capacity @ 50 psid (3.45 bar) with 30 ssu (1 cSt) Fluid			Maximum Fluid Viscosity at rpm Shown	
	rpm	US gpm	L/min	m³/h	ssu	cSt
STX3	800	250	946	57	500	105
	600	190	719	43	5,000	1,050
	400	125	473	28	20,000	4,250

Pump Horsepower Requirements

Pump Model	Pump Speed	30 ssu (1 cSt) Viscosity		100 ssu (21 cSt) Viscosity		1,000 ssu (210 cSt) Viscosity		4,600 ssu (970 cSt) Viscosity	
	rpm	50 psi (3.45 bar)	100 psi (6.9 bar)	50 psi (3.45 bar)	100 psi (6.9 bar)	50 psi (3.45 bar)	100 psi (6.9 bar)	50 psi (3.45 bar)	100 psi (6.9 bar)
STX2A	780	2.4	4.3	—	—	—	—	—	—
	520	1.5	2.9	1.7	3.1	2	3.3	—	—
	350	1	1.9	1	1.9	1.2	2.1	1.6	2.5
STX1220A	1,200	4	6.9	4.2	7.3	—	—	—	—
	1,000	3.4	5.6	3.6	6	—	—	—	—
	700	2.3	3.8	2.4	4.1	—	—	—	—

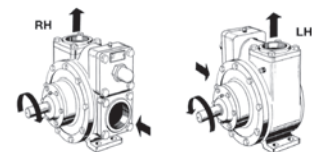
Pump Model	Pump Speed	30 ssu (1 cSt) Viscosity		50 ssu (13 cSt) Viscosity		500 ssu (105 cSt) Viscosity		5,000 ssu (1,050 cSt) Viscosity		10,000 ssu (2,200 cSt) Viscosity		20,000 ssu (4,250 cSt) Viscosity	
	rpm	50 psi (3.45 bar)	100 psi (6.9 bar)	50 psi (3.45 bar)	100 psi (6.9 bar)	50 psi (3.45 bar)	100 psi (6.9 bar)	50 psi (3.45 bar)	100 psi (6.9 bar)	50 psi (3.45 bar)	100 psi (6.9 bar)	50 psi (3.45 bar)	100 psi (6.9 bar)
STX3	800	9.5	17.5	9.8	17.9	11	19.0	—	—	—	—	—	—
	600	6.7	12.8	6.9	13.2	7.6	13.5	10	16.3	—	—	—	—
	400	4.2	8.0	4.3	8.3	4.7	8.5	6.1	10.3	6.9	11.1	8.3	12.4

Refer to Blackmer Characteristic Curves for flow rates and torque requirements for your specific conditions.

Maximum Operating Limits

Pump Model	Nominal Flow Rate			Pump Speed	Viscosity		Differential Pressure		Working Pressure		Temperature	
	US gpm	L/min	m³/h	rpm	ssu	cSt	psi	bar	psi	bar	°F	°C
STX2A	60	227	13.6	780	4,600	970	125	8.6	200	13.8	240	115
STX1220A	92	348	21	1,200	100	22	125	8.6	200	13.8	240	115
STX3	250	946	57	800	20,000	4,250	125	8.6	200	13.8	240	115

For pump dimensions, refer to Blackmer dimension page 203-101 and 203-103. Pages can be found in the literature section on Blackmer.com.



Pump Rotation

Blackmer's STX pump models are equipped with a double-ended straight-keyed drive shaft for either clockwise (RH) or counterclockwise (LH) rotation.



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