

HRU-1000

Heat rejection unit



Description

Improves electronics performance with a minimum 1000 watts of cooling power in a downsized package with Parker's HRU-1000. This rugged, stand-alone 1/2 ATR short-sized unit is designed for the space-constrained environments where high-performance cooling is a must. Pump, motor, and an advanced motor-logic controller are combined with completely integrated dual high-performance fans and a high-performance heat exchanger to create a top cooling rate for its class and size.

Available for multiple cooling fluids, Parker's HRU-1000 mates readily with components for wide-ranging versatility and comes standard with quick-disconnect hose assemblies. Works well in avionics, vetronics, telemetry, and navtonics applications where vibration, shock, acceleration, altitude, and environmental factors such as humidity, sand, salt, and dust can impact performance.

Product Highlights

- Meets demanding environmental applications for humidity, sand, salt, and dust
- Suitable for avionics, vetronics, telemetry, and navtonic applications
- Comes equipped with quick-disconnect assembly
- High-performance fans and heat exchanger create top cooling rate for its class and size

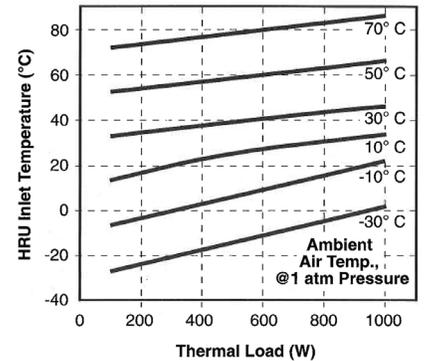
Specifications and Options

Configuration:	1/2 ATR short size with front "doghouse" per ARINC 404A
Dimensions:	15.19"L x 4.88"W x 7.62"H
Working fluids:	Polyalphaolefin (PAO); Ethylene glycol/water (EGW) mixture; Propylene glycol/water (PGW) mixture; 3M Fluorinert™ fluids FC-77, FC-104, FC-75
Storage temperature:	-55° to 105°C per MIL-STD-810F method 501.4, Procedure II and 502.4, Procedure II
Operating temperature:	-40° to 70°C per MIL-STD-810F method 501.4, Procedure II and 502.4, Procedure II
Electrical connector:	MIL-C-26482, Amphenol™ PT02E-16-99P
Input power:	28VDC per MIL-STD-704E, 200W max.
Weight:	23 lbs. (depending on configuration)
Water rating:	Per MIL-STD-810F-506.4 Procedure II
Hose (supplied):	Low permeation Tube: seamless, extruded, conductive Teflon™ Reinforcement: corrosion-resistant, steel wire braid Cover: integral silicone Low two-inch minimum bend radius Fire-proof per AS4897 and AS150
EMI/EMC:	When fitted with standard MIL-C-38999 style connectors, meets MIL-STD-461E conducted and radiated emissions and susceptibility requirements CE102, CS101, CS114, CS115, CS116, RE102, RS103
Quick disconnect (supplied):	Simple, one-hand push/pull operation; flush face, self-sealing valving; low attach/detach fluid volume loss (no drip); SAE AS1709 and MIL-C25427 qualified
Environmental:	Exceeds vibration, shock, altitude, acceleration, humidity, salt fog, fungus, thermal shock, sand, and dust requirements

Optional

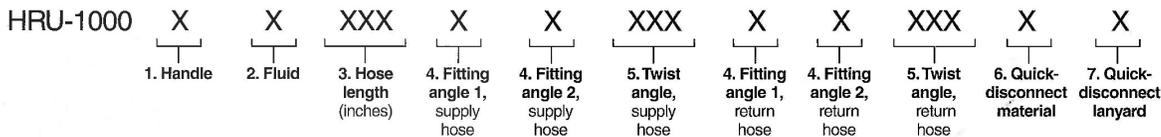
- Custom supply/return hose manifolding (e.g. one HRU-1000 connected to two ATR boxes)
- Custom hydraulic connectors
- Custom electrical connector (J1)
- Custom fan speed-control curve
- Custom pump speed-control curve
- Custom fluids
- Custom operating temperature
- Custom finishes
- Intermittent water submersion capability
- Fill and bleed kit
- ATR box quick-disconnect nipple kit (one nipple with pressure relief, one nipple without pressure relief)

HRU-Performance (Typical, with PAO)



Example: At 500W thermal load in a 30°C ambient environment, HRU Inlet temperature is 40°C.

Ordering Information (call for pricing, availability, and custom options)



1. Handle

- Y Yes
- N No

2. Fluid

- E Polyalphaolefin (PAO)
- F Ethylene glycol/water mixture (EGW)
- G Propylene glycol/water mixture (PGW)
- H 3M Fluorinert™ liquids FC-77, FC-104, FC-75
- J Custom

3. Hose length

XXX – Length in inches not including quick-disconnects (e.g. 185=18-5/8 inches)

4. Fitting angle

- 0 Straight
- 4 45 degrees
- 9 90 degrees

5. Twist angle

XXX – Specify (e.g. 045= 45 degree, etc.)

How to measure and specify positioning of fittings when two elbow fittings are required on a hose assembly:

Hold assembly so that the nearest fitting is pointing in the 6 o'clock position. Measure angle between fittings, counter-clockwise. Both fittings pointing to 6 o'clock position to be specified as zero degrees (0°).



6. Quick-disconnect material

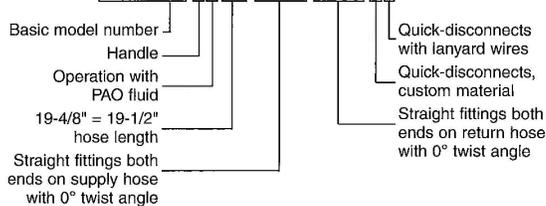
- S Stainless steel SAE 30304/30321
- C Custom

7. Quick-disconnect release lanyard

- L Lanyard
- N No lanyard

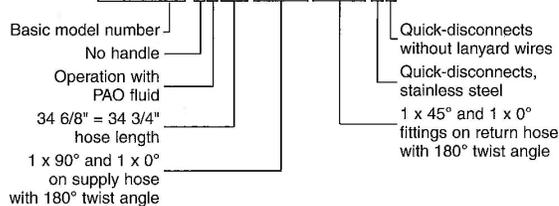
Order number example 1:

HRU-1000-YE194-00000-00000-CL



Order number example 2:

HRU-1000-NE346-90180-40180-SN



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