

# NSF Commercial-Duty Filter and Rendering Close-Coupled Roller Pumps

## Description

SherTech self-priming, positive displacement, Teflon® roller pumps feature cast-iron construction for high temperature use. This series of pumps is designed for hot oil or frying oil filtration up to 375° F., meeting NSF-listing requirements. The non-clogging Teflon® roller design can pass limited particulates and reduce oil shear, increasing oil life. Pumps are configured with motors specifically for hot oil filtration applications where oil is heated prior to pumping and discharge pressure limitations do not exceed 40 PSI. They provide a nearly pulseless flow in applications where non-particulate and non-abrasive fluids are pumped. Not for use with water-based fluids. AC ODP single-phase motors have thermal overload protection. Complete package is easy to install.

Uses: Ideal for a wide range of commercial fat fryer hot oil cooking, filtering, or waste oil rendering applications. This pump can also be used in non-NSF hot oil applications with non-particulate and non-abrasive fluids compatible with pump wet-end construction component materials.

- Pumps meet NSF-listed standards including NSF-accepted paint for hot oil cooking applications.
- Pumps can operate bi-directionally.
- Pressures to 40 PSI with configured motors.
- Flows to 8.2 GPM.
- Operating temperatures to 375° F.
- Maximum viscosity of 50 SSU and maximum specific gravity of 1.0 with configured motors.
- Suction lift capabilities up to 7.5 feet of head.
- Maximum RPM: 1725.
- Port size: 1/2 - 3/4" (ports can be rotated vertically or horizontally).
- ODP single-phase custom 56C frame motors with 1/3, 1/2 and 3/4 HP

**CAST IRON ROLLER PUMPS (COMMERCIAL-DUTY)** – Unlike traditional pumps, roller pumps feature a non-clogging design that passes small non-abrasive particulates without shearing oil. Heavy-duty steel rotor with long life rollers provides strong pumping action from 3.8 to 8.2 GPM. Pumps are direct-coupled to custom 56C frame, ODP single-phase motors. Wet-end parts are constructed from cast iron, steel, 303 stainless steel, carbon, ceramic, Teflon®, and Viton.



**WARNING:** Do not use to pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc. Do not use in flammable and/or explosive atmospheres. When pumping hazardous or dangerous materials, use only in room or area designated for that purpose. For your protection, always wear proper clothing, eye protection, etc. in case of any malfunction. For proper handling techniques and cautions, contact your chemical supplier, insurance company and local agencies (fire dept., etc.). Failure to comply with this warning could result in personal injury and/or property damage.

# NSF Commercial-Duty Filter and Rendering Close-Coupled Roller Pumps

## Model Ordering Codes and Options



Example Model: NR5

(1)  
NR

(2)  
5

(3)

1st	2nd	3rd
Mounting	Pump Size (Ports)/AC Motor	Options
NR: NSF Motor-Mounted Roller Pump	3: 3 GPM (1/2") / 1/3 HP 5: 5 GPM (1/2") / 1/2 HP 8: 8 GPM (3/4") / 3/4 HP	-PH: Pump Head Only (no motor)

**NOTE:** Not all order code combinations (configurations) are standard models available from the manufacturer. Custom model configurations may require ordering standard components and/or optional parts that will need to be assembled by the customer.

Manufacturer reserves the right to change model order codes, standard models, specifications, and performance without notification.

The pump is made out of cast iron with Viton seals and Teflon® rollers.

Maximum motor speed is 1725 RPM.

Cast iron is not for use with water-based fluids.

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## Performance

Models	Port Size*	RPM	Max. Input Torque in.-lbs.	Suction Lift (ft)**	GPM Pumping Cooking Oil at 300° F					
					Free Flow	10 PSI	20 PSI	30 PSI	40 PSI***	
<b>Pumps with Motors</b>										
NR3	1/2"	1725	46	5.6	3.80	3.70	3.60	3.50	3.40	
NR5	1/2"	1725	64	6.8	5.80	5.65	5.50	5.30	5.15	
NR8	3/4"	1725	90	7.5	8.20	8.00	7.80	7.60	7.40	
<b>Pumps without Motors</b>										
NR3-PH	1/2"	1725	46	5.6	3.80	3.70	3.60	3.50	3.40	
NR5-PH	1/2"	1725	64	6.8	5.80	5.65	5.50	5.30	5.15	
NR8-PH	3/4"	1725	90	7.5	8.20	8.00	7.80	7.60	7.40	

Test data taken on cooking oil at 300° F.

Performance in water will decrease by about 10%, and HP required will also be reduced by 10%. (Don't use water with Cast Iron.) Pump performance when pump is new. As pump wears, the performance will decrease.

(\*) Female NPT inlet and outlet (in inches).

(\*\*) Suction lift requires wetted rollers and primed seal chamber.

(\*\*\*) Max. PSI = 40 based on HP of motors supplied (rating may vary based on application; check motor amps on start-up).

**NOTES:** Pumps with motors are HP rated to handle up to 50 SSU at 40 PSI and specific gravity of 1.0.

Max. Viscosity = 50 SSU at 1725 RPM with the motor supplied.

Max. Input Torque = See chart above.

Max. RPM = 1725

Max. Specific Gravity = 1.0 at 40 PSI, up to 1.6 at lower PSI & viscosity.

Reverse Rotation = Pumps can be run in reverse rotation. If a separate pressure relief valve is used, it will only function if installed on the discharge side of the pump.

Manufacturer reserves the right to change performance without notification.

## Price List and Specifications

List Price	Model	Motor HP	AC Motor		Motor Voltage	Amps	Motor Phase	Thermal***			PUMP CONSTRUCTION (Wet End)				Ship Wt. (lbs.)		
			NEMA Type	Frame				Overload Protection	Motor RPM	Hz	Motor Shaft**	Inlet & Outlet Port	Body Cover & Rotor	Rollers		Seals & O-rings*	
<b>Models with Motors</b>																	
\$	NR3	1/3	ODP	56C	115/230	6.2/3.1	1	Yes	1725	60	303 SS	1/2"	CI	Teflon®	Viton	23.7	
\$	NR5	1/2	ODP	56C	115/230	8.8/4.4	1	Yes	1725	60	303 SS	1/2"	CI	Teflon®	Viton	28.4	
\$	NR8	3/4	ODP	56C	115/230	10.8/5.4	1	Yes	1725	60	303 SS	3/4"	CI	Teflon®	Viton	33.0	
<b>Models without Motors</b>																	
NA	NR3-PH	-	NOTE: This series of motors are custom 56C frame type.				-	-	-	-	-	-	1/2"	CI	Teflon®	Viton	6.1
NA	NR5-PH	-	Standard NEMA 56C frame motors will not work.				-	-	-	-	-	-	1/2"	CI	Teflon®	Viton	7.7
NA	NR8-PH	-					-	-	-	-	-	-	3/4"	CI	Teflon®	Viton	9.1

SS = Stainless Steel CI = Cast Iron ODP = Open Drip-Proof

(\*) Standard Shaft Seals have carbon on ceramic faces and 18-8 SS components.

(\*\*) Motor Shaft is pump shaft

(\*\*\*) Manual or Automatic (check motor supplied).

**NOTES:** Driver data is subject to change without notice; see label on driver for specifications and wiring information.

All dimensions in inches unless otherwise specified.

Manufacturer reserves the right to change specifications without notification.

Source: Owner's Manual L-4091 (11/07)