

Medium Pressure Pumps: Immersion Pumps (S)TC

Our multistage pump models (S)TC40 to (S)TC160 have been especially developed to supply internally cooled tools with coolant fluid.

Closed impellers provide optimal hydraulic efficiencies while minimizing power consumption.

A **frequency converter** can be supplied for **special applications** or for matching the pump characteristic to a specific duty point. See page "Control/Regulation" in the Technical Information section of this catalog for further information.



(S)TC63

SAE Flange for TC Pumps

Upon request all TC pumps are available with an SAE flange. The flange allows for either vertical or horizontal pipe connection and offers a NPT 1/4 (G 1/4) pressure gauge connection port. A surcharge applies for pumps ordered with SAE flange.

Pump Curves

One key feature of the (S)TC series pumps is their non-overloading motors. These pumps can be operated across the entire pump curve without damaging the motor. This key advantage applies for all allowed fluids, including coolant oils. For specific applications where only one working point is required, the pump/motor combinations can be reviewed and a smaller motor size might be applicable.

Number of Stages

(S)TC pump curves are determined by the number of impeller used within the pump.

Within the range the immersion depth can be extend up to the maximum mentioned length.

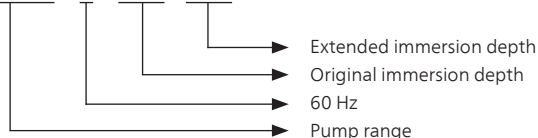
Example: STC63S350-750

Pump suction with threaded inlet

The TC40 to TC160 series pumps are also available with threaded suction ports upon request. This feature increases the standard immersion depth by 1.57 inch (40 mm).

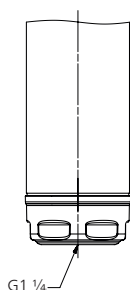
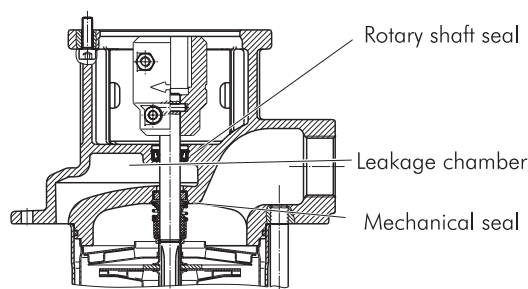
Type Designation

(S)TC63 S 270 - 750



Leakage chamber / Leakage connections

TC



TC40-160

Medium Pressure Pumps: Immersion Pumps (S)TH

The (S)TH Series uses closed impellers in order to minimize power consumption and to optimize hydraulic pump efficiencies. In addition, the (S)TH series offers high pressures at short immersion depths.

A **frequency converter** can be supplied for **special applications** or for matching the pump characteristic to a specific duty point. See page "Control/Regulation" in the Technical Information section of this catalog for further information.



(S)TH



TH

SAE Flange for TH Pumps

Upon request all TH pumps are available with an SAE flange (STH). The flange allows for either vertical or horizontal pipe connection and offers a NPT 1/4 (G 1/4) pressure gauge connection port. A surcharge applies for pumps ordered with SAE flange.

Pump Curves

One key feature of the (S)TH series pumps is their non-overloading motors. These pumps can be operated across the entire pump curve without damaging the motor. This key advantage applies for all allowed fluids, including coolant oils. For specific applications where only one working point is required, the pump/motor combinations can be reviewed and a smaller motor size might be applicable.

Number of Stages

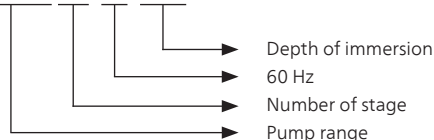
(S)TH pump curves are determined by the number of impeller used within the pump.

Within the range the immersion depth can be extend up to the maximum mentioned length.

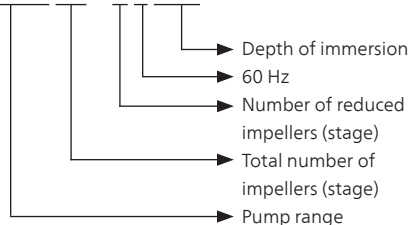
Example: STH203S690 (3 impeller, 27.17 inch / 690 mm immersion depth)

Type Designation

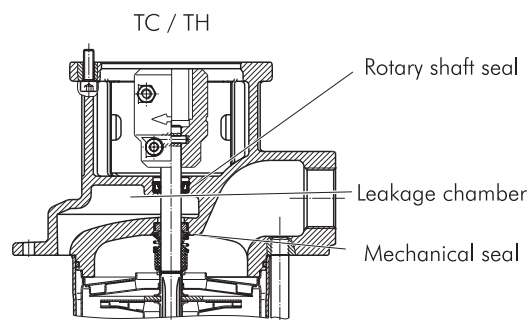
(S)TH4 11 S 290



STH21 01 - 1 S 260



Leakage chamber / Leakage connections



Small leaks flow back through the leakage chamber into the tank without reaching the outside.

By connecting a leakage line it is possible to direct minor leaks back into the tank.

Medium Pressure Pumps: Pressure Boosting Pumps FH

The FH series uses closed impellers in order to minimize power consumption and to optimize hydraulic pump efficiencies.

A **frequency converter** can be supplied for **special applications** or for matching the pump characteristic to a specific duty point. See page "Control/Regulation" in the Technical Information section of this catalog for further information.



FH

Applications

Inline pumps of the series FH can be used as boosting pumps if provided with positive inlet pressure. This inlet pressure can be provided by the central coolant supply or a feed pump. In such a setup, pumps of the series FH can raise the incoming pressure by up to 26 bar.

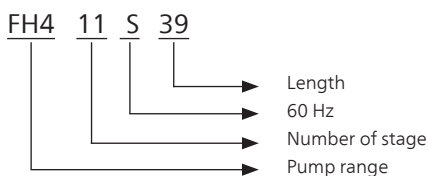
Pump Curves

One key feature of the FH series pumps is their non-overloading motors. These pumps can be operated across the entire pump curve without damaging the motor. This key advantage applies for all allowed fluids, including coolant oils. For specific applications where only one working point is required, the pump/motor combinations can be reviewed and a smaller motor size might be applicable.

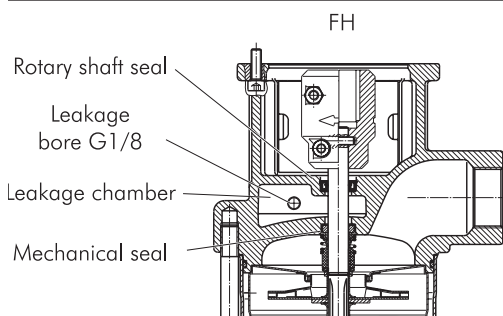
Number of Stages

FH pump curves are determined by the number of impeller used within the pump.

Type Designation



Leakage chamber / Leakage connections



Small leaks flow back through the leakage chamber into the tank without reaching the outside.

By connecting a leakage line it is possible to direct minor leaks back into the tank.

Medium Pressure Pumps: Inline Pumps IH

The IH series pumps achieve optimum hydraulic efficiency with their closed impellers.

The compact design of the inline pumps with opposing suction and discharge ports allows for space-saving installation – either integrated directly into the pipeline or directly on the tank.

A **frequency converter** can be supplied for **special applications** or for matching the pump characteristic to a specific duty point. See page "Control/Regulation" in the Technical Information section of this catalog for further information.



IH

Applications

Multi-stage inline centrifugal pumps are ideal for high delivery pressures and, in addition to supplying cooling lubricants in industry, are used in water supply, refrigeration and air conditioning technology, and industrial cleaning processes.

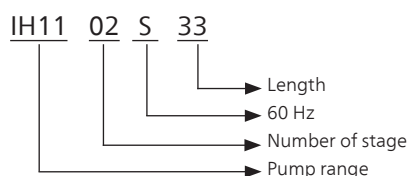
Pump Curves

One key feature of the IH series pumps is their non-overloading motors. These pumps can be operated across the entire pump curve without damaging the motor. This key advantage applies for all allowed fluids, including coolant oils. For specific applications where only one working point is required, the pump/motor combinations can be reviewed and a smaller motor size might be applicable.

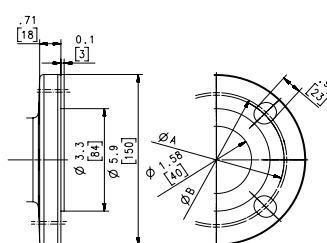
Number of Stages

IH pump curves are determined by the number of impeller used within the pump.

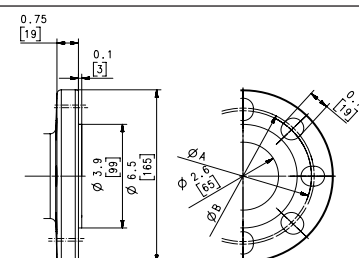
Type Designation



Suction and pressure connections

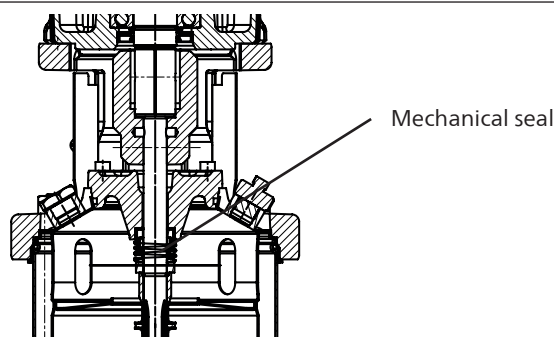


IH11: 1½" ANSI B16.5 Class300 (4 hole)
 $\varnothing A = 4.49$ Inches / 114 mm
 JIS B2239 1½" 40K (4 hole) $\varnothing B = 4.72$ Inches / 120 mm
 Upon request
 DN40 PN25 (4 hole) $\varnothing = 4.33$ Inches / 110 mm



IH14 / IH17: DN50 PN25 (4 hole)
 $\varnothing = 4.92$ Inches / 125 mm
 2" ANSI B16.5 Class300 (8 hole) $\varnothing A = 5$ Inches / 127 mm
 JIS B2239 2" 40K (8 hole) $\varnothing B = 5.12$ Inches / 130 mm

Mechanical seal



The pump does not need to be removed from the piping system to replace the mechanical seal.

The motor, coupling, and housing cover are dismantled and the mechanical seal is removed from the shaft. The counter ring is located in the housing cover.

Medium Pressure Pumps: (S)TH | FH

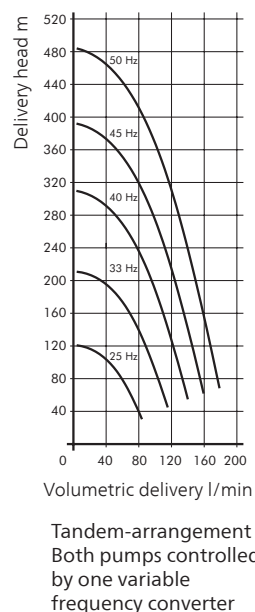
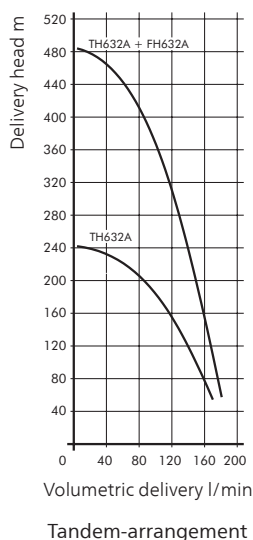
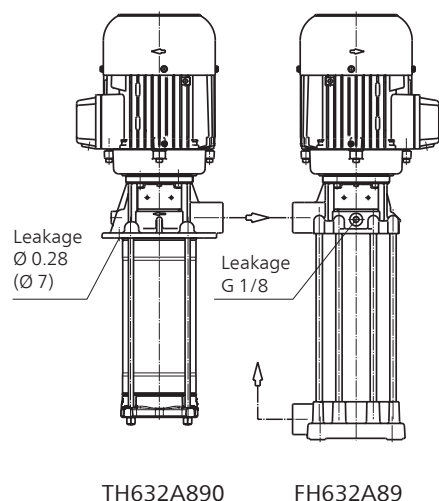
Operation of (S)TH/FH pumps in grinding applications

Grinding versions (S)TH/FH pumps (-E). (S)TH/FH series pumps can be supplied upon request as a special grinding version for applications with heavy loads of abrasive particles (>50HRC). Ordering description: e.g. TH224A590-E

In this version pumps are supplied without internal diffuser gaskets in order to prevent increased wear caused by the abrasive particles in the fluid. As a result, however, the internal losses of the pump increase and the pump curves are reduced.

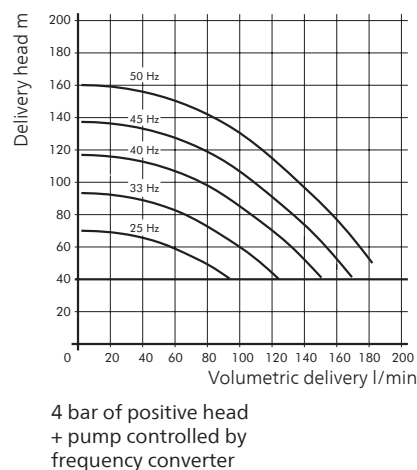
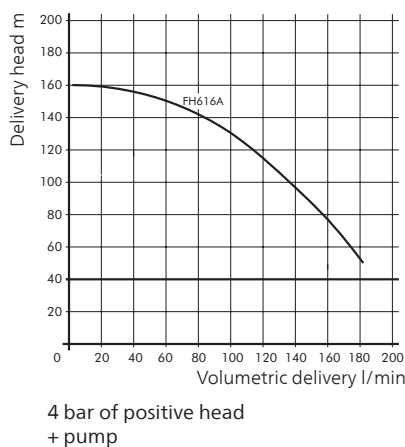
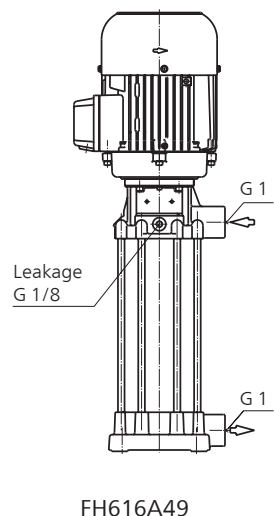
These curves are available upon request.

Examples for pressure boosting: TH632A890 + FH632A89 in tandem-arrangement



Dimensions in Inches / mm

Examples for pressure boosting: FH616A49 + 4 bar of positive head from central coolant supply



Medium Pressure Pumps: (S)TH | FH

Operation of (S)TH / FH Pumps outside of the recommended flow rate ranges

Operation of (S)TH and FH pumps **outside of the recommended flow rate ranges** and within the perforated zones of the pump curves can lead to premature damage and failure of pump components.

Therefore, we recommend the use of the reinforced versions of these pump models when operation in the perforated zones of the curves is present, i.e. during temporary pump operation through a bypass with very low flow rates.

Ordering description: e.g. TH224A590-Q

Example: (S)TH2

