

Yakovlev Yak-1

A/C Type: Day fighter
 Engine(s): One Klimov M-105PA V-12
 Eng. Pwr: 1050-1100 hp, liquid-cool, Non-FI
 A/C Crew: Pilot

Maximum Speed: 371 mph at 16,400 ft
 Maximum Ceiling: 32,800 ft.

Defense factor: 5 Size Modifier: +0
 Damage Factor: 8/12 Endurance: 81
 Cockpit View: Fair Blind Area: Rear

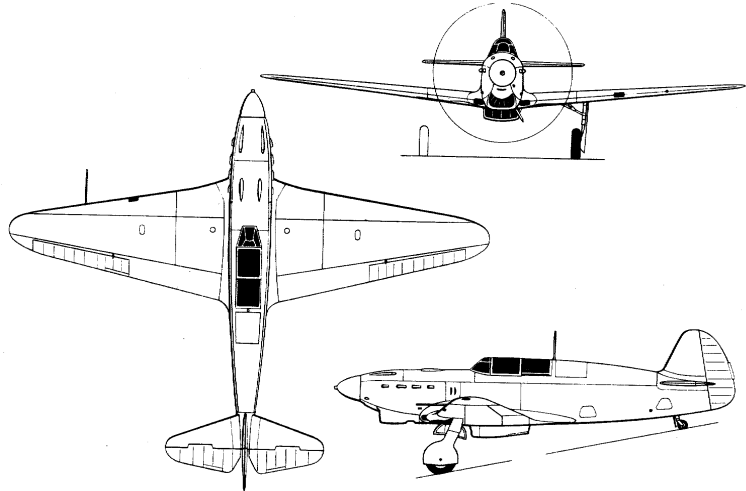
Protection: Cockpit +1 Fuel +0 Engine +0

Climb Dece/ Dive Accel: 3.0 / 1.0
 Weight and Load Limit: 440 / 2-3

Wpn Stations Weight Allowed Loads
 1,2 220 lbs 3x RS-82 rkts

Country: Soviet Union

Service Entry Date: June 1941



Class: F

Victory Points: 4-7

AIRCRAFT PERFORMANCE CHART

Altitude Levels	Bands	Minimum Speed	Maximum Speed	Maximum Dive Spd	Min TT(3)	Min HT(4)	Min BT(5)	Min ET(6)	Altitude Levels	Bands	Average Rate of Climb
43+	UH	--	--	--	--	--	--	--	43+	UH	--
37-42	EH	--	--	--	--	--	--	--	37-42	EH	--
31-36	VH	3.0	6.0	10.5	4.5	6.0	7.5	8.5	31-36	VH	500
25-30	HI	2.5	6.5	10.5	4.0	5.5	7.0	8.0	25-30	HI	1,300
19-24	MH	2.0	7.0	10.5	3.5	5.0	6.0	7.0	19-24	MH	2,600
13-18	ML	2.0	7.5	10.5	3.0	4.5	5.5	6.5	13-18	ML	3,300
7-12	LO	2.0	7.0	10.0	3.0	4.0	5.0	6.0	7-12	LO	3,600
1-6	VL	1.5	6.0	8.5	2.5	3.5	4.5	5.5	1-6	VL	3,800

FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
N1	1x 20mm ShVAK cannon	6	2
W1	1x 7.62mm ShKAS mg	7	4
W2	1x 7.62mm ShKAS mg	7	4
N2	2x 12.7mm Beresin mg	12	3

GUN ATTACK FACTORS

Range	N1	W1	W2	N2	Total
0	27	10	10	20	47/47
1	20	7	7	15	34/35
2	13	4	4	10	21/23
3	9	3	3	7	15/16
4	6	2	2	5	10/11
5	4	1	1	3	6/7
6	3	--	--	3	3/6
7	--	--	--	--	--

WEAPON STATION LOCATION



1

2

POWER VERSUS SPEED CHART

Levels	Bands	1.0 - 4.5	5.0 - 7.5	8.0 - 9.5	10.0+	Band
43+	UH	--	--	--	--	UH
37-42	EH	--	--	--	--	EH
31-36	VH	2	1	--	--	VH
25-30	HI	3	1	--	--	HI
19-24	MH	4	1	--	--	MH
13-18	ML	6	3	--	--	ML
7-12	LO	7	4	--	--	LO
1-6	VL	7	4	--	--	VL
Banking FPs		2	2	4	6	
Side Slip FPs		2	3	5	7	

NOTES AND VARIANTS

Yak series: Maneuverable monoplane fighters built by the Soviet Union entering production in June 1941. Mixed wood and steel construction.

Yak 1: Available June 1941. The design won Yakovlev the Order of Lenin, a Zis automobile, and 100,000 roubles. 400 available in June 41. Simple Gun-sight: +2 to all non-rear-arc shots. Use left total. 744 built.

Yak 1M: Series of modifications of basic Yak 1:

- 2x 12.7mm UBS mg (N2) vice two wing 7.62 ShKAS (use right total).
- 20 more shells for the 20mm ShVAK (+1 ammo).
- Cutdown fuselage and bubble for better view (blind = rear,low).
- 1260-hp engine (+1 accel)

Collected mods entered production as Yak 7B.

Yakovlev Yak-7B

Country: Soviet Union

Service Entry Date: 1942

A/C Type: Day fighter
 Engine(s): One Klimov M-105PF V-12
 Eng. Pwr: 1260-hp, air-cooled, Non-F.I.
 A/C Crew: Pilot

Maximum Speed: 381 mph at 16,400 ft
 Maximum Ceiling: 33,400 ft

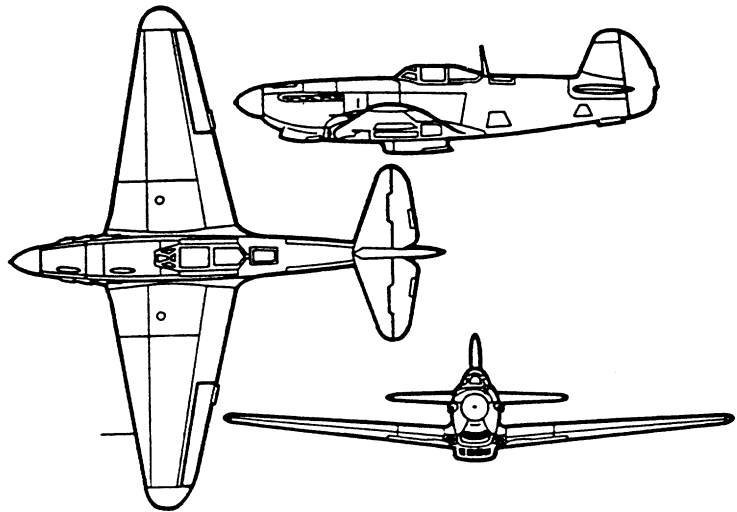
Defense factor: 5 Size Modifier: +0
 Damage Factor: 8/12 Endurance: 96
 Cockpit View: Good Blind Area: Rear, Low

Protection: Cockpit +1 Fuel +0 Engine +0

Climb Dece/ Dive Accel: 3.0 / 1.0

Weight and Load Limit: 500 / 2-4

<u>Wpn Stations</u>	<u>Weight</u>	<u>Allowed Loads</u>
1, 2	250 lbs	1x 100 kg bomb or 3x RS-82 rcts



Class: F

Victory Points: 4-8

AIRCRAFT PERFORMANCE CHART

Altitude Levels	Bands	Minimum Speed	Maximum Speed	Maximum Dive Spd	Min TT(3)	Min HT(4)	Min BT(5)	Min ET(6)	Altitude Levels	Bands	Average Rate of Climb
43+	UH	--	--	--	--	--	--	--	43+	UH	--
37-42	EH	--	--	--	--	--	--	--	37-42	EH	--
31-36	VH	3.0	6.0	10.5	4.5	6.0	7.5	8.5	31-36	VH	600
25-30	HI	2.5	6.5	10.5	4.0	5.5	7.0	8.0	25-30	HI	1,400
19-24	MH	2.0	7.0	10.5	3.5	5.0	6.0	7.0	19-24	MH	2,400
13-18	ML	2.0	7.5	11.0	3.0	4.5	5.5	6.5	13-18	ML	3,000
7-12	LO	2.0	7.0	10.0	3.0	4.0	5.0	6.0	7-12	LO	3,300
1-6	VL	1.5	6.5	9.0	2.5	3.5	4.5	5.5	1-6	VL	3,600

FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
N1	1x 20mm ShVAK cannon	7	2
N2	2x 12.7mm UBS mg	12	3

GUN ATTACK FACTORS

Range	N1	N2	Total
0	27	20	47
1	20	15	35
2	13	10	23
3	9	7	16
4	6	5	11
5	4	3	7
6	3	3	6
7	--	--	--

WEAPON STATION LOCATION



1

2

POWER VERSUS SPEED CHART

Levels	Bands	1.0 - 4.5	5.0 - 7.5	8.0 - 9.5	10.0+	Band
43+	UH	--	--	--	--	UH
37-42	EH	--	--	--	--	EH
31-36	VH	2	1	--	--	VH
25-30	HI	3	1	--	--	HI
19-24	MH	5	2	--	--	MH
13-18	ML	7	4	--	--	ML
7-12	LO	8	5	--	--	LO
1-6	VL	8	5	--	--	VL
Banking FPs		2	2	4	6	
Side Slip FPs		2	3	5	7	

NOTES AND VARIANTS

Yak series: Maneuverable monoplane fighters built by the Soviet Union entering production in June 1941. Mixed wood and steel construction.

Yak 7B: Available June 42. Collected Yak 1M mods as a standardized version. Simple Gunsight: +2 to all non-rear-arc shots.

Yakovlev Yak-3

A/C Type: Day fighter
 Engine(s): One Klimov M-105PF-2 V-12
 Eng. Pwr: 1222 hp, liquid-cooled, Non-F.I.
 A/C Crew: Pilot

Maximum Speed: 403 mph at 10,700 ft
 Maximum Ceiling: 35,475 ft.

Defense factor: 5 Size Modifier: +0
 Damage Factor: 8/12 Endurance: 105
 Cockpit View: Fair Blind Area: Rear, low

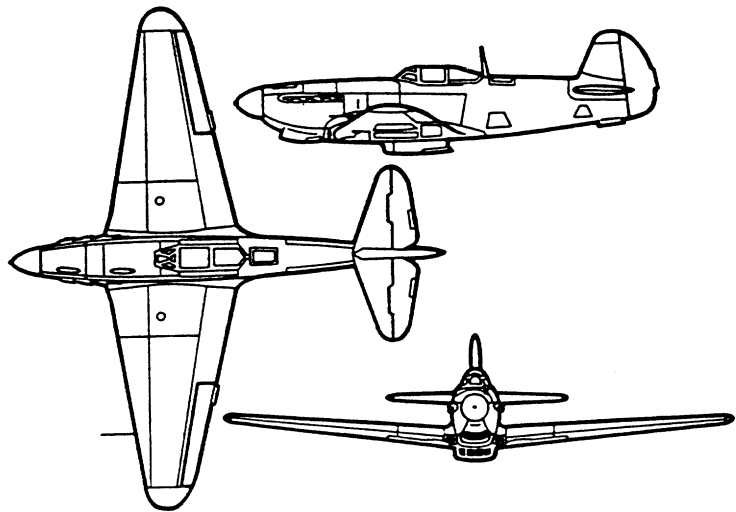
Protection: Cockpit +1 Fuel +0 Engine +0

Climb Decel/ Dive Accel: 3.0 / 1.0
 Weight and Load Limit: 400 / 2-3

Wpn Stations Weight Allowed Loads

Country: Soviet Union

Service Entry Date: November 1943



Class: F

Victory Points: 4-9

AIRCRAFT PERFORMANCE CHART

Altitude Levels	Bands	Minimum Speed	Maximum Speed	Maximum Dive Spd	Min TT(3)	Min HT(4)	Min BT(5)	Min ET(6)	Altitude Levels	Bands	Average Rate of Climb
43+	UH	--	--	--	--	--	--	--	43+	UH	--
37-42	EH	--	--	--	--	--	--	--	37-42	EH	--
31-36	VH	3.5	6.5	11.0	5.0	6.5	7.5	8.5	31-36	VH	1,100
25-30	HI	3.0	7.0	11.0	4.5	6.0	7.0	8.0	25-30	HI	2,300
19-24	MH	2.5	7.5	11.0	4.0	5.5	6.5	7.5	19-24	MH	3,000
13-18	ML	2.0	8.0	11.0	3.5	5.0	6.0	7.0	13-18	ML	3,600
7-12	LO	2.0	8.0	10.5	3.0	4.0	5.0	6.0	7-12	LO	3,900
1-6	VL	2.0	7.5	9.5	2.5	3.5	4.5	5.5	1-6	VL	4,200

FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
N1	One 20mm ShVAK can	6	2
N2	Two 12.7mm Beresin mg	5	3
N3	Two 20mm ShVAK can	5	2

GUN ATTACK FACTORS

Range	N1	N2	N3	Total
0	27	20	50	47/77
1	20	15	38	35/58
2	13	10	25	23/28
3	9	7	17	16/26
4	6	5	11	11/17
5	4	3	7	7/11
6	3	3	5	6/8
7	--	--	--	--

WEAPON STATION LOCATION



none

POWER VERSUS SPEED CHART

Levels	Bands	1.0 - 4.5	5.0 - 7.5	8.0 - 9.5	10.0+	Band
43+	UH	--	--	--	--	UH
37-42	EH	--	--	--	--	EH
31-36	VH	2	1	--	--	VH
25-30	HI	4	1	--	--	HI
19-24	MH	6	3	--	--	MH
13-18	ML	8	6	3	--	ML
7-12	LO	9	7	4	--	LO
1-6	VL	9	7	--	--	VL
Banking FPs		2	2	4	6	
Side Slip FPs		2	3	5	7	

NOTES AND VARIANTS

Yak series: Maneuverable monoplane fighters built by the Soviet Union entering production in June 1941. Mixed wood and steel construction.

Yak 3: Light weight, low altitude, high maneuverability Yak. Usually attacked from 8-11,000 ft or lower. Available in small numbers from late 1943. Flown by Normandie-Niemen Regiment (Free French pilots) and Polish Regiment during final campaign through East Prussia in 1945. Luftwaffe issued orders to avoid this a/c below 15K ft at all costs. Protection from rear only. 4848 built.

Klimov VK-107 engine: Available April 1945. 1650 hp engine. Max speed 447 mph at 19,685 ft: add 2 power at all alts, turn decel: 4/5/6/7; add 1.0 to max level speed LO, ML, MH; 0.5 to VL, HI, VH. 100 built; available on 1/D10.

Yak-3U: Available June, 1945. VK-107A engine (as above); full Cockpit +1; armed with 3x ShVAK: use N3 vice N2, total to right of slash.

Lavochkin LaGG-3

A/C Type: Day fighter
 Engine(s): One Klimov M-105P V-12
 Eng. Pwr: 1050-1100 hp, liq-cooled, Non-FI
 A/C Crew: Pilot

Maximum Speed: 348 mph at 16,400
 Maximum Ceiling: 29,500 ft.

Defense factor: 5 Size Mod: +0
 Damage Factor: 7/11 Endurance: 115
 Cockpit View: Fair Blind Area: Rear,low

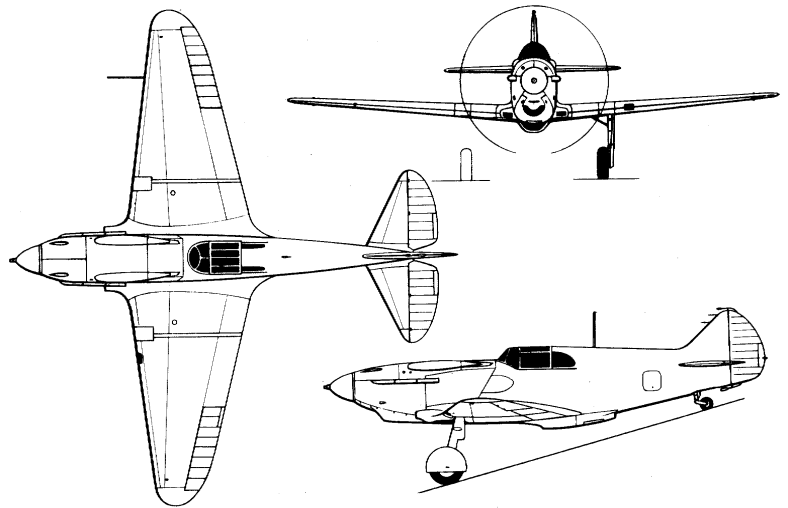
Protection: Cockpit +1 Fuel +0 Engine +0

Climb Dece/ Dive Accel: 3.0 / 1.0
 Weight and Load Limit: 1000 / 2-3

Wpn Stations Weight Allowed Loads
 1, 2 250 1x100+20 kg or
 1x 50+2x 20 kg or
 3x RS-82 rkts or
 1x 22-gal FT

Country: Soviet Union

Service Entry Date: August 1941



Class: F

Victory Points: 4-7

AIRCRAFT PERFORMANCE CHART

Altitude Levels	Bands	Minimum Speed	Maximum Speed	Maximum Dive Spd	Min TT(4)	Min HT(5)	Min BT(6)	Min ET(7)	Altitude Levels	Bands	Average Rate of Climb
43+	UH	--	--	--	--	--	--	--	43+	UH	--
37-42	EH	--	--	--	--	--	--	--	37-42	EH	--
31-36	VH	--	--	--	--	--	--	--	31-36	VH	--
25-30	HI	3.0	5.0	9.0	3.5	4.5	6.0	7.5	25-30	HI	900
19-24	MH	2.5	5.5	9.0	3.5	4.0	5.5	7.0	19-24	MH	1,500
13-18	ML	2.0	7.0	9.0	3.0	4.0	5.0	6.5	13-18	ML	2,000
7-12	LO	2.0	6.0	8.5	3.0	3.5	4.5	6.0	7-12	LO	2,600
1-6	VL	2.0	5.0	8.0	3.0	4.0	5.0	6.0	1-6	VL	3,200

FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
N1	2x 7.62mm ShKAS mg	6	4
N2	1x 20mm ShVAK can	5	2
N3	2x 12.7mm Beresein	4	3

GUN ATTACK FACTORS

Rng	N1	N2	N3	Total
0	19	27	20	46/47
1	15	20	15	35/35
2	10	13	10	23/23
3	6	9	7	15/16
4	4	6	5	10/11
5	3	4	3	7/7
6	--	3	3	3/6
7	--	--	--	--

WEAPON STATION LOCATION



1

2

POWER VERSUS SPEED CHART

Levels	Bands	1.0 - 4.5	5.0 - 7.5	8.0 - 9.5	10.0+	Band
43+	UH	--	--	--	--	UH
37-42	EH	--	--	--	--	EH
31-36	VH	--	--	--	--	VH
25-30	HI	3	1	--	--	HI
19-24	MH	5	2	--	--	MH
13-18	ML	6	3	--	--	ML
7-12	LO	6	3	--	--	LO
1-6	VL	6	3	--	--	VL
Banking FPs		2	3	4	6	
Side Slip FPs		3	4	5	7	

NOTES AND VARIANTS

LaGG-3: Available August 41. Monoplane fighter of wood construction. Also used variety of alternative armaments, including N3 (2 Beresin 12.7mm vice N1); use total on right. Simple Gunsight: +2 to all non-rear-arc shots. Slotted wing. 6527 built.

22-gal FT: Wgt: 200 Ld: 1.5/1.0 End: +10 each

Ilyushin Il-10

A/C Type: Attack bomber
 Engine(s): One Mikulin AM-42 inline V-12
 Eng. Pwr: 2000 hp, liquid-cooled
 A/C Crew: Pilot, Gunner

Maximum Speed: 374 mph @ 13,125 ft
 Maximum Ceiling: 24,500 ft.

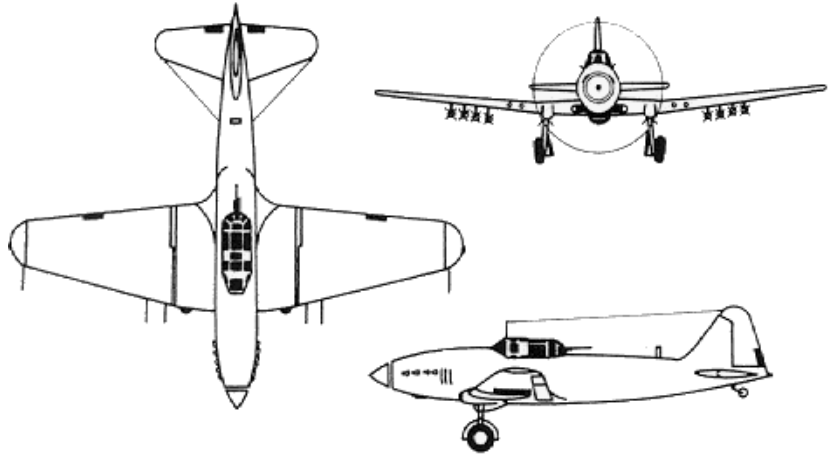
Defense factor: 5 Size Modifier: +0
 Damage Factor: 9/13 Endurance: 110
 Cockpit View: Poor Blind Area: Rear,Low

Protection: Cockpit +3 Fuel +2 Engine +2
 Climb Dece/ Dive Accel: 3.0 / 1.0
 Weight and Load Limit: 1600 / 4-6

Wpn Stations	Weight	Allowed Loads
1, 3	250	4x RS-82 rkts
2 (bombbay)	880	400 kg bombs

Country: Soviet Union

Service Entry Date: 1945



Class: L

Victory Points: 5-10

AIRCRAFT PERFORMANCE CHART

Altitude Levels	Bands	Minimum Speed	Maximum Speed	Maximum Dive Spd	Min TT(3)	Min HT(4)	Min BT(5)	Min ET(6)	Altitude Levels	Bands	Average Rate of Climb
43+	UH	--	--	--	--	--	--	--	43+	UH	--
37-42	EH	--	--	--	--	--	--	--	37-42	EH	--
31-36	VH	--	--	--	--	--	--	--	31-36	VH	--
25-30	HI	--	--	--	--	--	--	--	25-30	HI	--
19-24	MH	2.5	6.5	10.5	4.0	5.5	6.5	7.5	19-24	MH	800
13-18	ML	2.0	7.5	10.5	3.5	5.0	6.0	7.0	13-18	ML	1,200
7-12	LO	2.0	7.5	10.5	3.5	4.5	5.5	6.5	7-12	LO	1,400
1-6	VL	2.0	6.5	9.5	3.0	4.0	5.0	6.0	1-6	VL	1,400

FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
W1	1x 7.62mm ShKAS	14	4
W2	1x 7.62mm ShKAS mg	14	4
W3	1x 20mm VYa-23 cannon	8	2
W4	1x 20mm VYa-23 cannon	8	2
DG	1x 20mm UB-20 cannon	5	2

GUN ATTACK FACTORS

Rng	W1	W2	W3	W4	DG	Total
0	10	10	30	30	12	80
1	8	8	23	23	8	62
2	5	5	15	15	6	40
3	3	3	10	10	4	26
4	2	2	7	7	3	18
5	2	2	5	5	2	14
6	--	--	4	4	1	8
7	--	--	--	--	--	--

WEAPON STATION LOCATION

1 2 3

POWER VERSUS SPEED CHART

Levels	Bands	1.0 - 4.5	5.0 - 7.5	8.0 - 9.5	10.0+	Band
43+	UH	--	--	--	--	UH
37-42	EH	--	--	--	--	EH
31-36	VH	--	--	--	--	VH
25-30	HI	--	--	--	--	HI
19-24	MH	3/4	1/2	--	--	MH
13-18	ML	4/5	1/2	--	--	ML
7-12	LO	6/7	3/4	--	--	LO
1-6	VL	6/7	3/4	--	--	VL
Banking FPs		3	4	7	10	
Side Slip FPs		4	6	8	11	

NOTES AND VARIANTS

Ilyushin Il-10: Available 1945. Improved Il-2 Sturmovik that reached units in time for the final push on Berlin. Few available in Oct-44 for operational testing. Used against the Japanese in Manchuria and Korea during August, 1945. Used Postwar by many Soviet allies - including North Korea during the Korean War. 3300 built by 1948; 4900 built by 1951. Czech-built version called B3; 1,200 built.