

Po	werplant
Type	M-105PA
Takeoff Power	1100 <i>hp</i>
Power at 0m	1020hp
Power at ****m	1100 <i>hp</i>
	Size
Length	8.5 <i>m</i>
Wingspan	10.0 <i>m</i>
Wing area	17.15 <i>m</i> <sup>2</sup>
Weigh	its and loads
Empty	2450kg
Loaded	3042kg
Wing Load (kg/m <sup>2</sup> )	177.4
Power load (kg/hp)	2.98
20-27-101-38	Speed
at 0m	500km/h
at 4850m	580 <i>km/h</i>
Landing	145 <i>km/h</i>
9886	Range
Practical	900 <i>km</i>
	Ceiling
Ceiling	10000 <i>m</i>
	Climb
to 5000m	6.5 <i>min</i>
During combat turn	900 <i>m</i>
	Payload
Fuel	305(+60)kg
	rmament
Gun Type	ShVAK
Position	Through the hub
Ammo	120
Gun Type	2*UBS
Position	Engine cowling
Ammo	260+140
Salvo (kg/sec)	2.72
Bombs (kg)	2*(25 to 100)
Rockets	6*RS-82

The Yak-7 fighter was a direct development of a two-seat training UTI version based on the Yak-1. Yakovlev attempted to corner the market for advanced military trainers with the UTI-26, developed from the Yak-1.

Handling and flight behavior in the UTI-26 were absolutely superlative. With this in mind, when the dire need for fighters arose in 1941 it was natural that the Bureau look to develop a fighter version of the training machine. The resulting Yak-7 was similarly equipped to a contemporary Yak-1, and powered by the M-105PA engine.

The Yak-7B was a further refinement of the Yak-7 and -7A fighters - better armed and featured number of other improvements. Rifle-caliber ShKAS machineguns were replaced by far more capable pair of 12.7mm synchronized UBS (left with 260 rounds, right with 140). To accommodate those machineguns, Yak-7B had distinctive fairings on the engine cowling. As an option, six RS-82 rockets could be replaced by two bombs (from 25 to 100kg each).

Yak-7B M-105PA were used during Kuban` and Stalingrad battles. Pilots and commanders agreed that its combat performance is superior to all domestic fighters (LaGG-3 and MiG-3 especially). It is also superior to Bf-109 in horizontal combat and almost even in vertical maneuvers (depending on the Bf-109 model).

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