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# pompetravaini

## TRAVAINI PUMPS® USA

Engineered Pump Solutions

# TBH-TBA

SELF-PRIMING
CENTRIFUGAL PUMPS
Capacity to 70 m³/h
Total head to 40 bar





ISO 9001 EAC

# TBH

# SELF-PRIMING CENTRIFUGAL PUMPS

# TBA

- *Multistage self-priming centrifugal pumps with horizontal mounting vertical suction and discharge flanges.*
- *Capable of handling mixtures of gas and clean liquids.*
- *Low capacity - high head.*
- *Suction lift to 8.5 m.w.c.*
- *Low operating speed for extended life, low vibration, low noise level and maximum reliability.*
- *Impellers hydraulically balanced thus end thrust forces to bearings eliminated.*
- *Mechanical seals standard and unified to UNI EN 12756.*
- *Optional double mechanical seals back to back or tandem.*
- *Cooled or heated seal housing available.*
- *Reduced number of components is achieved by design innovation.*
- *Choice of motor mounting, including close-coupled through flexible coupled motor, up to 30 HP*
- *Variety of materials available to meet specific requirements*
- *Capacities to 308 GPM (70 $m^3$/h)*
- *Heads to 580 PSIG (40 bar)*



- *TBA pumps derive from the TBH series with an additional centrifugal stage at the suction side*
- *TBA pumps have low NPSH requirements suitable for handling boiling liquids and difficult applications*
- *This design is especially suited to handle liquids with entrained gases and liquefied gases such as LPG.*
- *TBA series have performances, design and duty characteristics as the TBH series.*
- *Pump components are interchangeable thus reducing the need to stock spare parts for both series.*
- *Capacities to 154 GPM (35 $m^3$/h)*
- *Heads to 580 PSIG (40 bar)*





## *APPLICATIONS*

- *Pumps series TBH and TBA suitable to handle clean liquids, corrosives, hot or cold in the chemical, petrochemical, pharmaceutical, food industries, etc.*
- *Removal of condensates and distilled liquids.*
- *Solvents and liquified gases applications.*
- *Boiler feed applications.*
- *Removal or liquid from processes under vacuum.*
- *Filling stations and transfer of LPG and liquified gases.*
- *Fire fighting systems and autoclaves.*
- *Potable and sanitary systems in the naval industry.*
- *Spray washing installations.*

## *CONSTRUCTION*

*The self-priming pumps series TBH and TBA utilize the lateral channel principle. The open "star" type impeller is hydraulically balanced and enclosed between the suction and discharge port plates to form the pumping stage. Stages mounted in series to give proportional higher discharge pressures with constant capacities.*

*Magnetic drive pumps series TBK and TBAK derive from the series TBH and TBA suitable to handle hazardous, toxics, odorous or polluting liquids and other applications where zero liquid leakage is desired.*





# MATERIALS AND LIMITS

### EXAMPLE OF MODEL DESIGNATION

**T B H 40 3 A / 1 - C / A3 - M / T - V - Z**

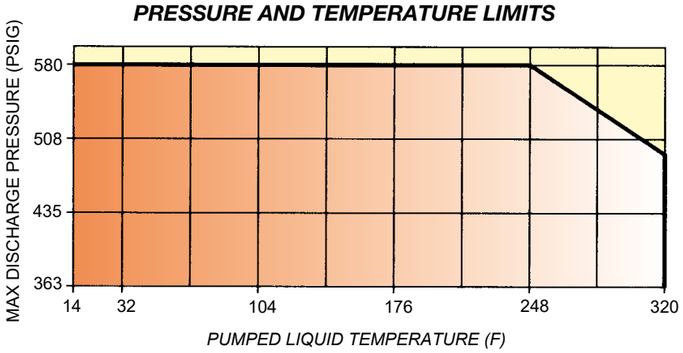
- T B H — Construction: Self-priming Multistage Centrifugal Pumps
- 40 — Type of Construction
- 3 — Pump Size
- A — Number of Stages
- 1 — Modification of Hydraulics
- C — Type of Shaft Seal
- A3 — Materials of Construction
- M — Close coupled construction with lantern (on request)
- T - V - Z — Special Constructions

### STANDARD MATERIALS OF CONSTRUCTION

| VDMA N° | Description | GH | RA | A3 | B2 | GP |
|---|---|---|---|---|---|---|
| 106 | Suction Casing | Ductile Iron | | | Bronze | Ductile iron |
| 107 | Discharge Casing | | | | | |
| 109<br>114<br>149 | Port Plate and Diffuser | Cast iron | | | | Cast iron |
| 210 | Shaft | Stainless Steel AISI 420 | Stainless Steel AISI 316 ASTM-CF8M | | | Stainless Steel AISI 420 |
| 147 | Manifold | Carbon steel | | | | Carbon Steel |
| 230 | Impeller | Brass | | | Bronze | Brass |
| 310.1 | Element Bushing | — | | Carbon | — | Bronze |
| 357 | Bearing and Mechanical Seal Housing | Cast Iron | | | | |

*SPECIAL MATERIALS AVAILABLE UPON REQUEST - For further information please consult our Sales Office*

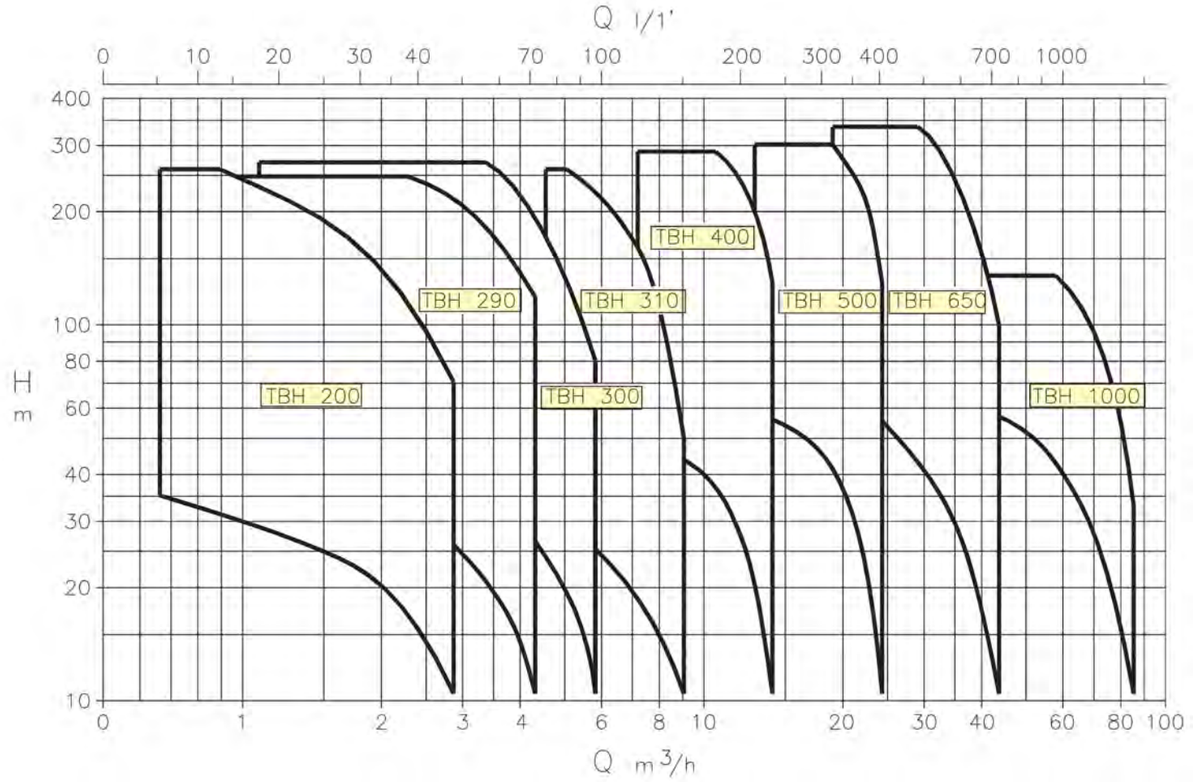
### PRESSURE AND TEMPERATURE LIMITS




*The given values for maximum pressure is the sum of the suction pressure and the pump head at shut-off point.*
*These limits not valid for **B2** construction.*

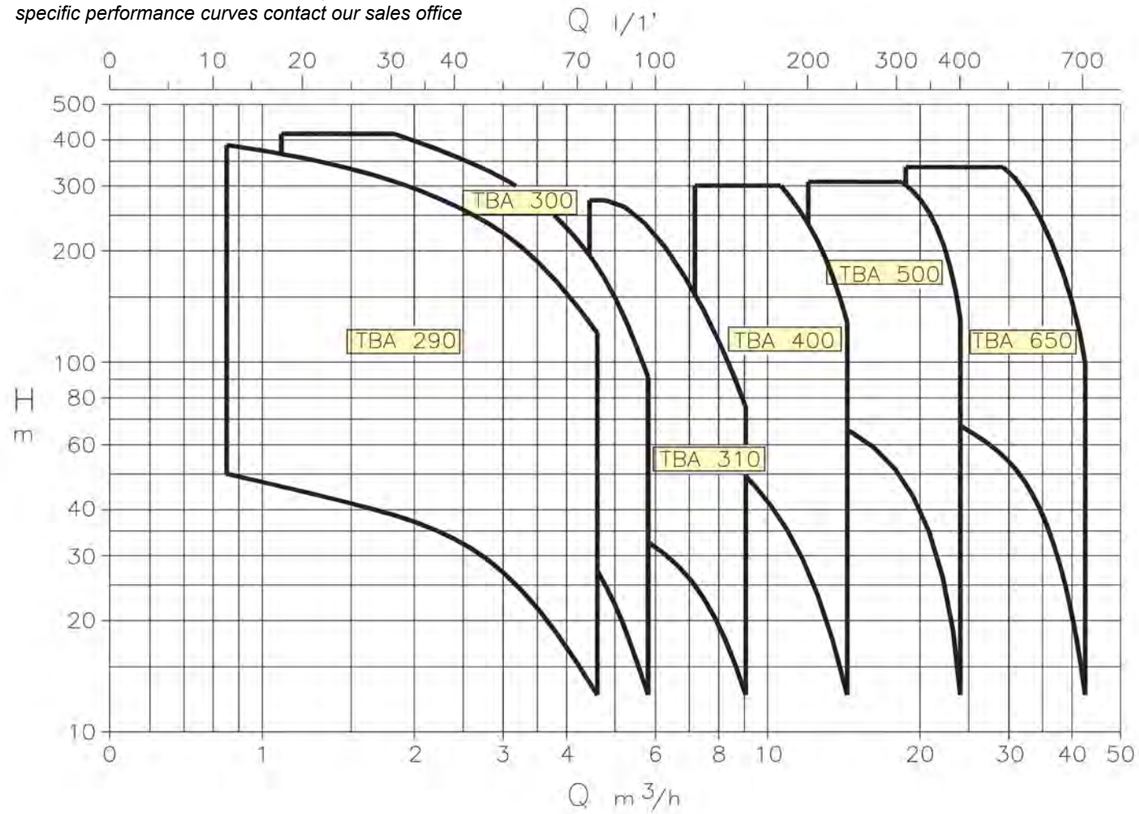
# PERFORMANCE RANGE AT 1750 RPM

## TBH

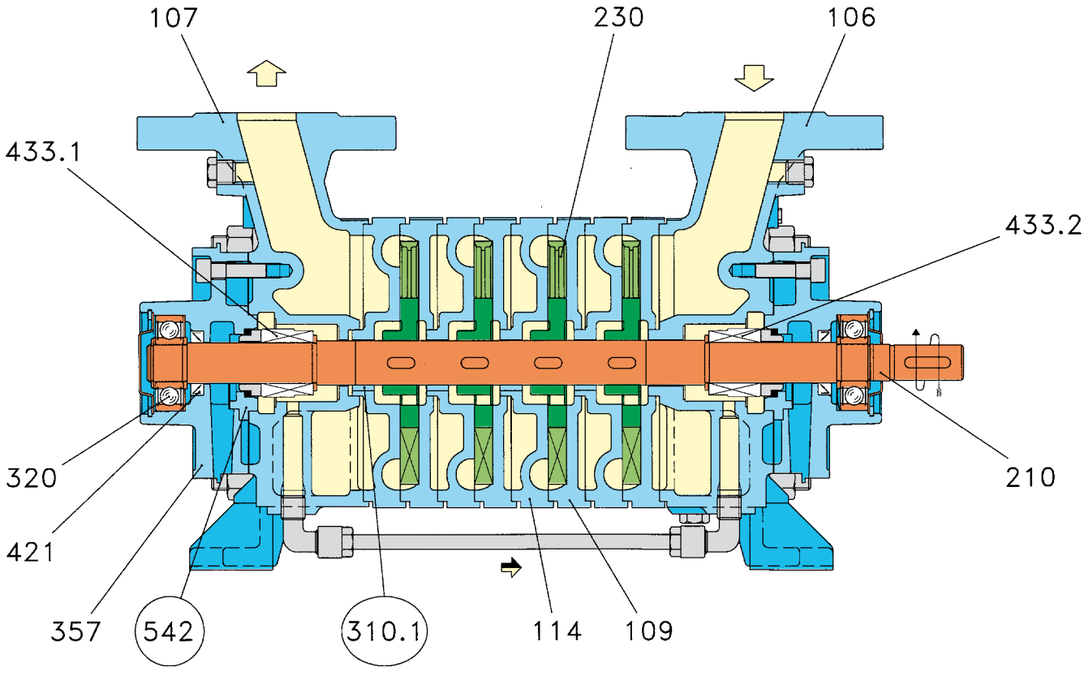



*Information is for water at room temperature, for specific performance curves contact our sales office*

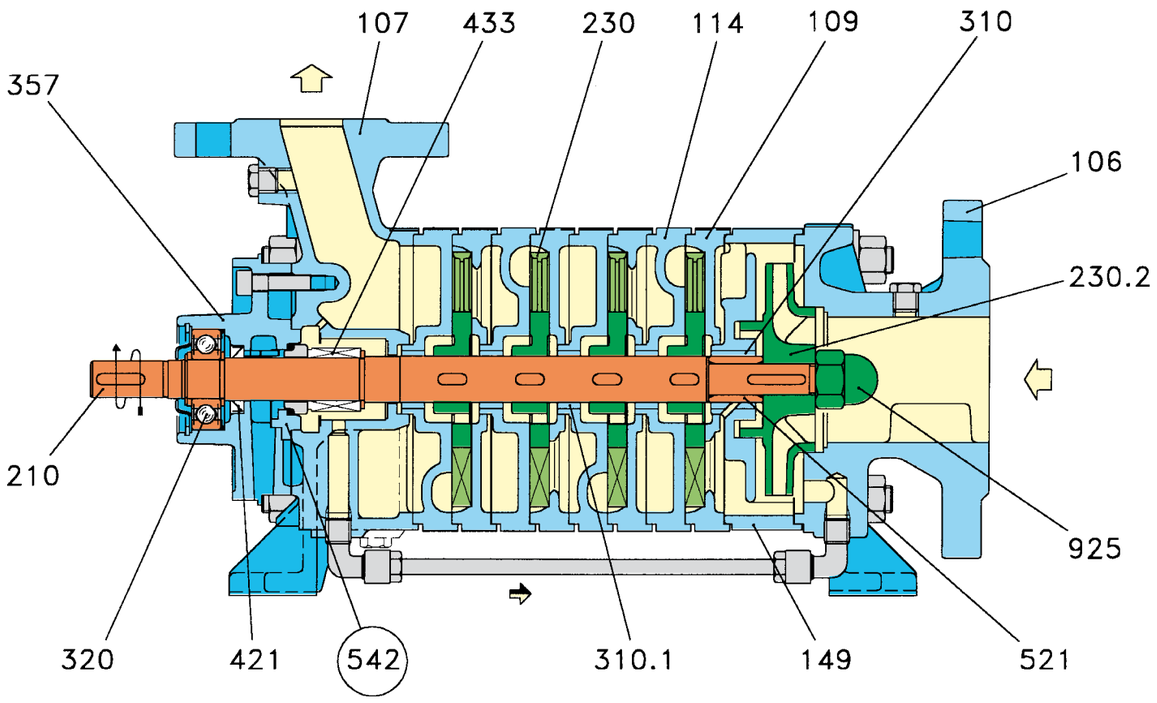
## TBA



# TYPICAL CROSS SECTION

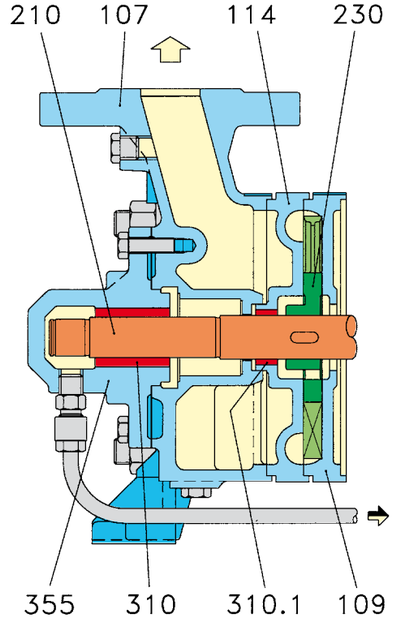



*Pump series TBH with 2 single mechanical seals (design …/C).*




*Pump series TBA with single mechanical seal (design …/R).*

# TYPICAL CROSS SECTION




***Detail of pump series TBH with sleeve bearing and element bushing (design …/R/GP).***

***MAIN COMPONENTS***

| DESIGNATION |
|---|
| Suction casing |
| Discharge casing |
| Suction element |
| Discharge element |
| Diffuser |
| Shaft |
| Open “Star” impeller centrifugal impeller |
| Sleeve bearing |
| Element bush |
| Ball bearing |
| Sleeve bearing housing |
| Bearing and mechanical seal housing |
| Radial seal ring |
| Mechanical seal |
| Seal insert (A3 construction only) |
| Impeller locking nut |

*A3 Construction Only*

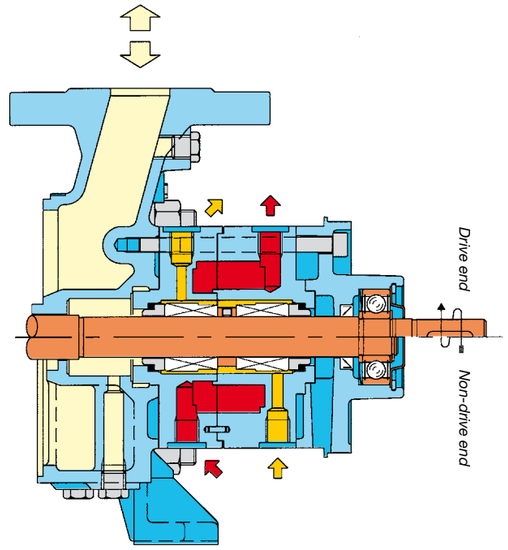
***CONSTRUCTION WITH COOLING OR HEATING CHAMBERS***

*Cooling or heating the seals area with liquid from an external source*

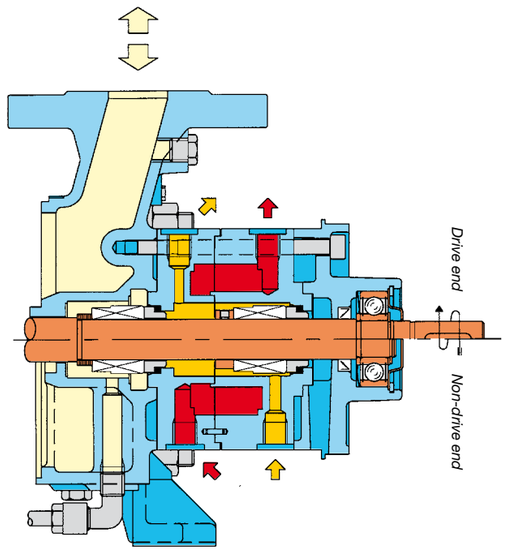
*External mechanical seals flushing with liquid from an external source*

*Pumping fluid*

*Double mechanical seals construction, back to back (design …/CC…/T or …/RR…/T)*




*Double mechanical seals construction, tandem (design …/C2…/T or …/R2…/T)*

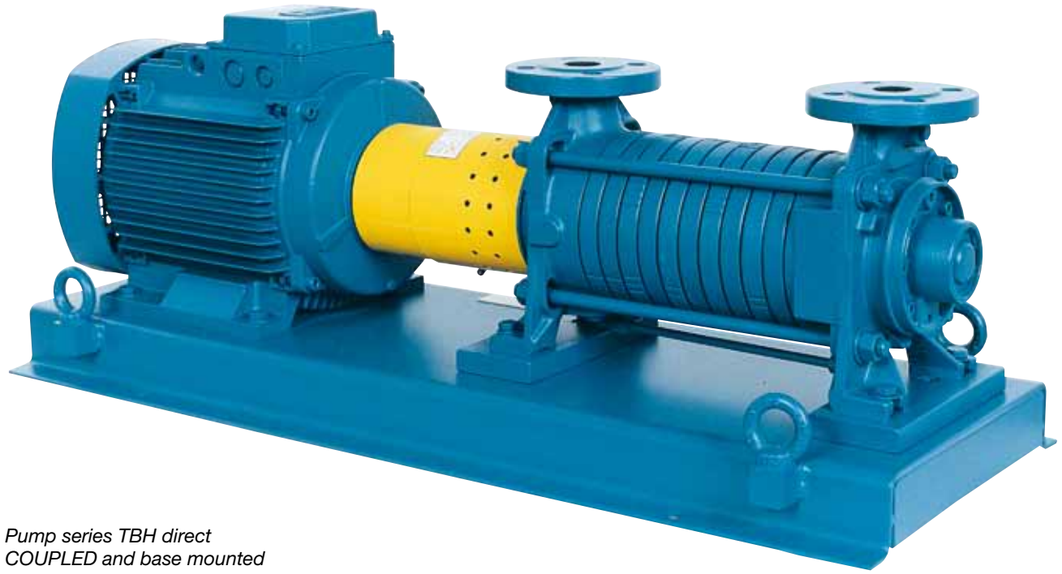




*Pump series TBH*
*CLOSE-COUPLED to ELECTRIC MOTOR*



*Pump series TBH*
*BARESHAFT construction*



*Pump series TBH direct*
*COUPLED and base mounted*

SAMPLE CONSTRUCTION



*Pump series TBK*
*BARESHAFT pump series TBH with MAGNETIC DRIVE*

*Pump series TBH*
*CLOSE-COUPLED to HYDRAULIC MOTOR*





*Pump series TBAK*
*BARESHAFT pump series TBA with MAGNETIC DRIVE*