

TopGear

INTERNAL GEAR PUMPS



Gear pumps are used in all types of manufacturing industries for the transportation of both thin and thick liquids, from diesel fuels to chocolate. The SPX FLOW Johnson Pump brand heavy duty pumps are designed around high reliability as well as long life.

TopGear offers a combination of strong design with small or large clearances, unique gear tooth profile and options such as electrical heating and built-on safety relief valves.

The extensive TopGear series is divided into three ranges; the TG G-range for general purposes, the TG H-range for high demanding applications and the TG L-range that offers high efficiency when transporting low viscosity fluids. For applications demanding leak-free operation a magnetically driven, TG MAG, is available.

SPX FLOW, Inc. (NYSE:FLOW) is a leading manufacturer of innovative flow technologies, many of which help define the industry standard in the market segments they serve. From its headquarters in Charlotte, North Carolina, it operates a sales and support network, centers of manufacturing excellence, and advanced engineering facilities, throughout the world.

Its cutting-edge flow components and process equipment portfolio includes a wide range of pumps, valves, heat exchangers, mixers, homogenizers, separators, filters, UHT, and drying technology that meet many application needs. Its expert engineering capability also makes it a premium supplier of customized solutions and complete, turn-key packages to meet the most exacting of installation demands. Incorporating many leading brands,

SPX FLOW has a long history of serving the food and beverage, power and energy, and industrial market sectors. Its designs and engineered solutions help customers drive efficiency and productivity, increase quality and reliability, and meet the latest regulatory demands. In-depth understanding of applications and processes, state-of-the-art Innovation Centers, and advanced pilot/testing technology further assist in optimizing processes and reducing timescales to reliably meet production targets.

For more information, please visit www.spxflow.com

TopGear When reliability is the priority

TG G & TG H ranges

IMPROVED PRIMING, LOW NPSHR

- Ports above centerline
- Oversized ports for better efficiency

IMPROVED DESIGN FOR LOW AND HIGH VISCIOUS MEDIA

- Optimized gear tooth profile
- Smooth flow

HIGH EFFICIENCY

- Axial rotor locking
- Adjustable clearances
- Balanced hydraulic design

ELIMINATED LEAKAGE DURING THERMAL EXPANSION

- Pin cover
- Safety sealed

SEVERAL MATERIAL OPTIONS

- Shaft seal materials
- Bearing materials
- Hydraulic parts

PROLONGED SERVICE LIFE

- Double ball bearing design
- Adjustable axial clearance
- Allows V-belt drive
- Accepts higher axial forces

MINIMUM OF MAINTENANCE

- Cartridge design
- Simple design

MAXIMIZED LIFETIME

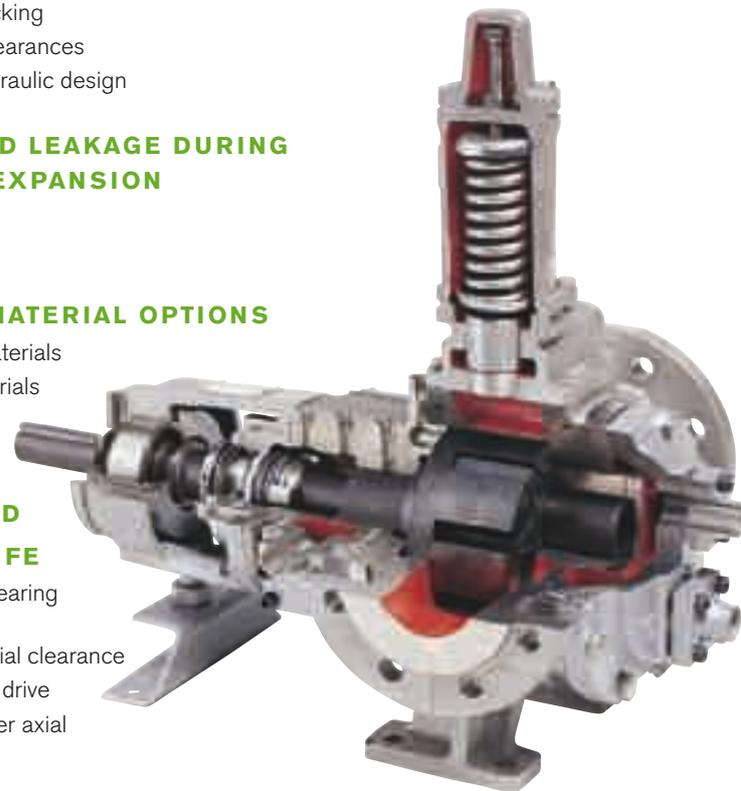
- Compact rotor
- Strong shafts
- Maximized bearing design
- Possibility for selection of hardmetal bearings
- On seals thanks to seal relief channel

LESS DOWNTIME

- Front and back pull-out

FLANGE CONNECTIONS OPTIONS

- EN
- ANSI



TG L range

LARGE VERTICAL PORTS

- Improved priming capability
- Reduced risk of cavitation

HIGH VOLUMETRIC EFFICIENCY

- Small radial and axial clearances – reduced slip
- Optimized rotor/gear shape

LESS DOWN TIME

- Pumps and motors flanged to pedestals – correct alignment between pump and drive shaft
- Compact units easy to assemble

PROLONGED SEAL LIFE

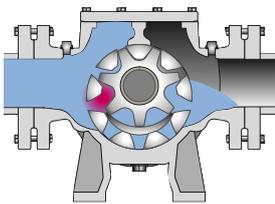
- Pressure relief channel from the seal area back to the suction side

LONG SERVICE LIFE

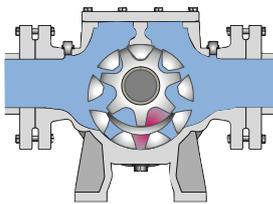
- Large bearing diameters
- Rotors are machined from solid bar stock material.
- Hardened interior parts



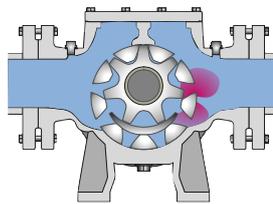
OPERATING PRINCIPLE



As the rotor and idler unmesh, an under-pressure is created and the liquid enters the newly created cavities.



Liquid is transported in sealed pockets to the discharge side. The walls of the pump casing and the crescent create a seal, that separates suction from discharge side.



The rotor and idler mesh and liquid is pushed into the discharge line.

TECHNICAL DATA

	TG L	TG G			TG H
		TG GS	TG GP	TG GM	
PUMP CASING	CAST IRON	CAST IRON			STAINLESS STEEL CAST STEEL DUCTILE IRON
IDLER	STEEL	CAST IRON STEEL STAINLESS STEEL			
ROTOR	STEEL	CAST IRON NODULAR IRON STAINLESS STEEL			
MAX CAPACITY (M ³ /H)	8	80	130*	130	
MAX DIFFERENTIAL PRESSURE (BAR)	25	10	16	16	
MAX TEMPERATURE (°C)	250	200	300	300	
MAX VISCOSITY (M.PAS)	60 000	5 000	80 000	80 000	

*Flow rates up to 260 m³/hr with SRT on request

Typical product applications

TopGear pumps are used in various industries and environments, which have thousands of liquids that need to be pumped.

PETROCHEMICALS

Pure or filled bitumen, pitch, diesel oil, crude oil, lube oil



CHEMICALS

Sodium silicate, acids, plastics, mixed chemicals, isocyanates



PAINT AND INK

RESINS AND ADHESIVES

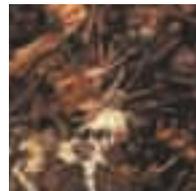
PULP & PAPER

Acid, soap, lye, black liquor, kaolin, lime, latex, sludge



FOOD

Chocolate, cacao butter, fillers, sugar, vegetable fats and oils, molasses, animal feeds



SPXFLOW

Options

SHAFT SEAL OPTIONS

Shaft seal options include packed gland, single and double mechanical seals, lip seals and cartridge seals.

Magnetic drive available as the TG MAG.



JACKET OPTIONS

Heating and cooling jackets guarantee the performance of the pump in a start-up or a shut-down procedure. They also provide the pump with the best condition for the seals during operation. Different options: thermal oil, steam or electrical heating.



SAFETY RELIEF VALVE OPTIONS

Built-on safety relief valves protect the pump, as well as other equipment in the system, from over pressure. When the pump is used bi-directionally, a double safety relief valve is available.



FOR YOUR LOCAL REPRESENTATIVE:

www.spxflow.com/en/johnson-pump/where-to-buy/

SPX FLOW TECHNOLOGY BELGIUM N.V.

Evenbroekveld 2-4 • BE-9420 Erpe-Mere, BELGIUM

P: +32 (0)53 60 27 15

F: +32 (0)53 60 27 01

E: johnson-pump.be.support@spxflow.com

SPX FLOW, Inc. reserves the right to incorporate our latest design and material changes without notice or obligation.

Design features, materials of construction and dimensional data, as described in this bulletin, are provided for your information only and should not be relied upon unless confirmed in writing. Please contact your local sales representative for product availability in your region. For more information visit www.spxflow.com.

The green "S" and "X" are trademarks of SPX FLOW, Inc.

COPYRIGHT © 2018 SPX FLOW, Inc.