Mikoyan-Guerevich MiG-9FS

A/C Type: Jet Fighter
Engine(s): 2x RD-20 (BMW 003a) jet engines
Eng. Pwr: 1600 kg turbojet thrust
A/C Crew: Pilot

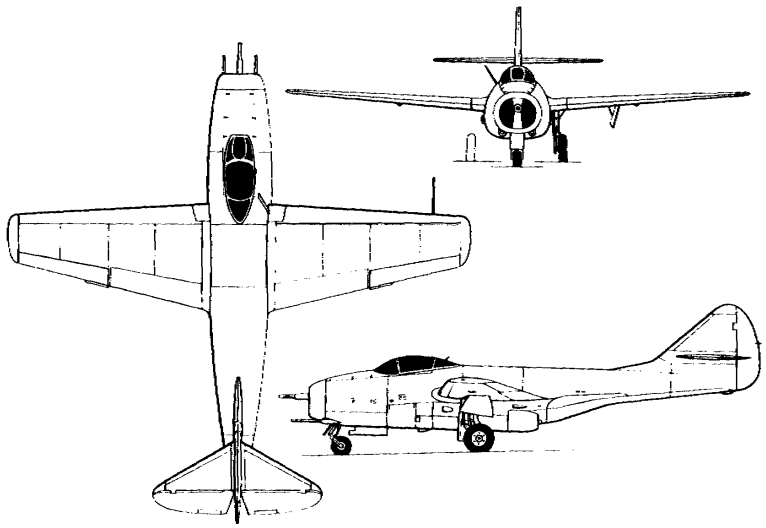
Maximum Speed: 566 mph at 14, 765 ft
Maximum Ceiling: 42,650 ft / 36,000 ft. / NA
Defense factor: 5 Size Modifier: +0
Damage Factor: 9/13 Endurance: 120
Cockpit View: Fair Blind Area: Rear,low

Protection: Cockpit +0 Fuel +0 Engines +0

Climb Dece/ Dive Accel: 3.0 / 1.0
Weight and Load Limit: 1100 / 2-4

Wpn Stations	Weight	Allowed Loads
1,2	550	66-gal FT

Country: USSR Service Entry Date: 1947



Class: F-Jet Victory Points: 3-6

AIRCRAFT PERFORMANCE CHART

Altitude Levels	Bands	Minimum Speed	Maximum Speed	Maximum Dive Spd	Min TT(5)	Min HT(6)	Min BT(8)	Min ET(9)	Altitude Levels	Bands	Average Rate of Climb
43+	UH	--	--	--	--	--	--	--	43+	UH	--
37-42	EH	4.0	10.0	12.0	6.0	7.5	9.0	10.0	37-42	EH	1,800
31-36	VH	3.5	10.5	12.0	5.5	7.0	8.5	9.5	31-36	VH	2,400
25-30	HI	3.0	10.5	12.0	5.0	6.5	8.0	9.0	25-30	HI	2,900
19-24	MH	3.0	11.0	12.0	4.5	6.0	7.0	8.0	19-24	MH	3,300
13-18	ML	2.5	11.0	12.0	4.0	5.5	6.5	7.5	13-18	ML	3,600
7-12	LO	2.5	10.5	12.0	3.5	5.0	6.0	7.0	7-12	LO	3,800
1-6	VL	2.5	10.5	11.5	3.5	4.5	5.5	6.5	1-6	VL	4,000

FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
N1	1x 23mm NS-23 cannon	2	2
N2	1x 23mm NS-23 cannon	2	2
N3	1x 37mm NS-37 cannon	9	1

GUN ATTACK FACTORS

Range	N1	N2	N3	Total
0	25	25	12	62
1	17	17	8	42
2	11	11	6	28
3	8	8	4	20
4	6	6	3	15
5	4	4	2	10
6	3	3	2	8
7	--	--	1	1

WEAPON STATION LOCATION

1 2

POWER VERSUS SPEED CHART

(per engine)

Levels	Bands	1.0 - 4.5	5.0 - 7.5	8.0 - 9.5	10.0+	Band
43+	UH	--	--	--	--	UH
37-42	EH	2	1	0.5	.25	EH
31-36	VH	2.5	1.5	0.5	.25	VH
25-30	HI	2.5	1.5	0.5	.25	HI
19-24	MH	3	2	1	0.5	MH
13-18	ML	3	2	1	0.5	ML
7-12	LO	3	2	1	0.5	LO
1-6	VL	3	2	1	0.5	VL
Banking FPs		3	4	6	8	
Side Slip FPs		4	5	7	9	

NOTES AND VARIANTS

MiG-9FS (I-301) "Fargo": Main production variant of the MiG-9. The negines were reverse engineered BMW 003a jets. Due to the ingestion of gas into the jets, there is a chance of engine shut down above 25.0 after the NS-37 cannon is fired: 2 or less on a D10. Roll each engine separately. Combat flaps. 604 built.

MiG-9FF (I-307): Available 1948. An improved version with 2x RD-21 engines (1,000 kg thrust each). Max speed 590 mph at sea level. +2 accel; +1,000 roc at VL and LO; +500 roc ML-HI; +300 roc above that. Equipped with afterburner: (+2 more accel, uses 1 END/combat turn. Small production run; further development dropped in favor of swept-wing MiG-15.

66-gal FT: **Wgt**: 550 lbs **Ld**: 3.0/2.0 **End**: +17

Yakovlev Yak-15

A/C Type: Short range jet Fighter
Engine(s): One RD-10 (Jumo 004B) Turbojet
Eng. Pwr: 900 kg Turbojet thrust
A/C Crew: Pilot

Maximum Speed: 500 mph at 16405 ft.
Maximum Ceiling: 39,400 ft. / NA / NA ft.
Defense factor: 5 Size Modifier: -1
Damage Factor: 8/12 Endurance: 40
Cockpit View: Good Blind Area: Rea,lowr

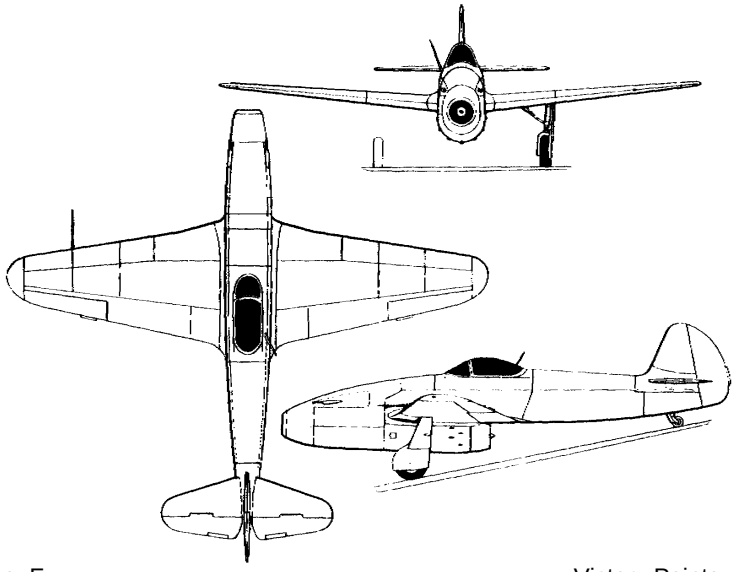
Protection: Cockpit +1 Fuel +1 Engines -2

Climb Dece/ Dive Accel: 3.0 / 1.5*
Weight and Load Limit: 1100 / 2-4

Wpn Stations	Weight	Allowed Loads
1,2 (Yak-17 only)	550	66-gal FT

Country: USSR

Service Entry Date: May, 1947



Class: F

Victory Points: 6-12

AIRCRAFT PERFORMANCE CHART

Altitude Levels	Bands	Minimum Speed	Maximum Speed	Maximum Dive Spd	Min TT(5)	Min HT(6)	Min BT(7)	Min ET(8)	Altitude Levels	Bands	Average Rate of Climb
43+	UH	--	--	--	--	--	--	--	43+	UH	--
37-42	EH	4.0	9.0	12.0	5.5	7.0	8.5	10.5	37-42	EH	1,000
31-36	VH	3.5	9.0	12.0	5.0	6.5	7.0	9.0	31-36	VH	1,500
25-30	HI	3.5	9.5	12.0	4.5	6.0	7.5	8.5	25-30	HI	2,000
19-24	MH	3.0	9.5 (9.0)	12.0	4.0	5.5	6.5	7.5	19-24	MH	2,500
13-18	ML	3.0	10.0 (9.0)	12.0	3.5	4.5	5.5	6.5	13-18	ML	3,200
7-12	LO	2.5	8.5 (9.0)	12.0	3.0	4.0	5.0	6.5	7-12	LO	3,800
1-6	VL	2.5	8.0	11.0	2.5	3.5	4.5	6.0	1-6	VL	4,400

FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
N1	One 23mm NS-23	3	2
N2	One 23mm NS-23	3	2

GUN ATTACK FACTORS

Range	N1	N2	Total
0	25	25	50
1	17	17	34
2	11	11	22
3	8	8	16
4	6	6	12
5	4	4	8
6	3	3	6
7	--	--	--

WEAPON STATION LOCATION

1 Yak-17 only 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	5	3	1	--	EH
31-36	VH	6	4	2	--	VH
25-30	HI	6	4	2	--	HI
19-24	MH	7	5	3	--	MH
13-18	ML	7	5	3	1	ML
7-12	LO	7	5	3	--	LO
1-6	VL	7	5	3	--	VL
Banking FPs		1	1	2	4	
Side Slip FPs		3	5	7	9	

NOTES AND VARIANTS

Yak-15 "Feather": Designed by mixing the wings and tail of a Yak-3 and a reverse engineered Junkers Jumo 0004B engine. limited to Mach .68 below 10,500 ft. Replaced in late 1947 by the Yak-17 (which did not handle as well). 280 built.

Yak-17:Available late 1947. RD10A engine (1,000 kg thrust, but heavier): use speeds in parentheses. Turn decel = 5-6-8-9. Quickly relegated to training. Phased out by 1951. 430 built.

66-gal FT: **Wgt**: 550 lbs **Ld**: 3.0/2.0 **End**: +20

Mikoyan-Guerevich MiG-13

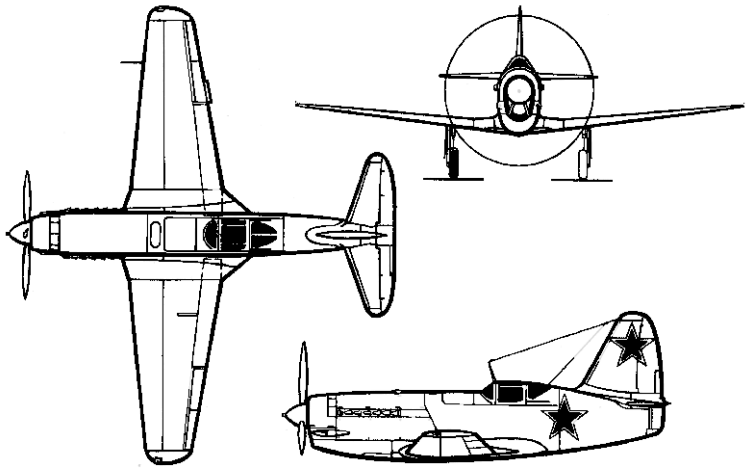
A/C Type: Jet/Prop hybrid Fighter
Engine(s): 1x VK-107A Inline + VDRK booster
Eng. Pwr: 1500-1650 hp, liq-cooled, plus 300 kg thrust booster
A/C Crew: Pilot

Maximum Speed: 451 mph at 25,600
513 at 25,600 w/ booster
Maximum Ceiling: 39,240 ft w/ booster
Defense factor: 5 Size Modifier: +0
Damage Factor: 10/15 Endurance: 240
Cockpit View: Poor Blind Area: Rear
Protection: Cockpit +1 Fuel +0 Engines +0

Climb Dece/ Dive Accel: 3.0 / 1.0
Weight and Load Limit: None

Wpn Stations	Weight	Allowed Loads

Country: USSR Service Entry Date: 1947



Class: F Victory Points: 3-6

AIRCRAFT PERFORMANCE CHART

Altitude Levels	Bands	Minimum Speed	Maximum Speed	Maximum Dive Spd	Min TT(5)	Min HT(6)	Min BT(7)	Min ET(8)	Altitude Levels	Bands	Average Rate of Climb
43+	UH	--	--	--	--	--	--	--	43+	UH	--
37-42	EH	3.5	-- / 8.5	11.0	5.5	7.0	8.5	10.0	37-42	EH	-- / 800
31-36	VH	3.0	7.0 / 9.5	11.0	5.0	6.5	8.0	9.0	31-36	VH	1,000 / 2,000
25-30	HI	2.5	7.5 / 9.5	11.0	4.5	6.0	7.0	8.0	25-30	HI	1,600 / 2,600
19-24	MH	2.5	7.5 / 10.0	11.0	4.0	5.5	6.5	7.5	19-24	MH	2,200 / 3,000
13-18	ML	2.0	7.5 / 9.5	11.0	3.5	4.5	5.5	6.5	13-18	ML	2,700 / 3,300
7-12	LO	2.0	8.0 / 8.5	9.5	3.0	4.0	5.0	6.0	7-12	LO	3,100 / 3,800
1-6	VL	2.0	6.5 / 8.0	9.0	3.0	3.5	4.5	5.5	1-6	VL	3,400 / 3,900

FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
N1	1x 20mm B-20 can. (hub)	6	2
N2	1x 20mm B-20 cannon	6	2
N3	1x 20mm B-20 cannon	6	2

GUN ATTACK FACTORS

Range	N1	N2	N3	Total
0	28	25	25	78
1	19	17	17	53
2	13	11	11	35
3	9	7	7	23
4	6	5	5	16
5	4	3	3	10
6	3	2	2	7
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	(2)	(2)	(1)	--	EH
31-36	VH	3/4 (+2)	1/2 (+1)	(1)	--	VH
25-30	HI	5/6 (+2)	3/4 (+1)	(1)	--	HI
19-24	MH	4/5 (+2)	2/3 (+1)	(1)	--	MH
13-18	ML	6/7 (+2)	4/5 (+1)	(1)	--	ML
7-12	LO	6/7 (+2)	4/5 (+1)	(1)	--	LO
1-6	VL	6/7 (+2)	4/5 (+1)	(1)	--	VL
Banking FPs		3	4	5	7	
Side Slip FPs		4	5	6	8	

NOTES AND VARIANTS

MiG-13 (I-250): A piston engine aircraft with a jet booster similar in concept to the US Ryan FR-1 Fireball. Prototypes prepared for the Nov-45 military parade, but all fly-bys were cancelled due to inclement weather. Its capabilities were rapidly over taken by full jets. The 24 production models were handed to the Soviet Navy Air Force (which was low on the list for jets) in May, 1948. Equipped one squadron near Riga.

VDRK booster: usable for 10 minutes (1 op turn or one combat). ENgine-driven compressor feeds air and fuel into a double walled mixing hcamber, boosting speed by 62 mph. Use max speeds to right of slash; add value in parentheses to accelleration. For example, at 15.0 at speed 6.0, accel w/ booster is 5/6; at speed 8.0, accel is 1.