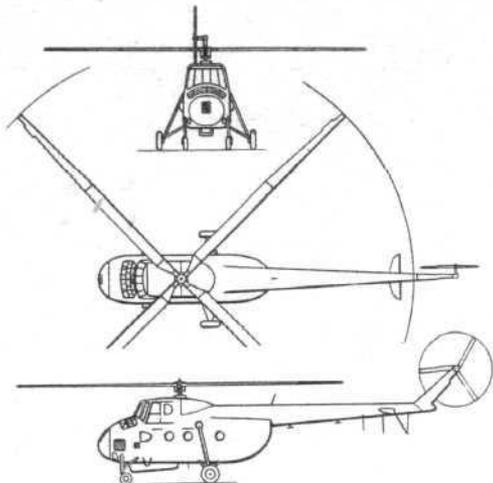




Left and right, Mi-4.

## Helicopters of the World . . .



### SOVIET UNION

#### MILLA

**Mi-1** This 3/5-seater helicopter has been in service since 1951 for postal work, communications, ambulance, rescue, liaison and the air inspection of high-voltage cross-country transmission lines, etc. The fuselage is a steel tube structure to which is attached the conical semi-monocoque tail boom. In the normal arrangement a bench for three passengers is provided behind the pilot. Radio equipment is installed in the extreme nose and a radio altimeter is generally fitted. The engine is an ASZ-21 seven-cylinder radial with fan cooling and developing a maximum of 575 h.p. The main rotor blades are of mixed construction.

A point of particular interest is the suitability of the Mi-1 for flights in icing conditions. Anti-freezing liquid is carried in

a tank under the rotor pylon and is continuously sprayed over the main and tail-rotor blades and windscreen.

A more detailed description of the aircraft, with sectional drawings, appeared in *Flight* of April 20 last.

● Main rotor diam., 48ft 5in; gross weight, 4,938 lb; max. speed, 125 m.p.h.

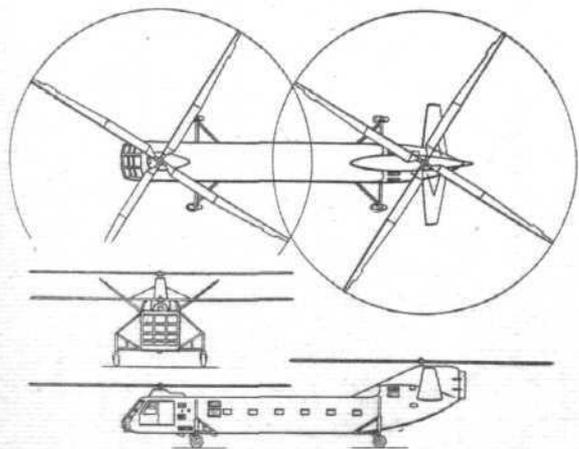
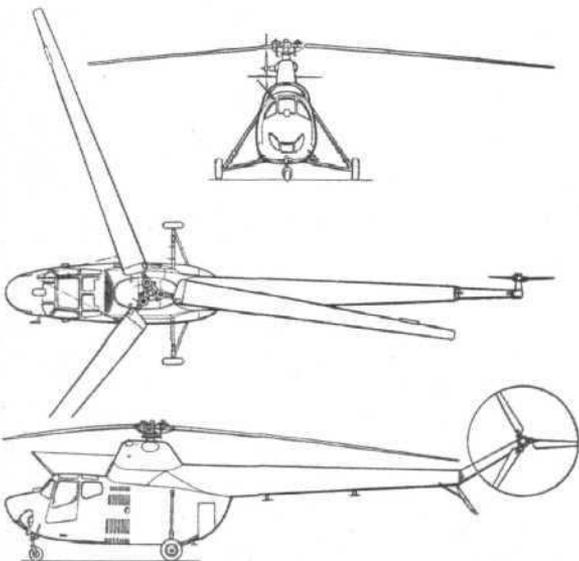
**Mi-4** This helicopter bears the same relationship to the Mi-1 as does the Westland Whirlwind to the Dragonfly. It is powered with a 1,000 h.p. ASH-62 radial mounted in the nose and driving the large four-bladed rotor via an inclined shaft. A particularly valuable feature of this helicopter is that—in certain versions at least—large clamshell doors are fitted at the rear of the capacious interior, which can seat ten fully equipped troops. The Mi-4 was first seen in 1953 and is now fully operational in all parts of the Communist world, including Arctic and Antarctic exploratory areas. It is the holder of several world records, typical of which are an ascent to 19,472ft with 4,400 lb payload and an average of 116.3 m.p.h. over a 310.7-mile circuit.

● Rotor diam., 58ft; gross weight, 12,000 lb approx.; max. speed, 125 m.p.h. approx.

#### YAKOVLEV

**Yak-24** A successful and already widely used large transport helicopter, the Yak-24 is fitted with two ASH-62 radial engines driving tandem interlinked counter-rotating rotors almost identical in design with that of the Mi-4. The fuselage is built up as a metal framework, with unstressed metal skinning at the front and rear and fabric covering over the middle portion. The two pilots and radio operator are seated in the glazed nose, with access to the forward power compartment immediately behind, around which is a narrow passage leading to the unobstructed main cabin. The latter can accommodate as many as

Left, Mi-1. Below and lower left, Yak-24.



40 persons, or three small M-20 Army utility cars, access for bulky cargo or vehicles being provided by a loading ramp at the rear end.

● Rotor diam., 58ft; gross weight, 23,000 lb approx.; max. speed, 130 m.p.h. approx.

### FRANCE

#### SUD-EST AVIATION

37 Blvd. de Montmorency, Paris XVI.  
(BAG. 84-00)

**S.E.3130 Alouette II** A turbine-driven helicopter seating up to five people, the Alouette II is now in production with a single Turboméca Artouste II. The cabin enclosure is of notably clean design and almost completely transparent; the central and rear fuselage structures are of triangulated steel tubes, the rear fuselage being detachable for transport. The seating arrangement is two in front and three behind, but the machine is readily adaptable for the usual military or civil missions, and in the ambulance rôle can take two stretchers and two sitting cases. The undercarriage is of the skid-cum-wheel type. In the centre of the fuselage, forward of and below the Artouste, is the fuel tank of 126 gallons.

● Rotor diam., 33ft; empty weight, 1,818 lb; gross weight, 2,970 lb; max. speed, 112 m.p.h.; cruising speed, 105 m.p.h.; rate of climb, 1,180ft/min; service ceiling, 14,760ft; hovering ceiling with ground effect, 9,800ft.

**S.E.3150** Progress with the Alouette II has encouraged the makers to plan a new version, designated S.E.3150, with a covered tail-boom structure. In addition, the cabin has been slightly widened and lengthened, and staggered seats added to accommodate two extra people, bringing the total to seven. The new shape is expected to increase cruising speed by 12 m.p.h.

