

AIRBUS
Approved

BH4016A1
RAT Flow control unit



BH4016A3
RAT safety interface



BH4016A2
Ground check motor



The BH4016A test stand is composed to above-mentioned three elements :
Le banc BH4016A est constitué des trois éléments mentionnés ci-dessus :

GENERAL FEATURES

BH4016A test stand is used to achieve the RAT (Ram Air Turbine) tests on the following aircrafts:

- AIRBUS A320 family, A330 and A340.

DESCRIPTION

- Stainless steel chassis equipped with drip tray.
- Casters, 2 fixed and two steerable with brake.
- Sides made of polyester resin.
- Hoses equipped with QDC.
- Forklift devices.
- Space for electric cable storage.

STRENGTHS

- Reliable and ergonomic design.
- Compact and easy to use.
- Easy access for maintenance.

CARACTERISTIQUES GENERALES

Le banc BH4016A est utilisé pour effectuer les tests de la RAT (Ram Air Turbine) des avions suivants :

- AIRBUS famille A320, A330 et A340.

DESCRIPTION

- Châssis en acier inoxydable avec bac de rétention.
- Roulettes 2 fixes et 2 pivotantes avec frein.
- Flancs en résine polyester.
- Tuyauteries de liaison équipées de selfs et enroulées sur une sellette.
- Passage de fourche pour chariot élévateur.
- Espace de rangement pour câble électrique.

ATOUTS

- Conception fiable et ergonomique.
- Compact et facile à manœuvrer.
- Grande accessibilité pour la maintenance.

AIRBUS approved for A320 NEO & CEO, A330/A340 all series
per GCA D29130 dated oct. 12/2016 (copy available on request)

WEIGHT & DIMENSIONS BH4016A1

Depth	35 in
Width	35 in
Height	47 in
Weight	518 lbs

WEIGHT & DIMENSIONS BH4016A2

Depth	43 in
Width	43 in
Height	18 in

FEATURES BH4016A1

Pressure	3000 psi
Hoses	157 in
With couplings	AE95074N et AE94186P
Supply and test cable	

FEATURES BH4016A2

Pressure	2390 psi
Hoses	236 in
With couplings	AE94185M et AE94185P

OPERATION CONDITION

Environment	-4°F to 122°F
Fluid	SKYDROL, HyjetIV, HyjetV

MEASURING INSTRUMENTS

Flowmeter	0.1 - 21 gpm (0.5% of read value)
Temperature gauge	0-100 °C (1,6% of full scale)
Pressure gauge	0-6000 psi (1% of full scale)
Digital RAM-AIR pressure indicator	
Digital RAM-AIR speed indicator	

Applications given for information. Verify that characteristics are in accordance with your needs.

Applications données à titre indicatif. Vérifier que les caractéristiques sont en accord avec vos besoins.

Certificate / Certifié 

POIDS ET DIMENSIONS BH4016A1

Profondeur	900 mm
Largeur	900 mm
Hauteur	1200 mm
Poids	235 kg

POIDS ET DIMENSIONS BH4016A2

Profondeur	1100 mm
Largeur	1100 mm
Hauteur	450 mm

CARACTERISTIQUES BH4016A1

Pression	207 bar
Tuyauteries de liaison	4 m
Avec raccords	AE95074N et AE94186P
Câble de test et d'alimentation	

CARACTERISTIQUES BH4016A2

Pression	165 bar
Tuyauteries de liaison	6 m
Avec raccords	AE94185M et AE94185P

CONDITION D'UTILISATION

Environnement	-20°C à 50°C
Fluide	SKYDROL, HyjetIV, HyjetV

APPAREILS DE MESURES

Débitmètre	0.4 - 80l/mn (0.5% de la valeur de lecture)
Thermomètre	0-100 °C (1,6% de l'EM)
Manomètre	0-400 bar (1% de l'EM)
Afficheur digital de pression RAT	
Afficheur digital de vitesse RAT	

BH4016A1

BH4016A2

BH4016A3


RAT test stand - BH4016A



Applicability: A318/A319/A320/A321 and A330/A340

DESCRIPTION

The RAT test equipment BH4016A is designed to perform RAM Air Turbine testing;

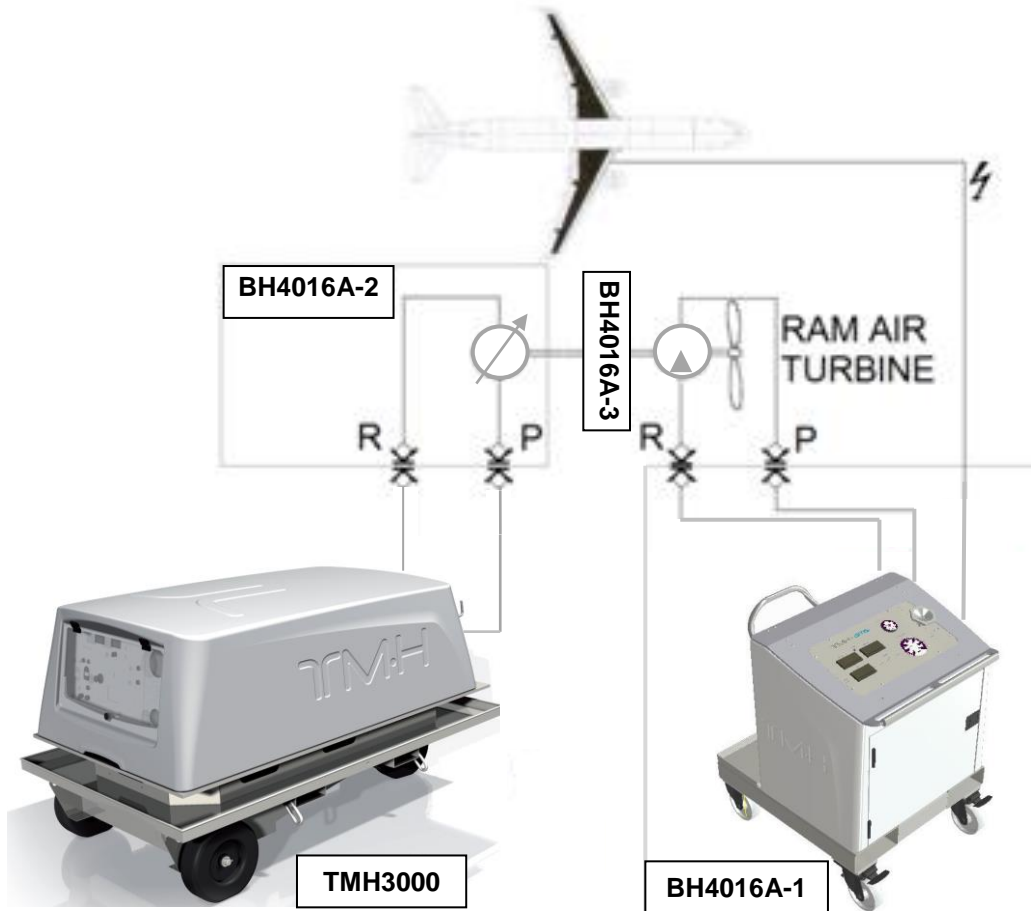
It is used to:

- Measure the pressure delivered by RAT pump,
- Measure the flow delivered by RAT pump
- Display the RAT speed measured from the Aircraft sensor
- Display the RAT pressure measured from the Aircraft sensor
- Check Oil temperature during the operations.

The BH4016A is made of:

- A RAT Flow control unit : BH4016A-1
- A RAT Ground check motor: BH4016A-2
- RAT safety interface : BH4016A-3

GLOBAL CONNECTION DRAWING FOR RAT TEST APPLICATION



BH4016A-1 : RAT FLOW CONTROL UNIT**Main characteristics**

- Compact steel construction.
- Handles and caster wheels with breaks for easy displacement
- The unit is compatible with forklift devices
- Storage space for connection hoses and electrical cables
- Skydrol resistant construction with sealed electrical cabinet
- The RAT flow control unit is powered by the Aircraft electrical supply 28VDC

Technical data

Fluid: Hyjet IV , Hyjet V or equivalent (SKYDROL 500-B4, SKYDROL LD-4)

Pressure: 0-3000 PSI

Flow: 0 - 80 l/min

The measuring circuit includes

- a loading valve
- a high pressure filter (3µm) with visual clogging indicator to ensure fluid class ≤5 according to AIR 1653A or NAS1638.

The BH4016A1 includes a retention tray equipped with a draining cap.

Measurements

Gear type flowmeter:

0.1 – 21 gpm (0.4 – 80 l/mn) accuracy: 0.5% of read value

Temperature gauge:

0-100°C accuracy: 1,6% of full scale

Pressure gauge:

0-6000 psi (0-400 bar) accuracy 1% of full scale

RAM-AIR oil pressure digital indicator(measurement from Aircraft):

0-4000 psi (0-275 bar) accuracy: 0.5% of full scale

RAM-AIR speed digital indicator(measurement from Aircraft):

0-9999rpm +/- 2rpm

Accessories:

High pressure Test unit/Aircraft connection hose: 13ft (4m) long equipped with quick disconnect coupling and protective cap (AE95074N).

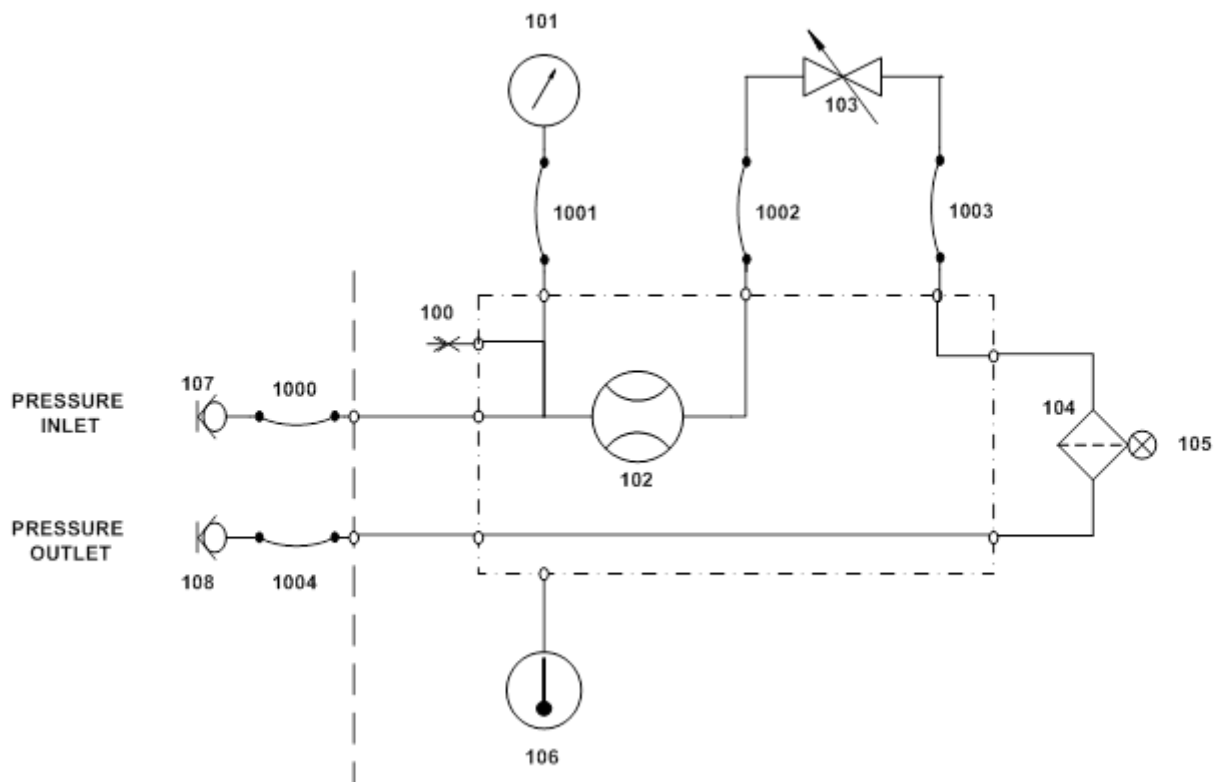
Return pressure Test unit/Aircraft connection hose: 13ft (4m) long equipped with quick disconnect coupling and protective cap (AE94186P).

Supply and test cable for RAM-AIR pressure, speed indicator and 28V DC Aircraft supply.

Dimensions

Length:	900 mm
Width:	900 mm
Height:	1200 mm
Weight:	250 kg

Hydraulic schematic



BH4016-2 : RAT MOTOR UNIT

The Rat motor unit is composed of

Hydraulic motor

Manufacturer: Parker, Model: AM8C-12 - 68094



The hydraulic motor is designed for :

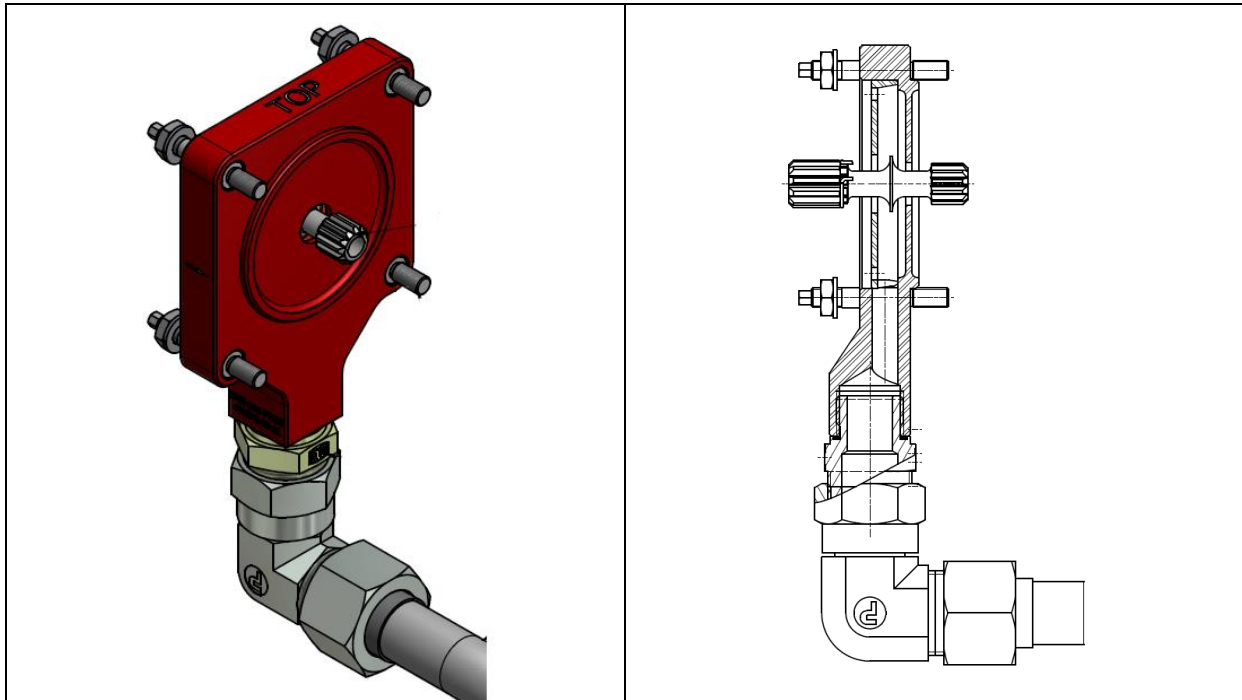
- Skydrol application
- Rated pressure: 2400 PSI
- Displacement: 1,36 CIPR
- Rated speed: 6000 RPM
- Torque: 410 lb.inch at 2400 PSI
- Rotation : Clockwise

Accessories:

- Flexible supply and return hoses (6m)
- Double clamp
- Aeroquip couplings : AE94185M and AE94185P

BH4016-3 : RAT SAFETY INTERFACE

The RAT interface kit BH4016A3 protects aircraft components during RAT ground test from accidental projection of fluid under high pressure due to a shaft seal failure on the hydraulic ground check motor. If this defect appears, the BH4016A3 allow the fluid to be deflected and redirected threwh a flexible hose to a container (not supplied)

**SET-UP**

The BH4016A3 is an interface plate screwed on the connecting flange of the motor. It allows in case of leak on the drive shaft seal to keep the test zone clean. The fluid is deflected thanks to the extended splined shaft. The extended splined shaft is composed of a disc which allows redirecting the fluid from axial to radial direction. Then, the interface drains the fluid by an outlet at the bottom of the BH4016A3.

FLUIDS USED

HYJET IV-4A and HYJET V
SKYDROL 500-B4, SKYDROL LD-4

ENVIRONMENT

Ambient temperature: -20°C to 50°C

Humidity:

- 50% at 40°C
- 90% at 20°C