

# SUBMERSIBLE PUMPS & MOTORS



**60 HZ BOOKLET**

**SHAKTI**  
PUMPING LIFE

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# SUBMERSIBLE PUMPS

## SUBMERSIBLE PUMP QF

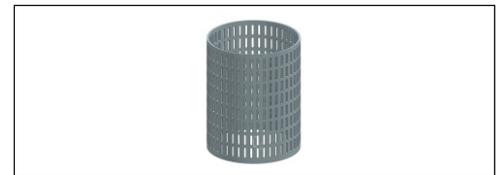
### BEARINGS WITH SAND CHANNELS

All bearings are water-lubricated and have a square shape, enabling sand particles, if any, to leave the pump together with the pumped liquid.



### INLET STRAINER

The inlet strainer prevents particles over a certain size from entering the pump.

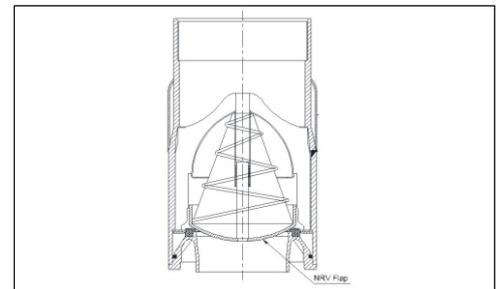


### NON - RETURN VALVE

All pumps are equipped with a reliable non-return valve in the valve casing preventing back flow in connection with pump stoppage.

Furthermore, the short closing time of the non-return valve means that the risk of destructive water hammer is reduced to a minimum.

The valve casing is designed for optimum hydraulic properties to minimize the pressure loss across the valve and, thus, contributes to the high efficiency of the pump.

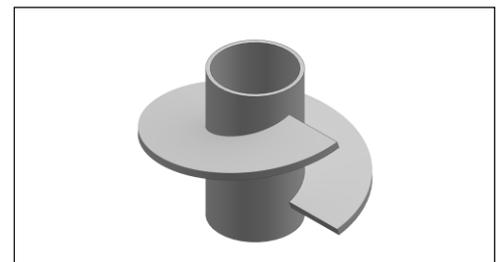


### PRIMING SCREW

All QF and QF 30 pumps are fitted with a priming screw. Consequently, dry running is prevented because the priming screw will make sure that pump bearing are always lubricated.

Due to the semi-axial impellers of large QF pumps (except for QF 30) this priming is automatically provided.

However, it applies to all pump types that if the water table is lowered to a level below the pump inlet neither pump nor motor will be protected against dry running.



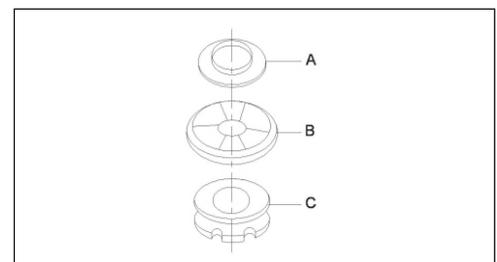
### STOP RING

The stop ring prevents damage to the pump during transport and in case of up-thrust in connection with start-up.

The stop ring, which is designed as a thrust bearing limits axial movements of the pump shaft.

### EXAMPLE : QF 125

The stationary part of the stop ring (A) is secured in the top bowl (Upper intermediate chamber). The rotating part (B) is fitted above the collet [split cone (C)].



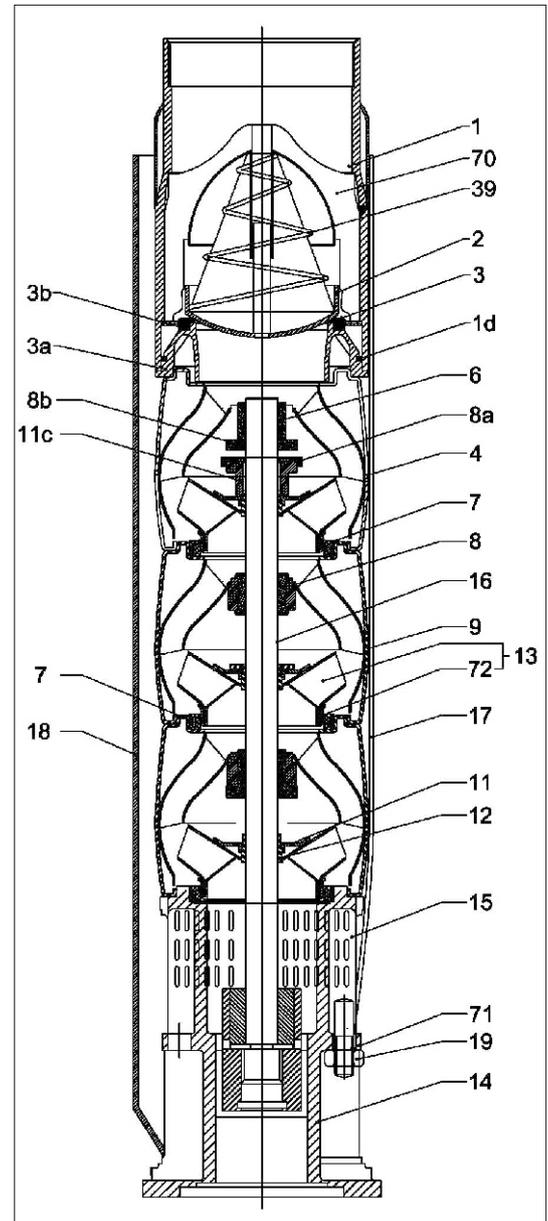
# SUBMERSIBLE PUMPS

## SUBMERSIBLE PUMP QF

### MATERIAL SPECIFICATION

POS.	DESCRIPTION	MATERIAL	STANDARD	N-VERSION
1	VALVE CASING	STAINLESS STEEL	304	316
1d	O-RING	NBR		
2	VALVE CAP	STAINLESS STEEL	304	316
3	VALVE SEAT	STAINLESS STEEL	304	316
3a	LOWER VALVE SEAT RETAINER	STAINLESS STEEL	304	316
3b	UPPER VALVE SEAT RETAINER	STAINLESS STEEL	304	316
4	TOP CHAMBER CUP	STAINLESS STEEL	304	316
6	UPPER BEARING	STAINLESS STEEL	304	316
7	NECKRING	NBR/PPS		
8	BEARING	NBR		
8a	WASHER FOR STOP RING	CARBON/GRAPHITE		
		HY22 IN PTFE MASS		
8b	STOP RING	STAINLESS STEEL	304	316
9	CHAMBER	STAINLESS STEEL	304	316
11	SPLIT CONE NUT	STAINLESS STEEL	304	316
11c	NUT FOR STOP RING	STAINLESS STEEL	304	316
12	SPLIT CONE	STAINLESS STEEL	304	316
13	IMPELLER	STAINLESS STEEL	304	316
14	SUCTION INTERCONNECTOR	STAINLESS STEEL	304	316
15	STRAINER	STAINLESS STEEL	304	316
16	SHAFT COMPLETE	STAINLESS STEEL	304	316
17	STRAP	STAINLESS STEEL	304	316
18	CABLE GAURD	STAINLESS STEEL	304	316
19	NUT FOR STRAP	STAINLESS STEEL	304	316
39	SPRING FOR VALVE CUP	STAINLESS STEEL	304	316
70	VALVE GUIDE	STAINLESS STEEL	304	316
71	WASHER	STAINLESS STEEL	304	316
72	WEAR RING	STAINLESS STEEL	304	316

### EXAMPLE : QF - 125



# SUBMERSIBLE MOTORS



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## SUBMERSIBLE MOTOR

### FEATURES AND BENEFITS

#### A COMPLETE MOTOR RANGE

We offer a complete submersible motor range in different voltages :

- 4" motors, single - phase up to 4 kW. (Encapsulated & Rewindable)
- 4" motors, three-phase up to 7.5 kW. (Encapsulated & Rewindable)
- 6" motors, three-phase from 2.2 kW to 37 kW. (Rewindable)
- 8" motors, three-phase from 11 kW to 220 kW. (Rewindable)

#### HIGH MOTOR EFFICIENCY

Within the area of high motor efficiency Star is a market leader. This is due to newly developed motor concept which is introduced with the MS 100, MS 101 and MS 150.

#### SHAFT SEAL

The choice of material is ceramic/ tungsten carbide providing optimum sealing, optimum wear resistance and long life.

The spring loaded shaft seal is designed with a large surface and a sand shield. The result is a minimum exchange of pumped and motor liquids and no penetration of particles.

#### PROTECTION AGAINST UPTHRUST

In case of a very small counter pressure in connection with start-up there is a risk that the entire pump body may rise. This is called upthrust. Upthrust may damage both pump and motor. Therefore, both pumps and motors are protected against upthrust as standard, preventing upthrust from occurring in the critical start-up phase. The protection consists of either a built-in stop ring or hydraulic balancing.

#### BUILT-IN COOLING CHAMBERS

In all submersible motors an efficient cooling is ensured by cooling chambers at the top and at the bottom of the motor, and by an internal circulation of motor liquid. As long as the required flow velocity cooling of the motor will be efficient.

REWINDABLE



REWINDABLE

