

## MATERIAL OF CONSTRUCTION

Options	Pump Housing and Cover	Shaft	Rotor Group			Shuttle Pin
			Rotor	Piston	Shuttle	
1	Cast Iron	Alloy Steel	Alloy Steel	Alloy Steel	Alloy Steel	Hardened Steel
2	Cast Iron	Alloy Steel	Cast Iron	Cast Iron	Cast Iron	Hardened Steel
3	Cast Iron	Alloy Steel	Bronze	Bronze	Bronze	Hardened Steel

## PUMP PERFORMANCE TABLE

PUMP MODEL	SB-01 INLET X OUTLET (NB 2", ANSI, B16.5, 150#, FF)		SB-02 INLET X OUTLET (NB 3", ANSI, B16.5, 150#, FF)		SB-03 INLET X OUTLET (NB 4", ANSI, B16.5, 150#, FF)		Std. Available Gearbox Ratios
	SPEEDS for 1440 RPM	Flow (LPM)	Power (kW)	Flow (LPM)	Power (kW)	Flow (LPM)	
960	250	5.00	N.A.	N.A.	N.A.	N.A.	1.5:1
720	187	3.76	403	8.11	N.A.	N.A.	2:1
576	150	3.00	323	6.50	1000	20.12	2.5:1
480	125	2.50	270	5.43	845	17.00	3:1
360	98	1.97	210	4.22	660	13.27	4:1
288	75	1.50	160	3.22	507	10.20	5:1
240	62	1.25	134	2.70	420	8.45	6:1

Pump Data with 40 cSt Lube Oil at 6 Bar and 40°C test standard as per VDMA 24284 G.II CL. II

Major Spare Kit (Rotor + Shuttle + Piston + Shaft + Pin + Minor Repair Kit)  
Minor Repair Kit (Static Seal + Dynamic Seal Kit + Bush)  
Interchangeability

**Important Note: Shuttle Block Pump is not Available in Stainless Steel Construction**

## We also Manufacture

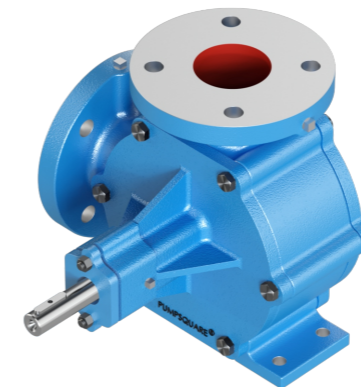
INTERNAL GEAR PUMPS	RELIEF VALVES	SIMPLEX / DUPLEX FILTERS
INTERNAL LOBE PUMPS	TWIN SCREW PUMPS	THREE SCREW PUMPS
EXTERNAL LOBE PUMPS	EXTERNAL GEAR PUMPS	FLEXIBLE IMPELLER PUMPS
STRAINERS	PROGRESSIVE CAVITY PUMPS	PERISTALTIC PUMPS

# PUMPSQUARE®

PUMP



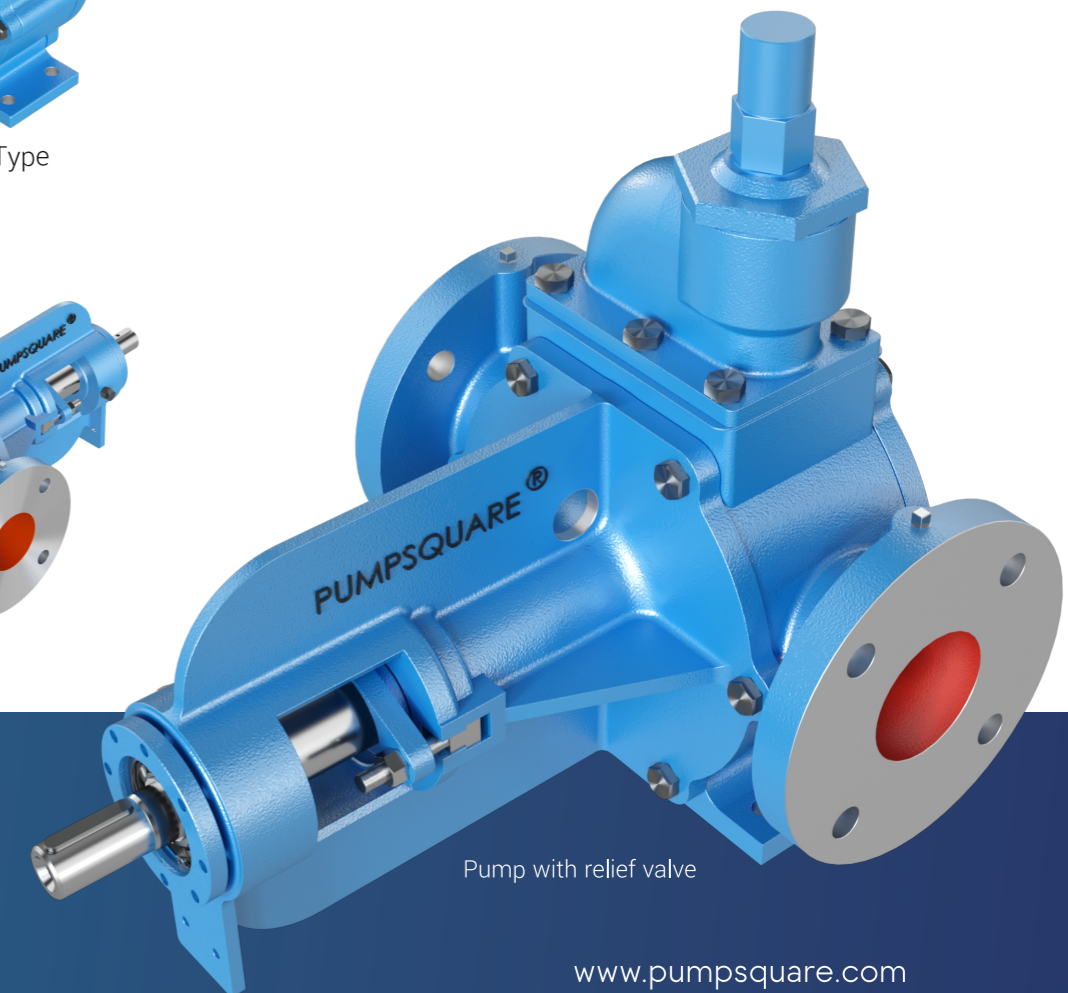
Bare Shaft Pump With 'L' Type Configuration



Short Design With 'L' Type Configuration



Pump With Jacketing



Pump with relief valve

# SB-0X

SHUTTLE BLOCK PUMPS  
OSCILLATION ROTARY PISTON PUMP

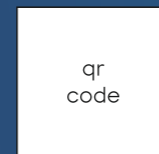
PRESSURE UPTO 8 BAR  
CAPACITY UPTO 1000 LPM  
VISCOSITY UPTO 2,00,000 cSt  
OPERATING TEMPERATURE UPTO 250°C

Pumpsquare® Draft Copy



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## WORKING PRINCIPLE

The shuttle block pump is a **positive displacement pump**, which mainly consist of three components: **rotor, piston and shuttle**. The **liquid-tight fit reciprocation** of double acting piston in the rotor slot ensures **high efficiency and suction power**. This action of piston results due to the **rotating shuttle on shuttle pin, which is placed eccentrically inside a rotor**. Thereby, the fluid is caused to fill the pockets on suction side and get emptied **smoothly and without any shear and churning on a discharge side**. **The robust design of this pump** is precisely executed by using advanced CNC machines, making our pumps **highly reliable and assures quality with minimum leakage and exceptionally long service life**. Our shuttle block pumps are **highly suitable to continuously handle wide range of viscous fluids with an enormously silent operation**. Furthermore, it is designed to **delivers vibration free pumping with minimum run out** by incorporating single shaft design supported by long sleeve bearing and external ball bearing. **The Front Pull-Out design of this pump enables a simple, convenient and quick inspection and maintenance of pump**. This pump has a **unique feature to manually change the clearances as well as adjust and compensate wear for longer pumping life**.

## TECHNICAL DATA

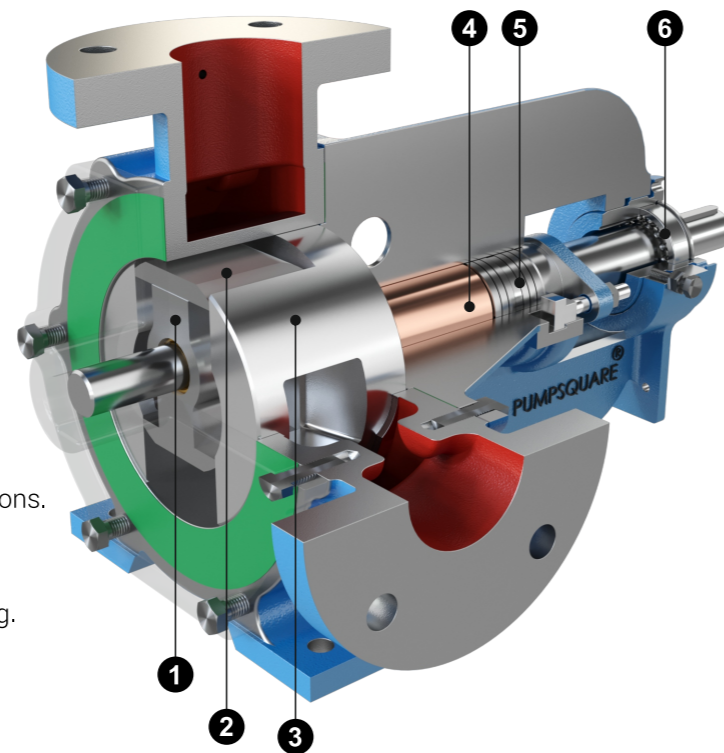
- ▶ Mounting: : Horizontal foot  
Gearbox Mounted  
Pulley Mounted
- ▶ Jacket : Fully Jacketed / Front Cover
- ▶ Relief Valve : Built-In  
No Relief Valve
- ▶ Sealing : Grafoil seal, Mechanical Seal  
or Gland Packing.

## APPLICATIONS

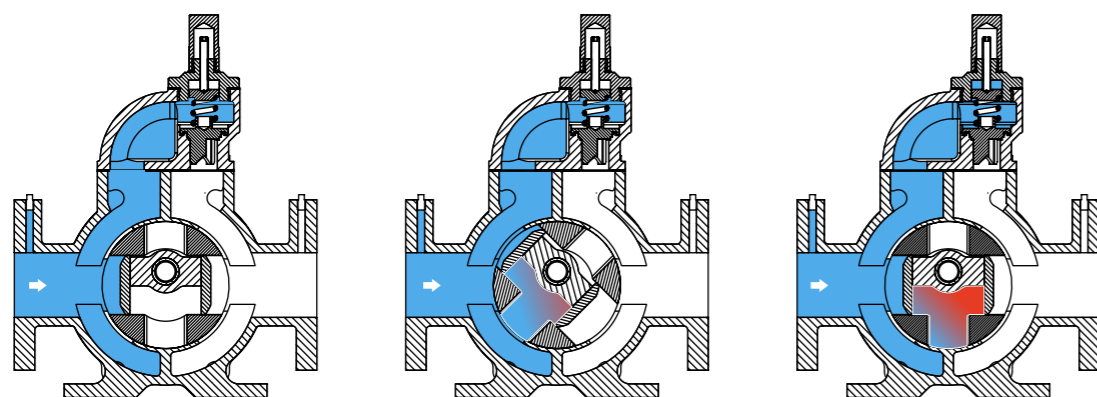
- ▶ Mainly applicable for handling dirty liquids.
- ▶ Loading-unloading of tank lorries and rail wagons.
- ▶ High viscous fluid such as chocolate can be pumped easily.
- ▶ For tank to tank transfer and process pumping.

## INDUSTRY

- ▶ Petrochemical and oil & gas
- ▶ Chemical
- ▶ Food processing



- ① Shuttle
- ② Piston
- ③ Rotor
- ④ Bush
- ⑤ Sealing
- ⑥ Bearing



## TYPICAL LIQUID LIST

**Light Products:** Olive Oils, Thermal Oils, Acetone, Alcohol, Benzol, Styrene, Hexane, Diesel, Gasoline, Aliphatic Hydrocarbons, Aromatic Hydrocarbons, Kerosene, Toluene, White Spirit.

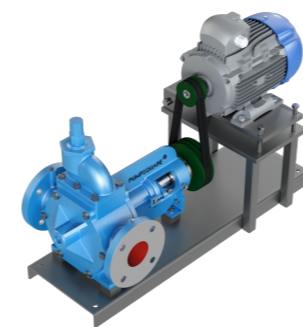
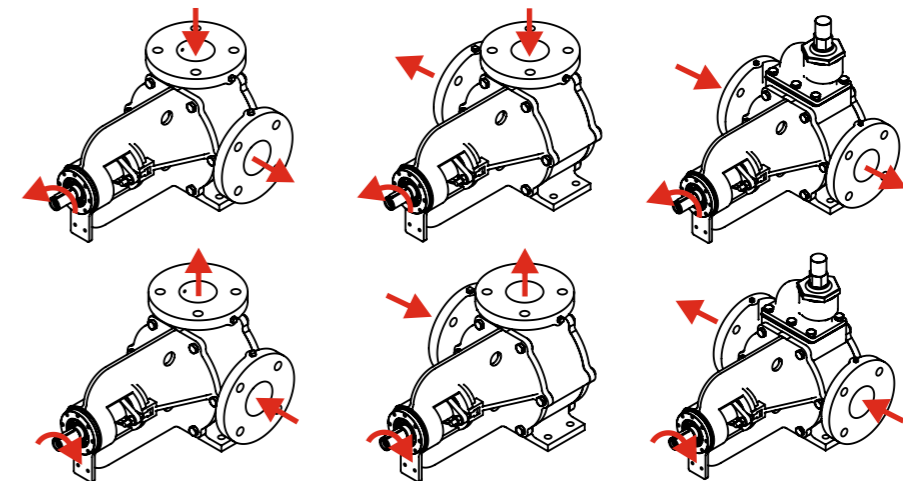
**Thick / Sticky Products:** Industrial Oils, Mineral Oils, Adhesives, Additives, Tars, Asphalt, Varnish, Polyvinyl Chloride, Urea or Phenol Glue, Cosmetics, Toothpaste, Detergent, Emulsions, Diesel Oil, Grease, Isocyanate, Soap, Molasses, Paraffin, Refinery Pastes, Paint, Plastic, Polyol, Resins, Silicates, Elbow Grease, etc.

**Food Products:** Edible Oils, Creams, Chocolates, Glaze, Glucose, Syrup, Juice, Butter, Mayonnaise, Jam, Honey, Pasta, Cookie Dough, Cake Batter, Tomato Paste, etc.

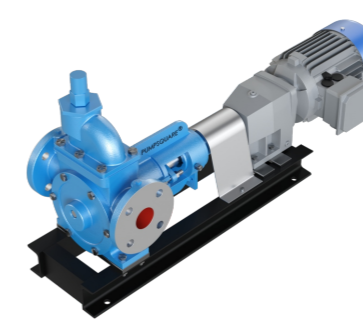
## PORT POSITION

● Counter clockwise – Standard

● Clockwise – On demand



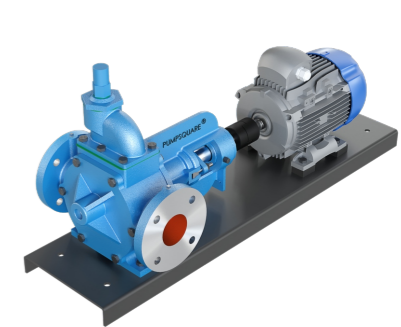
PUMP WITH V-BELT DRIVE, ROCKER & MOTOR



PUMP WITH FLEXIBLE COUPLING & GEARED MOTOR



PUMP WITH BUILT-IN SPEED REDUCER TO BE COUPLED DIRECTLY WITH STANDARD MOTOR



PUMP WITH FLEXIBLE COUPLING & MOTOR

