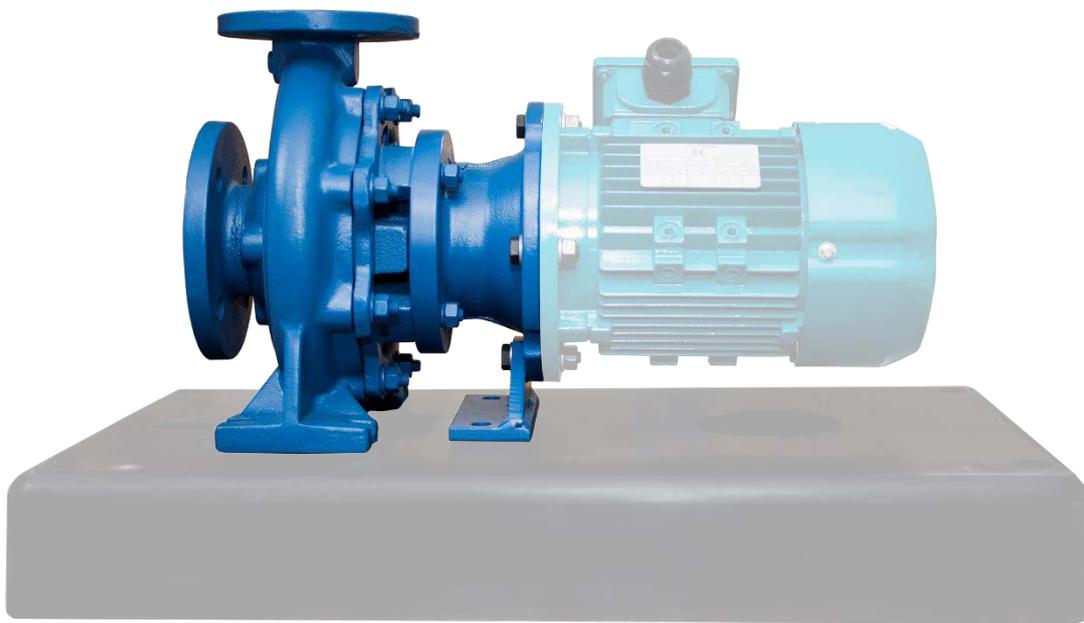


# MECHANICALLY SEALED CENTRIFUGAL PUMPS

## TCH, TCHM & TCH/M

### TOUGH • EFFICIENT • RELIABLE

ACQUIRED THROUGH DECADES OF ENGINEERING RESEARCH



**The TCH series of mechanically sealed pumps reflect the design guidelines given by ISO 5199 class II standards. Stringent manufacturing standards give you the ideal pump for heavy duties, especially in the petrochemical industry.**

An ideal choice for clean or slightly contaminated fluids, hot, superheated, acidic and caustic in chemical industry, petrochemical, pharmaceutical, food, pulp and paper, environmental, steel and textile industries, the TCH, TCHM and TCH/M are:

- **Tough**
- **Reliable**
- **Durable**
- **Efficient**
- **Safe**
- **Cost effective**

Featuring what is known as 'back pull-out', the pump casing is a spiral design with axial suction flange; a radial impeller and overhang mounting pump materials range from Cast Iron to Stainless Steel to Hastelloy C to Super Duplex. Atex certified upon request, these mechanically sealed pumps have the option to add a pump casing and seal housing with cooling or heating chambers as required.

[www.cdrpumps.co.uk](http://www.cdrpumps.co.uk)

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Pumps UK Ltd | Making the right choice...



**Technical specifications according to standards  
ISO 5199**

1. Corrosion allowance in excess of 3 mm
2. Oversized shaft minimises shaft deflections (<50 µm) and vibrations thus improves the mechanical seal life
3. High bearing span with an optimum value of L3/D4
4. Bearings are oversized to handle both radial and axial loads with life expectancy over 25000 hours of operation

**Dimensions and performances according  
to standards ISO 2858 - DIN 24256**

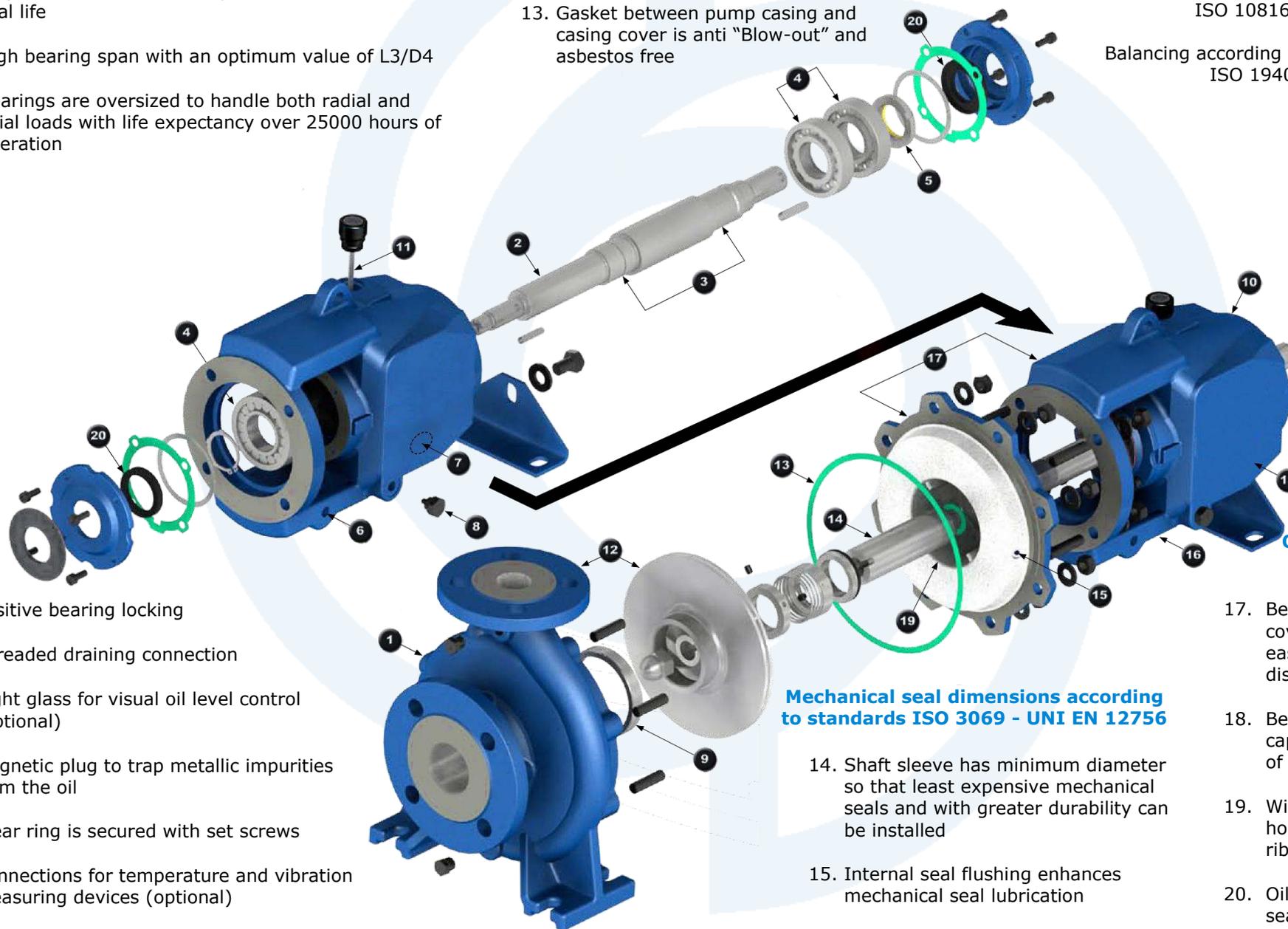
12. Pump casings and impellers are interchangeable with the previous pump series MCU-CH
13. Gasket between pump casing and casing cover is anti "Blow-out" and asbestos free

**Conforming to the Directive by Constructional Safety  
ATEX 94/9/CE**

Performance test according to standards  
ISO 9906

Vibration according to standards  
ISO 10816-3

Balancing according to standards  
ISO 1940



5. Positive bearing locking
6. Threaded draining connection
7. Sight glass for visual oil level control (optional)
8. Magnetic plug to trap metallic impurities from the oil
9. Wear ring is secured with set screws
10. Connections for temperature and vibration measuring devices (optional)
11. Oil dip stick with filter

**Mechanical seal dimensions according  
to standards ISO 3069 - UNI EN 12756**

14. Shaft sleeve has minimum diameter so that least expensive mechanical seals and with greater durability can be installed
15. Internal seal flushing enhances mechanical seal lubrication
16. Ample space is available for installation of various sealing systems

**Quality assurance  
ISO 9001:2000**

17. Bearing frame and casing cover are a single part for easy 'back pull out' disassembly
18. Bearing frame with large oil capacity for the lubrication of the submersed bearings
19. Wide conical and open seal housing has flow breaking ribs
20. Oil seal ring with dual lip seals the oil from the inside and dust from the external environment

## Typical Model Number & Materials of Construction

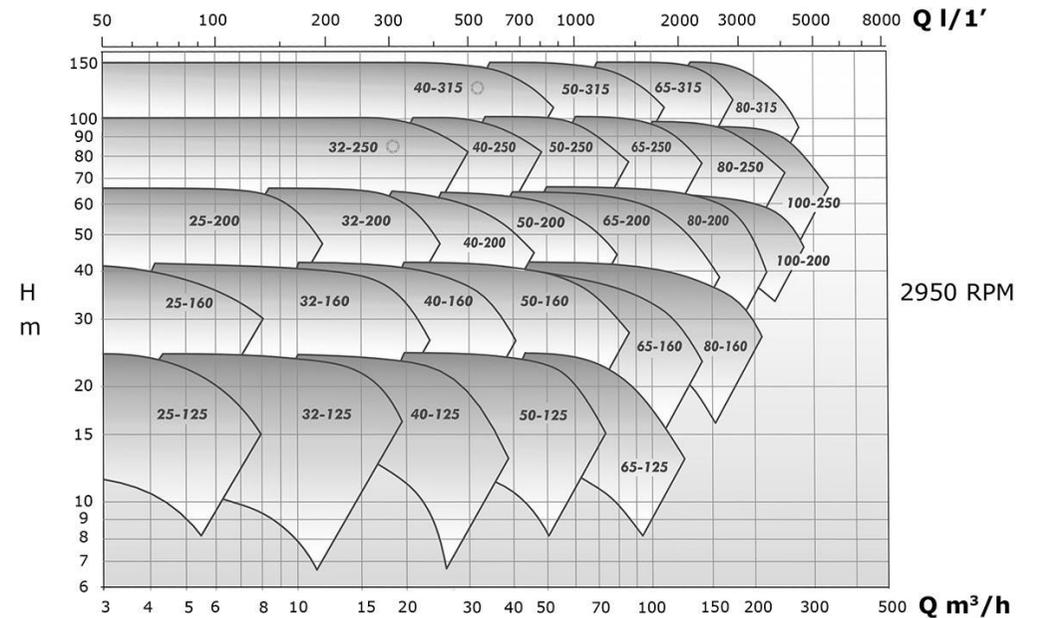
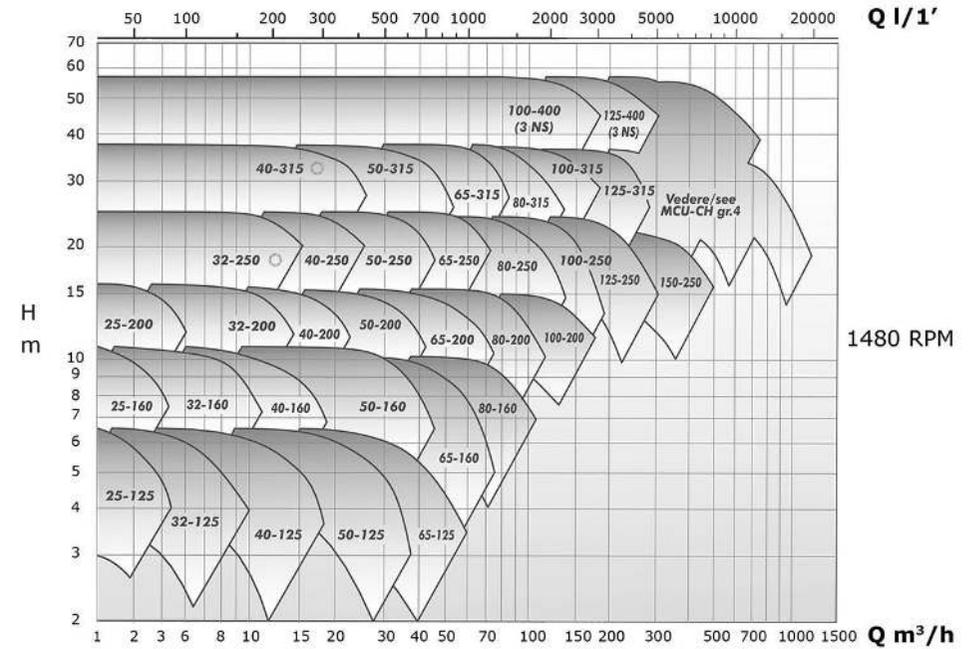
### T C H 32 - 160 A/ 1X - C/ A3 - M/ U2 - Z ...

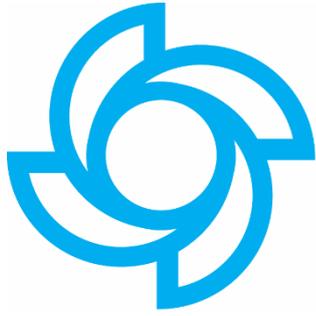
- T** → construction
- C** → mono-stage centrifugal pumps
- H** → series (impeller type)
- 32** → discharge flange size (mm)
- 160** → nominal diameter of impeller
- A** → modification of hydraulic project
- 1X** → constructive project number
- C** → type of shaft seal
- A3** → close-coupled construction with lantern
- M** → materials of construction (see table)
- U2 - Z** → special construction

### STANDARD MATERIALS OF CONSTRUCTION

VDMA	Description	GS	RA	A3	HC	DU
102	Pump Casing	Ductile Iron			Hastelloy C	ASTM-CN7M
135	Wear Plates	-	Cast Iron			
161	Casing Cover	Ductile Iron				
210	Shaft	AISI 316 Stainless Steel ASTM - CF8M				Incoloy 825
230	Impeller	Cast Iron		AISI 316		ASTM-CN7M
330	Bearing Housing	Cast Iron				
524	Shaft Sleeve	ASTFM - CF8M			Hastelloy C	Incoloy 825

## Performance Fields





# CDR

Pumps UK Ltd

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- Capacity up to 500 m<sup>3</sup>/h and heads to 16 bar
- Designed to DIN 24256
- High hydraulic efficiencies & low NPSH requirements
- Shaft sealing by packed stuffing box, single or double mechanical seals
- A range of impeller options including open, closed and completely open
- Pump casing and seal housing can be provided with heating or cooling chambers
- From the TCH series have derived series TCT, TCA and TCD that are designed for very specific pumping applications



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