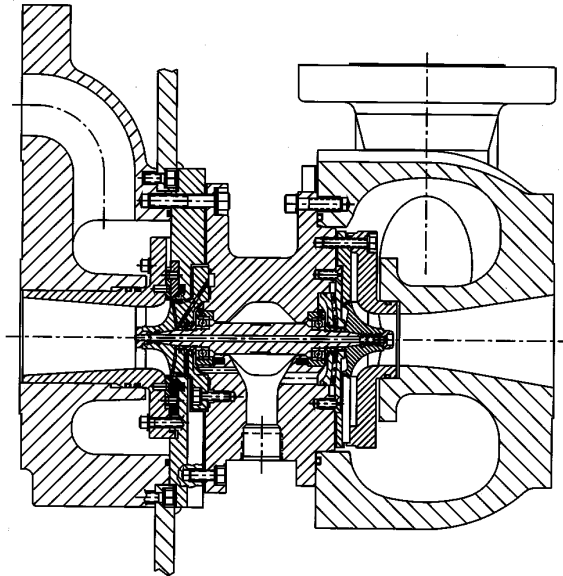


TB SERIES



ACD's rugged TB series expanders provide high efficiency and reliable operation for air separation throughout the world.

The custom engineering and manufacturing capabilities allow optimum performance for both expander and air brake designs.

Features

Machine:

- Aluminum housings (up to 500 psig inlet)
- Variable expander inlet guide vanes (nozzles)
- Tapered bore journal, tapered land thrust face bearings
- Labyrinth shaft seals with oil free design
- Cast and forged aluminum alloy expander wheel

- Stiff shaft rotor design with first bending above maximum design speed
- "Zero leakage" spring loaded nozzles
- Tapered shaft wheel attachment for field interchangeability

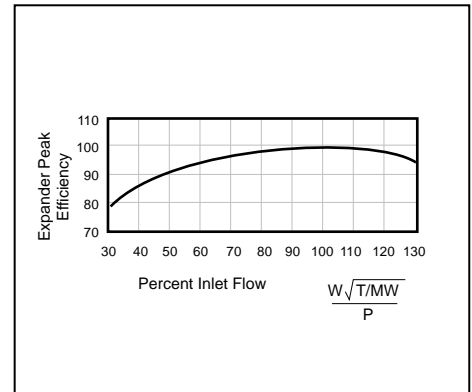
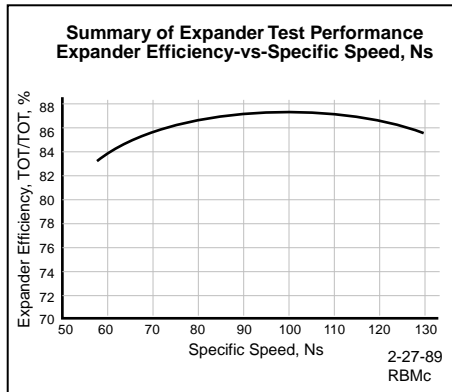
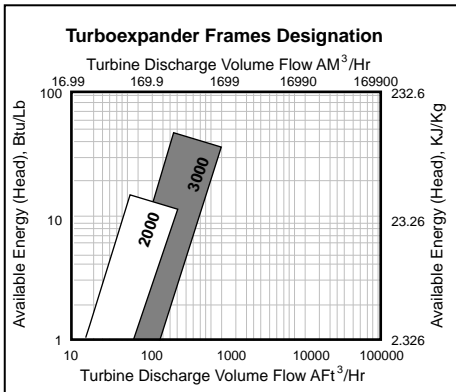
System:

- Machine only or reservoir mounted units
- Reservoir sized for 3 minutes minimum retention time
- Seal gas filter and regulator
- Stainless steel piping downstream of oil filter
- 10 micron oil filter
- "Swagelok" fittings standard
- Amot temperature control valve
- Air Brake silencers optional

TURBOEXPANDER/HYDRO

TURBOEXPANDER/BRAKE

TB SERIES



Controls

- Manual nozzle control or pneumatic nozzle
- HIC with actuator
- Speed probe and switch
- Oil pressure switch
- Seal gas pressure switch
- Oil temperature switch
- Optional vibration equipment and imbedded RTD's in bearings

Test

- Full speed mechanical test
- Operational test of lube & seal gas package
- Control setup and checkout
- Optional cryogenic performance test

- Spin testing at 115% max. design speed
- Housing hydrotest at 150% max. design pressure

Performance

- Ns Range from 30 to 130 for expander
- Expander efficiencies to the low 90's%
- Expander pressure ratios to 24:1
- Liquid at expander discharge allowed
- Tip speed to 1200 ft/sec
- Two and three dimensional wheels
- Shrouded and open face wheels
- Rotor speeds to 100,000 RPM
- Power capabilities up to 150 HP



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 Imperial, PA 15126
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 800/327-6461
 Fax: 412/695-1926

CryoCanada, Inc.
 530 McNicoll Avenue
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 Phone: 416/502-1950
 Fax: 416/502-1952

*See complete list of
 Service Centers on the Internet at:
<http://www.acdpumps.com>*

ACD Representative: