

Mikoyan-Gurevich MiG-19



The Mikoyan-Gurevich MiG-19 was a day fighter and interceptor. Its NATO reporting name is Farmer.

Versions

MiG-19

The initial MiG-19 day fighter was significantly different in design from its predecessor, the MiG-17, as it had twin Mikulin RD-9 engines. It was the first Soviet production aircraft capable of supersonic speed in level flight. The initial versions were the only versions with a conventional (not an all-flying) tail. The armament was three 23mm NR-23 cannons, two in the wings and one under the nose. Its NATO reporting name is Farmer-A.

The MiG-19 entered service with the Soviet VVS in 1955.

MiG-19S and MiG-19SF

The MiG-19S was an improved version of the MiG-19. It incorporated an all-flying tail and updated avionics.

The early versions of the MiG-19S kept the armament of three 23 mm NR-23 guns used in the initial MiG-19, but later versions switched to three 30 mm NR-30 guns. The NR-30 has slightly better rate of fire and muzzle velocity compared to the NR-23 and fires a much heavier shell. To a large degree, it combines the dogfight characteristics of the NR-23 with the anti-bomber characteristics of the N-37.

The MiG-19SF has slightly more powerful engines, but is otherwise very similar to the late MiG-19S.

The NATO reporting name of the MiG-19S/SF is Farmer-C.

The MiG-19S was built under license in Czechoslovakia as the Aero S-105 and in China as the Shenyang J-6/F-6.

The MiG-19S entered service with the Soviet VVS in 1956. It later served with the Afghan Air Force, the Albanian Air Force, the Bulgarian Air Force, the Chinese PLAAF, the Czechoslovak Air Force, the East German Air Force, the Egyptian Air Force, the Indonesian Air Force, the Iraqi Air Force, and the Pakistan Air Force (in addition to Shenyang

F-6s).

MiG-19P

The MiG-19P was an all-weather interceptor. It was based on the MiG-19S, but had a modified nose and cockpit incorporating the RP-1 Izumrud (Scan Odd) radar and had only the guns in the wing roots. Again, the early versions had two 23 mm NR-23 guns, but later versions had two 30 mm NR-30 guns. In addition to underwing fuel tanks, it often carried two underwing rocket pods for use against bombers. Its NATO reporting name is Farmer-B.

The MiG-19P was built under license in China as the Shenyang J-6A.

The MiG-19P entered service with the Soviet PVO, VVS, and AV-MF in 1956. It later served with the Bulgarian Air Force, the Chinese PLAAF, the Czechoslovak Air Force, the Iraqi Air Force, the Polish Air Force, and the Romanian Air Force.

MiG-19PM

The MiG-19PM was also an all-weather interceptor. It was essentially a MiG-19P with the guns removed, provision for four Kaliningrad K-5 (AA-1 Alkali) beam-riding missiles, and the radar modified to support the missiles. Its NATO reporting name is Farmer-E.

The MiG-19PM was built under license and in China as the Shenyang J-6B.

The MiG-19PM entered service with the Soviet PVO in 1957. It later served with the Albanian Air Force, the Bulgarian Air Force, the Chinese PLAAF, the Czechoslovak Air Force, the East German Air Force, the Hungarian Air Force, the Iraqi Air Force, the Polish Air Force, and the Romanian Air Force.

Armament and Stores

The cannon-armed MiG-19s were equipped with either all 23 mm NR-23 or all 30 mm NR-30 cannons. Using homogeneous weapons was considered an improvement over the mixture of two 23 mm NR-23 and one 37 mm N-37 cannons in the MiG-15 and MiG-17, as the different calibers of these earlier guns had very different ballistic characteristics and so the shell streams diverged at long range.

Like most of its contemporaries, the MiG-19 suffered from short range on internal fuel, and this was mitigated by the use of under-wing 760L FTs.

The MiG-19 was potentially better suited to ground attack than the earlier MiG-15 or MiG-17, as it had four underwing stations and so could carry both FTs and air-to-ground

ordnance. However, this does not seem to have been exploited heavily except by the Pakistan Air Force. A typical air-to-ground load would be four ORO-57K RPs (on DRs) with a total of thirty-two 57 mm rockets along with two FTs.

Combat

A US reconnaissance flight was shot down by PVO MiG-19s in 1960. However, Soviet MiG-19s were not able to intercept U-2 overflights.

Egyptian MiG-19s were used for ground-attack missions in 1962 during the North Yemen Civil War. Egyptian and Syrian MiG-19s saw combat in the lead-up to and during the 1967 War. In Egyptian service, it also saw combat in the War of Attrition.

ADCs

- MiG-19S (Early)
- MiG-19S (Late)
- MiG-19SF
- MiG-19P (Early)
- MiG-19P (Late)
- MiG-19PM

See Also

- Shenyang J-6 and F-6

Photo Credit

- MiG-19: Revista Cer Senin Nr. 4/2016 (Public Domain)

MiG-19S (Early)										Crew: Pilot									
										Maneuver HFPs/DPs:									
LR/DR		1.0		1.0															
VR				0.5															
Power APs/DPs/FPs: ○○										Turn DPs:									
CL		1/2		DT		Fuel		CL		1/2		DT							
AB		3.5		3.0		2.5		5.0		TT		1.0		1.0		1.0			
M		2.5		2.0		2.0		2.0		HT		2.0		2.0		2.0			
N		0.0		0.0		0.0		1.0		BT		3.0		3.0		3.0			
I		0.5		0.5		0.5		0.0		ET		3.0		4.0		—			
SPBR		0.5		1.0		1.0		—											
					Cruise Speed: 5.5					Restr. Arcs: 60–									
					Climb Speed: 4.5					Blind Arcs: 30–									
					Visibility: 5					Internal Fuel: 180									
					Size: +0					AtA Refuel: No									
					Vulnerability: +1					Ejection Seat: Early									
Speeds and Ceilings										Climb Capabilities									
Alt.		Conf.		CL		1/2		DT		Dive		CL		1/2		DT		Alt.	
Band		Ceil.		58		53		48		Speed		AB Oth		AB Oth		AB Oth		Band	
EH+		46+		3.5 – 8.0		4.0 – 7.5		4.5 – 7.0		10.0		1.0 0.5		1.0 0.5		1.0 0.5		EH+	
VH		36–45		3.0 – 8.5		3.5 – 8.0		4.0 – 7.0		10.0		1.0 0.5		1.0 0.5		1.0 0.5		VH	
HI		26–35		3.0 – 9.0		3.0 – 8.0		3.0 – 7.5		10.0		2.0 0.5		1.0 0.5		1.0 0.5		HI	
MH		17–25		2.5 – 8.5		3.0 – 8.0		3.0 – 7.0		9.0		3.0 1.0		2.0 1.0		1.0 0.5		MH	
ML		8–16		2.5 – 7.5		2.5 – 7.0		2.5 – 6.5		8.5		4.0 2.0		3.0 1.0		2.0 1.0		ML	
LO		0–7		2.0 – 7.0		2.5 – 6.5		2.5 – 6.0		8.0		5.0 2.0		4.0 1.0		3.0 1.0		LO	

Radar:			—		ECM:		IFF		Weapon Stations Diagram:									
ECCM:			—		RWR:		A											
Arcs:			—		DDS:		—											
Search:			—		DJM:		—											
Track:			—		AJM:		—											
Lock-On:			—		BJM:		—											
Guns:			Three 23 mm NR-23			Technology:			Load Point Limits:					CL : 0–2				
To Hit:			5/3/2			None								1/2: 3–6				
Ammunition:			3.0						Weight Limit:					3,900 DT : 7+				
Gunsight:			TT+0/HT+2/BT+3						Station		Limit		Allowed Loads					
Ranging:			—						1 and 4		1,400		FT					
AtA/AtG:			5/5						2 and 3		550		BB RP RK DR					
Bomb System:			Manual						Load Notes:									
									1. May use 760L FTs on stations 1 and 4.									
									2. May use ORO-57K RPs on stations 2 and 3. From 1957, may use DRs each with two ORO-57K RPs on stations 2 and 3.									

<div><div>MiG-19S</div><div>(Late)</div><div><div>Power APs/DPs/FPs:</div><div><div>CL1/2DTFuel</div><div>AB3.53.02.55.0</div><div>M2.52.02.02.0</div><div>N0.00.00.01.0</div><div>I0.50.50.50.0</div><div>SPBR0.51.01.0—</div></div></div><div><div>Cruise Speed: 5.5</div><div>Restr. Arcs: 60–</div><div>Climb Speed: 4.5</div><div>Blind Arcs: 30–</div><div>Visibility: 5</div><div>Internal Fuel: 180</div><div>Size: +0</div><div>AtA Refuel: No</div><div>Vulnerability: +1</div><div>Ejection Seat: Early</div></div></div>						Crew: Pilot				
						Maneuver HFPs/DPs:				
						LR/DR1.01.0				
						VR0.5				
						Turn DPs:				
						CL1/2DT				
						TT1.01.01.0				
						HT2.02.02.0				
						BT3.03.03.0				
						ET3.04.0—				
Speeds and Ceilings						Climb Capabilities				
Alt. Band	Conf. Ceil.	CL 58	1/2 53	DT 48	Dive Speed	CL AB Oth	1/2 AB Oth	DT AB Oth	Alt. Band	
EH+	46+	3.5 – 8.0	4.0 – 7.5	4.5 – 7.0	10.0	1.0 0.5	1.0 0.5	1.0 0.5	EH+	
VH	36–45	3.0 – 8.5	3.5 – 8.0	4.0 – 7.0	10.0	1.0 0.5	1.0 0.5	1.0 0.5	VH	
HI	26–35	3.0 – 9.0	3.0 – 8.0	3.0 – 7.5	10.0	2.0 0.5	1.0 0.5	1.0 0.5	HI	
MH	17–25	2.5 – 8.5	3.0 – 8.0	3.0 – 7.0	9.0	3.0 1.0	2.0 1.0	1.0 0.5	MH	
ML	8–16	2.5 – 7.5	2.5 – 7.0	2.5 – 6.5	8.5	4.0 2.0	3.0 1.0	2.0 1.0	ML	
LO	0–7	2.0 – 7.0	2.5 – 6.5	2.5 – 6.0	8.0	5.0 2.0	4.0 1.0	3.0 1.0	LO	
<div><div>Radar:</div><div>ECCM:</div><div>Arcs:</div><div>Search:</div><div>Track:</div><div>Lock-On:</div></div> <div>— — — — — —</div>						<div><div>ECM:</div><div>RWR:</div><div>DDS:</div><div>DJM:</div><div>AJM:</div><div>BJM:</div></div> <div>IFF A — — — —</div>				
<div><div>Guns:</div><div>To Hit:</div><div>Ammunition:</div><div>Gunsight:</div><div>Ranging:</div><div>AtA/AtG:</div></div> <div>Three 30 mm NR-30 6/3/2 2.5 TT+0/HT+2/BT+3 — 6/9</div>						<div><div>Technology:</div><div>None</div></div>				
<div><div>Bomb System:</div><div>Manual</div></div>						<div><div>Weapon Stations Diagram:</div></div>				
<div><div>Notes:</div><div>1. The Mikoyan-Gurevich MiG-19S is a day fighter. It is an improved version of the original MiG-19 with an all-flying tail. This late variant has three 30 mm NR-30 cannons in place of the three 23 mm NR-23 cannons of the early version. The NATO reporting name for the aircraft is Farmer-C.</div><div>2. If a BT or ET is performed in the HI+ altitude bands, roll one die for each facing change after the first. On a 1 the aircraft suffers a maneuvering departure.</div></div>						<div><div>Load Point Limits:</div><div>CL : 0–2</div><div>1/2: 3–6</div><div>Weight Limit: 3,900</div><div>DT : 7+</div></div>				
						<div><div>Station</div><div>Limit</div><div>Allowed Loads</div><div>1 and 41,400 FT</div><div>2 and 3550 BB RP RK DR</div></div>				
						<div><div>Load Notes:</div><div>1. May use 760L FTs on stations 1 and 4.</div><div>2. May use ORO-57K RPs on stations 2 and 3. From 1957, may use DRs each with two ORO-57K RPs on stations 2 and 3.</div></div>				
						<div><div>VPs: 16/11/5/3</div><div>v1 00000000 0000-00-00T00:00:00</div></div>				

MiG-19P (Early)										Crew: Pilot									
										Maneuver HFPs/DPs:									
LR/DR		1.0		1.0															
VR				0.5															
Power APs/DPs/FPs: ○○										Turn DPs:									
CL		1/2		DT		Fuel		CL		1/2		DT							
AB		3.5		3.0		2.5		5.0		TT		1.0		1.0		1.0			
M		2.5		2.0		2.0		2.0		HT		2.0		2.0		2.0			
N		0.0		0.0		0.0		1.0		BT		3.0		3.0		3.0			
I		0.5		0.5		0.5		0.0		ET		3.0		4.0		—			
SPBR		0.5		1.0		1.0		—											
					Cruise Speed: 5.5					Restr. Arcs: 60–									
					Climb Speed: 4.5					Blind Arcs: 30–									
					Visibility: 5					Internal Fuel: 180									
					Size: +0					AtA Refuel: No									
					Vulnerability: +1					Ejection Seat: Early									
Speeds and Ceilings										Climb Capabilities									
Alt. Band		Conf. Ceil.		CL 58		1/2 53		DT 48		Dive Speed		CL AB Oth		1/2 AB Oth		DT AB Oth		Alt. Band	
EH+		46+		3.5 – 8.0		4.0 – 7.5		4.5 – 7.0		10.0		1.0 0.5		1.0 0.5		1.0 0.5		EH+	
VH		36–45		3.0 – 8.5		3.5 – 8.0		4.0 – 7.0		10.0		1.0 0.5		1.0 0.5		1.0 0.5		VH	
HI		26–35		3.0 – 9.0		3.0 – 8.0		3.0 – 7.5		10.0		2.0 0.5		1.0 0.5		1.0 0.5		HI	
MH		17–25		2.5 – 8.5		3.0 – 8.0		3.0 – 7.0		9.0		3.0 1.0		2.0 1.0		1.0 0.5		MH	
ML		8–16		2.5 – 7.5		2.5 – 7.0		2.5 – 6.5		8.5		4.0 2.0		3.0 1.0		2.0 1.0		ML	
LO		0–7		2.0 – 7.0		2.5 – 6.5		2.5 – 6.0		8.0		5.0 2.0		4.0 1.0		3.0 1.0		LO	

Radar:		RP-1 Izumrud		ECM:		IFF		Weapon Stations Diagram:																					
ECCM:		0		RWR:		A																							
Arcs:		Limited		DDS:		—																							
Search:		18–6		DJM:		—																							
Track:		6–6		AJM:		—																							
Lock-On:		7		BJM:		—																							
Guns:		Two 23 mm NR-23		Technology:		None		Load Point Limits:										CL : 0–2											
To Hit:		4/2/1												1/2: 3–6															
Ammunition:		3.0		Weight Limit:										3,900		DT : 7+													
Gunsight:		TT+0/HT+2/BT+3		Station										Limit		Allowed Loads													
Ranging:		RE		1 and 6										200		IRM													
AtA/AtG:		4/3*		2 and 5										1,400		FT													
Bomb System:		Manual		3 and 4										550		BB RP RK DR													
Notes:		1. The MiG-19P is an interceptor. It is similar from the MiG-19S day fighter, but has the RP-1 Izumrud radar and omits the gun under the fuselage. This early variant has two 23 mm NR-23 cannons. The NATO reporting name for the aircraft is Farmer-B and for the radar is Scan Odd. 2. If a BT or ET is performed in the HI+ altitude bands, roll one die for each facing change after the first. On a 1 the aircraft suffers a maneuvering departure.										Load Notes:																	
												1. May use 760L FTs on stations 1 and 4.																	
												2. May use ORO-57K RPs on stations 2 and 3. From 1957, may use DRs each with two ORO-57K RPs on stations 2 and 3.																	
												3. From 1961, may use AA-2 IRMs.																	
										VPs: 16/11/5/3										v1 0000000 0000-00-00T00:00:00									

MiG-19P (Late)									Crew: Pilot				
									Maneuver HFPs/DPs:				
LR/DR		1.0	1.0										
VR			0.5										
Power APs/DPs/FPs: ○○				Turn DPs:									
CL	1/2	DT	Fuel		CL	1/2	DT						
AB	3.5	3.0	2.5	5.0	TT	1.0	1.0	1.0					
M	2.5	2.0	2.0	2.0	HT	2.0	2.0	2.0					
N	0.0	0.0	0.0	1.0	BT	3.0	3.0	3.0					
I	0.5	0.5	0.5	0.0	ET	3.0	4.0	—					
SPBR	0.5	1.0	1.0	—									
					Cruise Speed: 5.5	Restr. Arcs: 60–							
					Climb Speed: 4.5	Blind Arcs: 30–							
					Visibility: 5	Internal Fuel: 180							
					Size: +0	AtA Refuel: No							
					Vulnerability: +1	Ejection Seat: Early							
Speeds and Ceilings						Climb Capabilities							
Alt. Band	Conf. Ceil.	CL 58		1/2 53	DT 48	Dive Speed	CL AB Oth		1/2 AB Oth		DT AB Oth		Alt. Band
EH+	46+	3.5 – 8.0		4.0 – 7.5	4.5 – 7.0	10.0	1.0	0.5	1.0	0.5	1.0	0.5	EH+
VH	36–45	3.0 – 8.5		3.5 – 8.0	4.0 – 7.0	10.0	1.0	0.5	1.0	0.5	1.0	0.5	VH
HI	26–35	3.0 – 9.0		3.0 – 8.0	3.0 – 7.5	10.0	2.0	0.5	1.0	0.5	1.0	0.5	HI
MH	17–25	2.5 – 8.5		3.0 – 8.0	3.0 – 7.0	9.0	3.0	1.0	2.0	1.0	1.0	0.5	MH
ML	8–16	2.5 – 7.5		2.5 – 7.0	2.5 – 6.5	8.5	4.0	2.0	3.0	1.0	2.0	1.0	ML
LO	0–7	2.0 – 7.0		2.5 – 6.5	2.5 – 6.0	8.0	5.0	2.0	4.0	1.0	3.0	1.0	LO

Radar:	RP-1 Izumrud	ECM:	IFF	Weapon Stations Diagram:	
ECCM:	0	RWR:	A		
Arcs:	Limited	DDS:	—	Load Point Limits: Weight Limit: 3,900	
Search:	18–6	DJM:	—		
Track:	6–6	AJM:	—		
Lock-On:	7	BJM:	—		
Guns: Two 30 mm NR-30		Technology:			
To Hit:	5/3/1	None		CL : 0–2	
Ammunition:	2.5			1/2: 3–6	
Gunsight:	TT+0/HT+2/BT+3			DT : 7+	
Ranging:	RE			Station	
AtA/AtG:	5/6			Limit	
Bomb System:	Manual			Allowed Loads	
Notes: 1. The MiG-19P is an interceptor. It is similar from the MiG-19S day fighter, but has the RP-1 Izumrud radar and omits the gun under the fuselage. This late variant has two 30 mm NR-30 cannons in place of the two 23 mm NR-23 cannons of the early version. The NATO reporting name for the aircraft is Farmer-B and for the radar is Scan Odd. 2. If a BT or ET is performed in the HI+ altitude bands, roll one die for each facing change after the first. On a 1 the aircraft suffers a maneuvering departure.				1 and 6	
				200	
				IRM	
				2 and 5	
				1,400	
FT					
3 and 4					
550					
BB RP RK DR					
Load Notes:					
				1. May use 760L FTs on stations 1 and 4.	
				2. May use ORO-57K RPs on stations 2 and 3. From 1957, may use DRs each with two ORO-57K RPs on stations 2 and 3.	
				3. From 1961, may use AA-2 IRMs.	
VPs: 16/11/5/3				v1 0000000 0000-00-00T00:00:00	

MiG-19PM										Crew: Pilot									
										Maneuver HFPs/DPs:									
LR/DR		1.0		1.0															
VR				0.5															
Power APs/DPs/FPs: ○○										Turn DPs:									
CL		1/2		DT		Fuel		CL		1/2		DT							
AB		3.5		3.0		2.5		5.0		TT		1.0		1.0		1.0			
M		2.5		2.0		2.0		2.0		HT		2.0		2.0		2.0			
N		0.0		0.0		0.0		1.0		BT		3.0		3.0		3.0			
I		0.5		0.5		0.5		0.0		ET		3.0		4.0		—			
SPBR		0.5		1.0		1.0		—											
					Cruise Speed: 5.5 Restr. Arcs: 60–														
					Climb Speed: 4.5 Blind Arcs: 30–														
					Visibility: 5 Internal Fuel: 180														
					Size: +0 AtA Refuel: No														
					Vulnerability: +1 Ejection Seat: Early														
Speeds and Ceilings										Climb Capabilities									
Alt. Band		Conf. Ceil.		CL 58		1/2 53		DT 48		Dive Speed		CL AB Oth		1/2 AB Oth		DT AB Oth		Alt. Band	
EH+		46+		3.5 – 8.0		4.0 – 7.5		4.5 – 7.0		10.0		1.0 0.5		1.0 0.5		1.0 0.5		EH+	
VH		36–45		3.0 – 8.5		3.5 – 8.0		4.0 – 7.0		10.0		1.0 0.5		1.0 0.5		1.0 0.5		VH	
HI		26–35		3.0 – 9.0		3.0 – 8.0		3.0 – 7.5		10.0		2.0 0.5		1.0 0.5		1.0 0.5		HI	
MH		17–25		2.5 – 8.5		3.0 – 8.0		3.0 – 7.0		9.0		3.0 1.0		2.0 1.0		1.0 0.5		MH	
ML		8–16		2.5 – 7.5		2.5 – 7.0		2.5 – 6.5		8.5		4.0 2.0		3.0 1.0		2.0 1.0		ML	
LO		0–7		2.0 – 7.0		2.5 – 6.5		2.5 – 6.0		8.0		5.0 2.0		4.0 1.0		3.0 1.0		LO	

Radar:			RP-1 Izumrud			ECM:			IFF			Weapon Stations Diagram:					
ECCM:			0			RWR:			A								
Arcs:			Limited			DDS:			—								
Search:			18–6			DJM:			—								
Track:			6–6			AJM:			—								
Lock-On:			7			BJM:			—								
Guns:			—			Technology:			None			Load Point Limits:					
To Hit:			—									CL : 0–2					
Ammunition:			—									1/2: 3–6					
Gunsight:			TT+0/HT+2/BT+3									Weight Limit: 3,900					
Ranging:			RE									DT : 7+					
AtA/AtG:			—														
Bomb System:			Manual									Station Limit Allowed Loads					
Notes: 1. The MiG-19PM is an interceptor. It is a development of the MiG-19P with AA-1 missiles replacing the cannons. The NATO reporting name for the aircraft is Farmer-E and for the radar is Scan Odd. 2. If a BT or ET is performed in the HI+ altitude bands, roll one die for each facing change after the first. On a 1 the aircraft suffers a maneuvering departure.						1 and 6 1,400 FT											
						2–3 and 4–5 200 BRM RHM											
						Load Notes:											
						1. May use 760L FTs on stations 1 and 6.											
						2. May use AA-1 BRMs and RHMs.											
						VPs: 16/11/5/3						v1 0000000 0000-00-00T00:00:00					