



## GROUND SUPPORT AND MAINTENANCE EQUIPMENT

AVIATECHSUPPLY Ltd. has experience of many years in design engineering and manufacturing of Ground Support and Maintenance Equipment for aircraft and aggregates repair and maintenance:

- Ground equipment;
- Tools and devices;
- Portable ground units;
- Test and control benches.

We are ready to deal with inquiries for manufacturing of aviation equipment under Your technical requirements.

# TEST AND CONTROL BENCHES

Our Company makes design engineering and manufactures benches for check (approval) tests of aircraft systems and aggregates:

- Hydraulic panel testing benches;
- Fuel pumps;
- Hydraulic pumps;
- Convertors;
- Pressure automatic devices;
- Off-loading automatic devices;
- Aircraft compressors;
- Hydraulic boosters;
- Generators;
- Pipe-line testing benches;
- Transmission system testing benches.





# TOOLS, DEVICES AND GROUND EQUIPMENT

We offer wide range of tools, devices and ground equipment for supporting, maintenance and testing of such aircraft types as Ми-8/17/171, Ми-26Т, Ка-32, as well as for Russian-manufactured fixed wing aircrafts.

- Hydraulic tongs;
- Tyre changers;
- Holder-up devices;
- Stairs and stepladders;
- Tow bars;
- Trolleys;
- Trestles;
- Different devices for components testing during maintenance of aircraft;
- Devices for schedule maintenance of hydro, air and fuel aircraft systems;
- Tools and tool sets.





# PORTABLE GROUND UNITS

At the bottom of our own equipment production lies the experience of close working relationship with our Clients, knowledge of their needs and demands. At the present days we offer the fully efficiency own designed and produced equipment for on-ground servicing of the following aircraft systems:

- Hydraulic;
- Air;
- Fuel;
- Oil;
- Fire protection;
- Anti-icing;
- Cooling.







# GROUND SUPPORT AND MAINTENANCE EQUIPMENT

AVIATECHSUPPLY LTD. produces a wide range of Ground Support & Maintenance Equipment for schedule and technical maintenance of the aircrafts at the parking area, covered accommodations and hangars.

- Ladders and traps – universal, folding, dismountable, with adjusting of the working area;
- Trolleys;
- Tow bars;
- Trolley docs;
- Lifting equipment;
- Supports;
- Technological chassis.







## LICENSES AND CERTIFICATES



Certificate of conformity № ATI-110319.005 by the Ministry of Transport of Russian Federation for supply and repair of aviation equipment.



License № 14636-AT by the Ministry of Industry and Trade of the Russian Federation for development, manufacturing, testing and repair of aviation equipment.



Certificate of conformity AT GOST R ISO 9001-2015 (ISO 9001:2015), GOST ISO 9001-2011/GOST PB 0015-002-2012 for quality management system by the Institute of test programs and military equipment for development, piece-production and individual wholesale, repair of the types of military production.



# ГУ-9977-00 «MIL» PORTABLE HYDRAULIC UNIT FOR HYDRAULIC SYSTEM SELF-TEST OF Ми-8/17/171 TYPE HELICOPTER AND ITS MODIFICATIONS

The Hydraulic ground unit is designed for self-test of Mi-8, Mi-17 type helicopters hydraulic system by connecting it into hydraulic control panel of the helicopter. It creates pressure and liquid flow in the system. Hydraulic ground unit operates with direct-current power 27V from external power source. It allows to test operational capability of helicopter hydraulic systems without engine starting.



## Specifications:

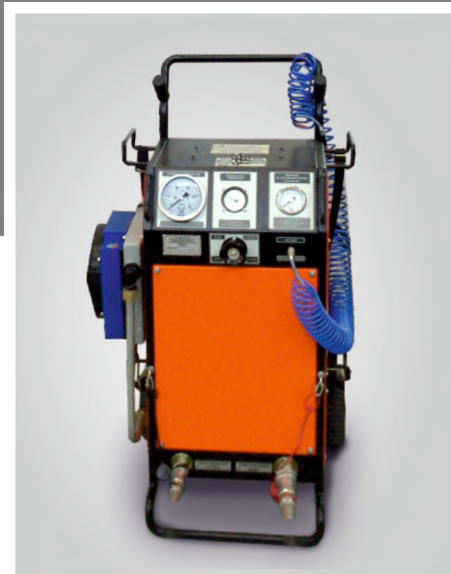
№	Characteristic	Value
1	Pump	465Д (465K)
2	Qty of independent hydraulic systems	1
3	Service fluid	AMF-10 oil*
4	Voltage (V)	27
5	Current intensity (A)	up to 150
6	Power consumption (kW)	6 (4,5)
7	Operation mode (min):	
	constant work / cooldown pause	45 / 15
8	Pump operational pressure (kgs/cm <sup>2</sup> )	
	Main system / Reserve system	65+8 / -
9	Productivity with operational pressure and + 25 deg. C (l/min)	
	Main system / Reserve system	8 / -
10	Filtering rate (micron)	12-16
11	environmental / service fluid	-45+65 / -30+65
12	Base weight (kg)	63
13	Dimensions: length/width/height (mm)	540/600/1090
14	Pneumatic system pressure (kgs/cm <sup>2</sup> )	-
15	Charging system incoming pressure (kgs/cm <sup>2</sup> )	-
16	Qty of independent cooling systems	-

\*Allowed equivalents of AMF-10:

- Aero Shell Fluid 41 due to specification MIL-H-5606F
- Mobile Aero HF due to specification MIL-H-5606F
- FH51 AIR 3520/B due to specification MIL-H-5606F

# ГY-9977-00 «KAMOV» PORTABLE HYDRAULIC UNIT FOR HYDRAULIC SYSTEM SELF-TEST OF KA-32 TYPE HELICOPTER AND ITS MODIFICATIONS

The Hydraulic ground unit is designed for self-test of KA-32 type helicopters hydraulic system by connecting it into hydraulic control panel of the helicopter. It creates pressure and liquid flow in the system. Hydraulic ground unit operates with direct-current power 27V from external power source. It allows to test operational capability of helicopter hydraulic systems without engine starting.



## Specifications:

Nº	Characteristic	Value
1	Pump	465Д
2	Qty of independent hydraulic systems	1
3	Service fluid	AMF-10 oil*
4	Voltage (V)	27
5	Current intensity (A)	up to 250
6	Power consumption (kW)	6
7	Operation mode (min):	
	constant work / cooldown pause	45 / 15
8	Pump operational pressure (kgs/cm2)	
	Main system / Reserve system	75±10 / -
9	Productivity with operational pressure and + 25 deg. C (l/min)	
	Main system / Reserve system	13 / -
10	Filtering rate (micron)	12-16
11	Operational temperature limits (deg. C)	
	environmental / service fluid	-45+65 / -30+65
12	Base weight (kg)	75
13	Dimensions: length/width/height (mm)	640/690/1090
14	Pneumatic system pressure (kgs/cm2)	6
15	Charging system incoming pressure (kgs/cm2)	4
16	Qty of independent cooling systems	1

\*Allowed equivalents of AMF-10:

- Aero Shell Fluid 41 due to specification MIL-H-5606G
- Mobile Aero HF due to specification MIL-H-5606G
- FH51 AIR 3520/B due to specification MIL-H-5606G



## TY-9977-00 PORTABLE HYDRAULIC UNIT FOR HYDRAULIC SYSTEM SELF-TEST OF ANSAT HELICOPTER.

The Hydraulic ground unit is designed for self-test of Ansat helicopters hydraulic system by connecting it into hydraulic control panel of the helicopter. It creates pressure and liquid flow in the system. Hydraulic ground unit operates with direct-current power 380V from external power source. It allows to test operational capability of helicopter hydraulic systems without engine starting.

The ergonomic case of the Hydraulic Unit provides high control and portability by one person. Hoses for connecting to the onboard hydraulic panel of the helicopter are included in a delivery set.



### Specifications:

Nº	Characteristic	Value
1	Pump	Plunger-type, adjustable
2	Qty of independent hydraulic systems	1
3	Service fluid	AMF-10 oil*
4	Voltage (V)	380
5	Current intensity (A)	up to 20
6	Power consumption (kW)	3,2
7	Operation mode (min):	
	constant work / cooldown pause	120/30
8	Pump operational pressure (kgs/cm2)	
	Main system / Reserve system	150± 2/-
9	Productivity with operational pressure and + 25 deg. C (l/min)	
	Main system / Reserve system	8/-
10	Filtering rate (micron)	5-8
11	Operational temperature limits (deg. C)	
	environmental / service fluid	-10+50/-10+70
12	Base weight (kg)	107
13	Dimensions: length/width/height (mm)	690/775/1028
14	Pneumatic system pressure (kgs/cm2)	-
15	Charging system incoming pressure (kgs/cm2)	-
16	Qty of independent cooling systems	1

\*Allowed equivalents of AMF-10:

- Aero Shell Fluid 41 due to specification MIL-H-5606F
- Mobile Aero HF due to specification MIL-H-5606F
- FH51 AIR 3520/B due to specification MIL-H-5606F

## PORTABLE COMPACT HYDRAULIC UNIT FOR TANKING ГY-9910-3000

The Portable compact hydraulic unit is designed for closed filling of hydraulic systems of Mi-8 and its modifications helicopter by connecting it into hydraulic control panel of the helicopter.

The Portable compact hydraulic unit is also designed for fluid outflow from hydraulic systems of helicopter.



### Main technical characteristics

Nº	Characteristic	Value
1	Pump	manual
2	Service fluid	AMF-10 oil*
3	Liquid flow for 10 cycles (double throws) with pump speed 1 cycle per 1 sec	Not less than 0,3 l/min
4	Filling pressure	Not more than 1,55 MPa
5	Filtering capacity	12-16 micron
6	Liquid volume, flowing in the hydraulic system of the helicopter from one can	Not less than 13 l
7	Volumetric tank displacement	Not less than 8 l
8	Dimensions (length x width x height)	390x 465x 450 mm
9	Base weight	13,5 kg

\*Allowed equivalents of AMF-10:

- Aero Shell Fluid 41 due to specification MIL-H-5606F
- Mobile Aero HF due to specification MIL-H-5606F
- FH51 AIR 3520/B due to specification MIL-H-5606F



# ЦДСА.С33.СОГ.01.00 PRESSURE FUELLING AND FILTERING UNIT

Unit designed for pressure fuelling and filtering of the hydraulic system service fluid of the Mi-8 (Mi-8T, Mi-17-1V, Mi-171), Mi-26T, Ka-226, Ka-32 from the mechanical impurity and emulsion water.

To ensure the efficiency of long filtering cycle unit is equipped with the cooling system. Main cooling system elements are two air-oil heat exchangers.

**Operation mode 1** – fuelling of the technological tank with further filtering from the external source.

**Operation mode 2** – pressure fuelling from the external source without long filtering cycle.

**Operation mode 3** – gravity fuelling of the technological tank for further filtering.

**Operation mode 4** – multiple filtering of the service fluid up to the GOST 17216-2001 rate in the technological tank.

**Operation mode 5** – multiple filtering of the service fluid up to the desired rate with liquid cooling.

**Operation mode 6** – cleaning of the fuelling line with liquid from technological tank.

**Operation mode 7** – pressure fuelling from the technological tank.



## Specifications:

Nº	Characteristic	Value
1	Service fluid	АМГ-10 oil*
2	Power source – 3 phase, AC, V/Hz	220/380/50
3	Power consumption, kW, not more than	5
4	Max productivity, l/min	40
5	Filtering rate, micron, not more than	5**
6	Filtering rate up to GOST 17216-2001 not less than	5-6**
7	Max pressure (with 0 productivity) MPa, not less than	0,3
8	Technological tank capacity, l	145
9	Max temperature of service fluid, deg. C	80
10	Constant work (no emptying of the dreg from the centrifuge, with temperature mode adherence), h, not less than	16
11	Service life till failure, h, not less than	200
12	Dimensions: length/width/height, mm	1600/1299/1350
13	Base weight, kg, not more than	260

\*Allowed equivalents of АМГ-10:

- Aero Shell Fluid 41 due to specification MIL-H-5606G
- Mobile Aero HF due to specification MIL-H-5606G
- FH51 AIR 3520/B due to specification MIL-H-5606G

\*\* Values are valid for temperature of service liquid 50 deg. C and productivity value 20 l/min

# HYDRAULIC AGGREGATES TESTING BENCH

Bench for testing of the hydraulic aggregates: HШ39M pump, ГA77B pump relief valve, ГA59/1 emergency supply valve.

Bench performs testing in manual, semi-automatic and automatic modes with saving the results in the automated supervisory control system.

bench includes 2 units:

- Bench;
- Computer stand CT-1-3.

Bench has 2 hydraulic testing systems:

- HШ-39M testing system;
- ГA-77B, ГA-59/1 testing system.



## Specifications:

Nº	Characteristic	Value
1	Qty of independent hydraulic systems	2 EA
2	Power source	380/220V 50 Hz
3	Power consumption, kW total	21,5
4	Dimensions of Bench (length/width/height)	2266/1470/1880 mm
5	Weight of Bench	1560 kg
6	Dimensions of Computer stand CT-1-3	500/425/1430 mm
7	Weight of Computer stand CT-1-3	50 kg
8	HШ39M operational pressure	10-90 kgs/cm2
9	Service fluid	AMГ-10 oil*
10	ГA77B, ГA59/1 operational pressure	45-120 kgs/cm2

\*Allowed equivalents of AMГ-10:

- Aero Shell Fluid 41 due to specification MIL-H-5606G
- Mobile Aero HF due to specification MIL-H-5606G
- FH51 AIR 3520/B due to specification MIL-H-5606G



# KAY-305, PA-605 AGGREGATES FUNCTIONAL TEST BENCH

Bench for testing of the KAY-305, PA-605 aggregates according to the KAY-305-000PK, PA-605-000PK repair manuals.

Bench includes 2 units:

- Bench
- Hydraulic station

Bench has 2 hydraulic testing systems:

- Main hydraulic system;
- Reserve hydraulic system.

Bench operates with automated supervisory control system (ASCS) and performs KAY-305, PA-605 aggregates testing in automatic mode, saves the results in the ASCS.

Bench operational modes:

- automatic mode under ASCS control;
- manual mode with ASCS operating;
- manual mode without ASCS operating.



## Specifications:

Nº	Characteristic	Value
1	Qty of independent hydraulic systems	2 EA
2	Power source AC	380/220V 50 Hz
3	Voltage AC	27 V
4	Total power consumption	16 kW
5	Dimensions of Bench (length/width/height)	2300/1020/1875 mm
6	Weight of Bench	850 kg
7	Dimensions of Hydraulic station	1360/1330/1220 mm
8	Weight of Hydraulic station	400 kg
9	Productivity of Hydraulic station (main/reserve)	up to 30 l/min each
10	Operational pressure	5-110 kgs/cm <sup>2</sup>
11	Service fluid	AMГ-10 oil*
12	Tank capacity (Б1, Б2)	120 l each

\*Allowed equivalents of AMГ-10:

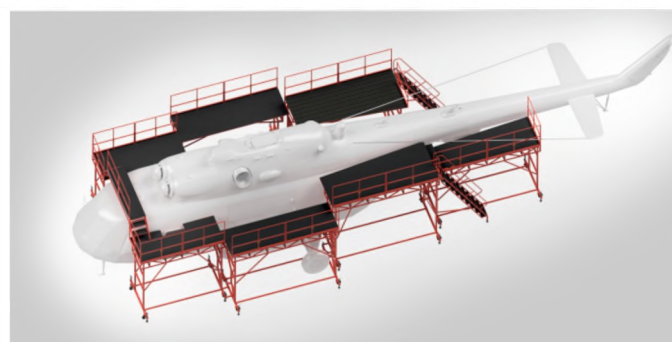
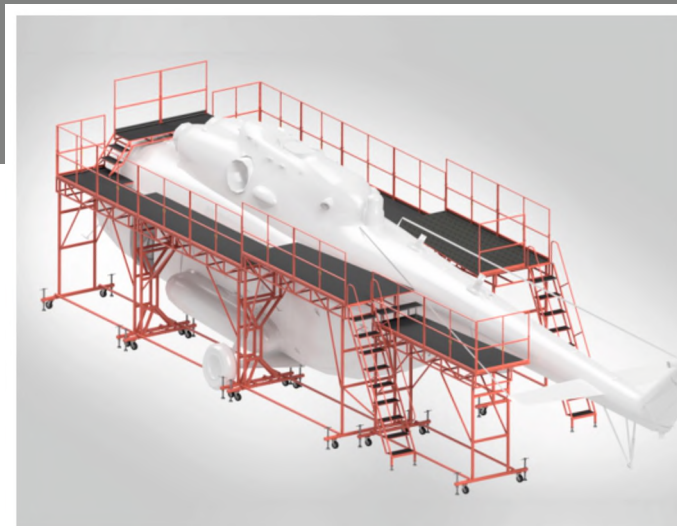
- Aero Shell Fluid 41 due to specification MIL-H-5606G
- Mobile Aero HF due to specification MIL-H-5606G
- FH51 AIR 3520/B due to specification MIL-H-5606G

ЦДСА.ДП.01.00.000

## SET OF PORTABLE LADDERS FOR MI-8T (MTV-1) HELICOPTER MAINTENANCE

### Specifications:

Dimensions in the working mode, mm	
Length	14400
Width	7218
Height	4507
Weight, kg	3300
Nominal load, kg/m <sup>2</sup>	200
Working levels, mm	
Nose area	2700
Main gear box area	3000
Tail boom area	2500



### Description

Designed as the several portable units with the wheel chassis each and can be moved by the strength of one or two men on the hard-surface. Units have the adjustable cradles allowing to set them against the helicopter and between each other. Units can be used separately. The working levels make the engine, main gear box areas and tail boom maintenance convenient. The height adjustable guardrail installed through all perimeter. Personal safety gear can be fastened to the guardrail. Height of the guardrails allows to rotate main rotor blades. Surface of the working platforms and ladders made of expanded steel sheets avoiding the slipping of the foots. Places of potential contact between working platforms and helicopter are equipped with the damping materials avoiding any damage to the fuselage.

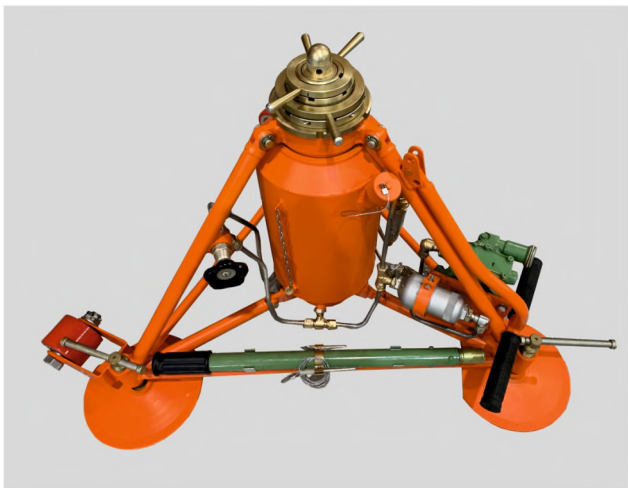
Unit designed for helicopter maintenance:

- With additional fuel tanks installed
- With main rotor blades installed
- With opened engine and main gear box cowls and cargo cabin doors

Unit meets the requirements of "Height works" standard and general requirements of "Safety works standards system. Individual safety gear against falling from the height" documentation.

# HYDRAULIC JACK ЦДСА.8АТ-9907-00

Hydraulic jack is designed to lift the helicopter when dismantling and installing the landing gear shock struts, charging them, leveling the helicopter. Hydraulic jacks are also used for other work scopes related to the lifting of the helicopter. It consists of a truss, a hydraulic cylinder with a tank, a pump with a handle and pipelines.



## Technical specification

Parameters	Value
Carrying capacity, kg	5000
Minimum height, mm	550
Maximum height, mm	1440
Hydraulic stroke, mm	690
Setscrew stroke, mm	200
Operating pressure, kg/cm <sup>2</sup>	130
Working liquid in hydraulic system	АМГ-10 ГОСТ 6794 or БМГ3 ТУ 38.101479
Volume of working liquid, l	5,5
Weight of hydraulic jack, kg	38





## ГY-9977-00 (2к). TWO-CIRCUIT HYDRAULIC PLANT FOR CONTINUOUS TESTING OF HELICOPTER HYDRAULIC SYSTEMS.

The plant provides autonomous testing of the operability of the main and backup hydraulic systems of the Mi-8/17/171 helicopters and their modifications. Operated by connecting to the ground check panel with onboard valves and creating the pressure and flow rate of the supplied working fluid.



### Technical specification

Power supply	
Alternating three-phase voltage	380V, 50Hz
Power consumption	no more than 10 kw
Current consumed by the plant	9 A
Hydraulics	
Number of independent systems	2 (main, backup)
-working liquid	oil АМГ-10 ГОСТ 6794-75
-maximum temperature of the working fluid	no more than 70°C
main hydraulic system	6,5-8,5 MPa (65-85 kgf/cm <sup>2</sup> )
backup hydraulic system	6,5-8,5 MPa (65-85 kgf/cm <sup>2</sup> )
Production capacity	
main hydraulic system	no more than 20 ltr
backup hydraulic system	no more than 20 ltr
Filtration fineness	16-25 mcm
Operation terms	
- ambient temperature	-15°C....+50°C
- relative humidity at a temperature of +30°C	no more than 90%
- atmosphere pressure	750±30 mmHg (1000+40hPa)
- air dustiness	10...15 mg/m <sup>3</sup>
- travel speed	no more than 5 km/h
Dimensions	
- base	1150 mm
- track	1000 mm
- clearance	170 mm
- overall dimensions (LxWxH)	2150x1500x1500
- minimum turning radius	1,2 m
- weight	no more than 920 kg