**POMPETRAVAINI** is one of the leading worldwide manufacturers of liquid ring vacuum pumps two stages **TRH series**. With the experience acquired through decades of engineering research, continual investments in the latest technological advanced machinery and sound mechanical know-how, Pompetravaini's product is today synonymous with high quality, high efficiency, robust construction and maximum reliability.

## APPLICATIONS

CENTRAL VACUUM SYSTEMS
DE-AERATION
IMPREGNATION
BOILING PROCESSES
VACUUM CONDENSING
DISTILLATION
DRYING SYSTEMS
STERILIZATION
FILTRATION
SOLVENT RECOVERY

## FEATURES

QUALITY
Designed and manufactured under the ISO 9001 standards, every components is guaranteed for the selected materials, workmanship and performance through scrupulous inspections during production stages and final testing of finished product.

FEWER COMPONENTS
Through engineered design innovations and co-operation with the finest technologically advanced foundries, the pumps are manufactured with less components than typically required. Fewer parts add to the rigidity and toughness of the pumps, they are easier to assemble and maintenance is greatly facilitated.

COMPACT DIMENSIONS
The conventional stuffing boxes construction is eliminated with the Pompetravaini standard design. The shaft length is greatly reduced thus eliminating the potential danger for shaft deflections and vibrations to the mechanical seals which would increase seals and bearing wear.

STANDARD MECHANICAL SEALS
In keeping pace with today technology, Pompetravaini has standardized all pumps to accept unified mechanical seals to DIN 24960 standards. Also available upon request, are constructions with double mechanical seals (tandem or batch to back) or cartridge type mechanical seals.

LARGE SELECTION OF MATERIALS
In addition to the standard materials, Pompetravaini pumps are also available with special exotic materials such as Ni-Resist D2B, Hastelloy B or C, Uranus B6, etc. to meet specific requirements.

MECHANICAL RELIABILITY
With the simple design of liquid ring pumps there are no reciprocating parts, no valves or sliding vanes. The impeller is the only rotating component with no metal-to-metal contact.

Pump operation is therefore with minimal wear, vibrations free and noise levels are greatly reduced.

LIQUID HANDLING CAPABILITY

Pumps are capable of handling even high volumes of vapours, condensables and liquids without detrimental consequences to their performance or their mechanical reliability. Pump service liquid can be water or other liquids such as oils, solvents, etc. to satisfy almost any process requirements.

DISCHARGED OIL FREE AIR

With clean water as pump service liquid, the aspirated air (or gas) is “washed clean” within the pump. Contrary to other types of vacuum pumps the discharged air is, therefore, completely free of any oils, carbon or plastic particles.

MOUNTING TO B3 OR B5 MOTORS

Pompetravaini standard design may be base mounted coupled to motors type B3. Pumps up to 30 KW can also be close coupled to motors type B5 utilizing specially designed attachment flange. This close coupled arrangement allows utilization of standard readily available electric motors, eliminates lengthy alignment procedures and costly breakdowns associated with misalignments. Overall dimensions are reduced and engineered base plates are no longer required.

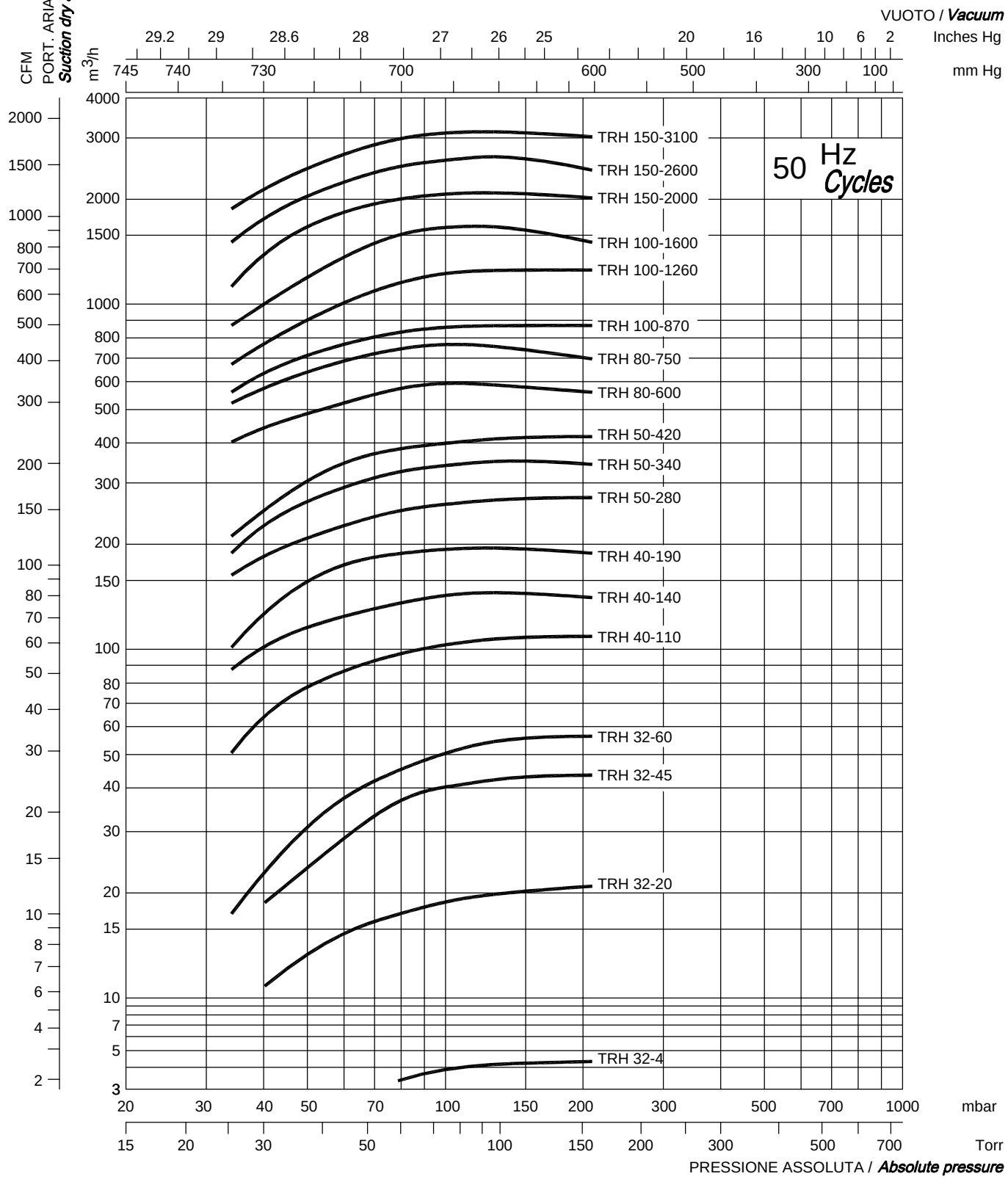
PRESSURE TO LESS THAN 33 MBAR

Liquid ring vacuum pumps, type TRH in series with devices such as ejectors and/or vacuum boosters can operate at pressure lower than 1 mbar.

I DATI RIPORTATI SONO RIFERITI A :

*Data refers to :*

| | | |
|---|---|---|
| ARIA SECCA ASPIRATA | 20 °C - 68 °F | *Suction dry air* |
| LIQUIDO DI ESERCIZIO | ACQUA / *Water* | *Service liquid* |
| TEMPERATURA LIQUIDO DI ESERCIZIO | 15 °C (59 °F) | *Service liquid temperature* |
| PRESSIONE DI SCARICO | 1013 mbar | *Discharge pressure* |
| TOLLERANZE | 10% | *Tolerance* |



# PART NUMBER

**T R H B 50 - 420 / C - M / GH - Z**

- Costruzione / *construction* POMPETRAVAINI
- Pompe ad anello di liquido *Liquid ring umps*
- Pompa a due stadi per alto vuoto *Double stage pump for high vacuum*
- Numero progetto costruttivo *Constructive project number*
- Ø Bocche (mm) *Flange size (mm)*
- Esecuzioni speciali *Special constructions*
- Materiali di costruzione *Materials of construction*
- Costruzione monoblocco con lanterna (su richiesta) *Close-coupled construction with lantern (on request)*
- Tipo di tenuta sull'albero *Type of shaft seal*
- Portata nominale ($m^3$/h) *Nominal capacity ($m^3$/h)*

# MATERIALS

| VDMA N°. | Descrizione *Description* | GH | F | RA | A3 |
|---|---|---|---|---|---|
| 106<br>107 | Corpo aspirante e premente<br>*Suction and discharge casing* | Ghisa<br>*Cast iron* | | | *AISI 316*<br>*Stainless steel* |
| 137 | Elemento<br>*Port plate* | | | | |
| 110 | Distanziale<br>*Impeller housing* | | | | |
| 210 | Albero<br>*Shaft* | *AISI 420*<br>*Stainless steel* | | | |
| 147 | Collettore<br>*Manifold* | Acciaio<br>*Carbon steel* | | | |
| 357 | Scatola cuscinetto e tenuta mecc.<br>*Bearing and mech. seal housing* | Ghisa<br>*Cast iron* | | | |
| 230 | Girante<br>*Impeller* | Bronzo<br>*Bronze* | Ghisa sferoidale<br>*Ductile iron* | *AISI 316*<br>*Stainless steel* | |