# Bloch MB.152C.1

A/C Type: Short range day fighter

One Rhone-Gnome 14N-25 radial Engine(s): Eng. Pwr: 1050 hp, air-cooled, Non-F.I.

A/C Crew:

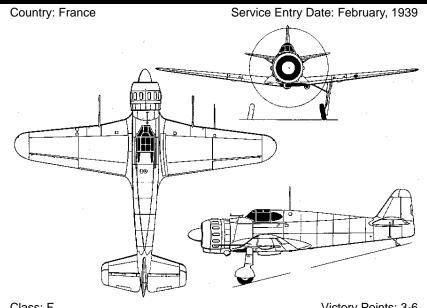
Maximum Speed: 319 mph at 13,100 ft

Maximum Ceiling: 32,800 ft.

Defense factor: Size Modifier: +0 Damage Factor: 7/11 Endurance: 105 Cockpit View: Fair Blind Area: Rear

Protection: Cockpit +0 Fuel +0 Engine +0 Climb Dece/ Dive Accel: 3.0 / 1.0Weight and Load Limit: None

Wpn Stations **Weight Allowed Loads** 



Class: F Victory Points: 3-6

# AIRCRAFT PERFORMANCE CHART

Altit	ude	Minimum	Maximum	Maximum	Min	Min	Min	Min	Altitu	de	Average
Levels	Bands	Speed	Speed	Dive Spd	TT(4)	HT(5)	BT(6)	ET(7)	Levels	Bands	Rate of Climb
43+	UH								43+	UH	
37-42	EH								37-42	EH	
31-36	VH	3.0	5.5	9.5	5.0	6.5	7.5	8.5	31-36	VH	300
25-30	HI	2.5	6.0	9.5	4.5	6.0	7.0	8.0	25-30	HI	600
19-24	MH	2.5	6.0	9.5	4.0	5.5	6.5	7.5	19-24	MH	1000
13-18	ML	2.0	6.5	10.0	4.0	5.0	6.0	7.0	13-18	ML	1400
7-12	LO	2.0	6.0	9.0	3.5	4.5	5.5	6.5	7-12	LO	1600
1-6	VL	1.5	5.0	7.5	3.5	4.5	5.5	6.0	1-6	VL	1800

#### **FIRE POWER CHART**

Guns	Type Weapons	Ammo	Criticals
W1	One 20mm HS404	3	2
W2	One 20mm HS404	3	2
W3	One 7.5mm MAC34 mg	9	4
W4	One 7.5mm MAC34 mg	9	4

#### **GUN ATTACK FACTORS**

Range	W1	W2	W3	W4	Total
0	22	22	5	5	54
1	16	16	4	4	40
2	11	11	3	3	28
3	7	7	2	2	18
4	5	5	1	1	12
5	4	4	1	1	10
6	3	3			6
7					

# WEAPON STATION LOCATION

# **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	1	1			VH
25-30	HI	2	1			HI
19-24	MH	3	1			MH
13-18	ML	5	2			ML
7-12	LO	7	4			LO
1-6	VL	7	4			VL
Bankir	ng FPs	2	3	5	6	
Side S	lip FPs	3	5	6	7	

## **NOTES AND VARIANTS**

Bloch MB.152: A lack-luster aircraft clearly inferior to the Bf-109E. 94 available in May 40; another 150 available before surrender. Full production about 500 aircraft. Engine is canted slightly right to overcome torque. If a/c uses max level or dive speed or full accel (any combination) for 4 consecutive turns, treat as 1st Coolant hit crit. Ring & Bead backup sight.

Numbers 201+ had a slightly upgraded engine (Gnome-Rhone 14N-49): +200 roc, -10 endurance. HS404 jams on 10+ for any attack.

Bloch MB-151: Available May 38. Armed with 4x7.5mm. Roc +200. Add 1 to power up to MH. 85 built. 9 served in Greece. Replace weapons with W1 and W2: 6/4/3/2/1/1/-/- each; total = 24/16/12/8/4/4/-/-. No gunsight fitted; use telescopic sight in Greek service.

MB.151s and MB.152s given to Rumania after fall of France.

# **Dewotine D.510 C1**

A/C Type: Day fighter

Engine(s): One Hispano-Suiza 12 Ycrs 12 Cyl Eng. Pwr: 860 hp, liquid-cooled, Non-F.I.

A/C Crew: Pilot

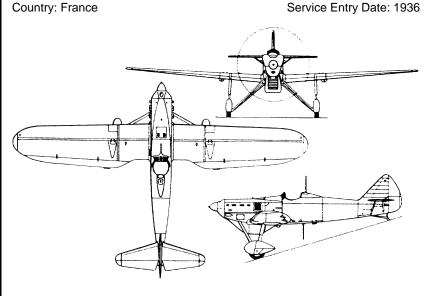
Maximum Speed: 244 mph at 15,750 ft

Maximum Ceiling: 34,400 ft.

Defense factor: 5 Size Modifier: +0
Damage Factor: 6/9 Endurance: 120
Cockpit View: Fair Blind Area: Rear

Protection: Cockpit +0 Fuel +0 Engine +0 Climb Dece/ Dive Accel: 3.0 / 1.0 Weight and Load Limit: None

Wpn Stations Weight Allowed Loads



Class: F Victory Points: 3-5

#### AIRCRAFT PERFORMANCE CHART

Altit Levels	ude Bands	Minimum Speed	Maximum Speed	Maximum Dive Spd	Min TT(3)	Min HT(4)	Min BT(5)	Min ET(6)	Altitu Levels	de Bands	Average Rate of Climb
43+	UH								43+	UH	
37-42	EH								37-42	EH	
31-36	VH	2.5	4.0	8.0	4.5	6.0	7.0	8.0	31-36	VH	300
25-30	HI	2.0	4.0	8.0	4.0	5.5	6.5	7.5	25-30	HI	700
19-24	MH	2.0	4.5	8.0	3.5	5.0	6.0	7.0	19-24	MH	1,100
13-18	ML	1.5	5.0	8.5	3.0	4.0	5.0	6.0	13-18	ML	1,600
7-12	LO	1.5	4.5	8.0	2.5	3.5	4.5	5.5	7-12	LO	2,100
1-6	VL	1.5	4.0	7.5	2.5	3.0	4.0	5.0	1-6	VL	2,400

#### **FIRE POWER CHART**

Guns	Type Weapons	Ammo	Criticals
N1	One 20mm HS9 cannon	4	2
W1	One 7.5mm Darné mg	7	4
W2	One 7.5mm Darné mg	7	4

#### **GUN ATTACK FACTORS**

Range	N1	W1	W2	Total
0	16	5	5	26
1	11	4	4	19
2	7	3	3	13
3	5	2	2	9
4	4	1	1	6
5	3	1	1	5
6	2			2
7				

# WEAPON STATION LOCATION

# **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	1				VH
25-30	HI	1				HI
19-24	MH	3				MH
13-18	ML	5	2			ML
7-12	LO	6				LO
1-6	VL	6				VL
Bankir	ng FPs	2	3	5		
Side S	lip FPs	3	4	6		

## **NOTES AND VARIANTS**

**D.510C.1:** Available September 1936. Pre-war french fighter. Maneuverable and well-armed (cannon were rare in 1936), armed with a 20mm cannon firing through the propellor hub. 90 Built for Armée de l'Air, 30 for Aeronavale. 36 sold to Turkey; 24 sold to China (saw action in 1938). A handful sold to Latvia turned up in the Spanish Republican Air Force. By September 1939, still equipped 3 Groupes de Chasse in France. By May, 1940, a few were left serving in reserve defense squadrons (ERCs) and 3 Groupes in North Africa. Open Cockpit, fixed gear. Telescopic gunsight: +2 to all non-rear shots.

**D.501**: Available July 1935. Smaller engine: -1 power (but not less than 1); -.5 Max Speed, -200 RoC. 14 sold to Lithuania. Open cockpit, fixed gear. Telescopic gunsight: +2 to all non-rear shots.

# **Morane-Soulanier MS.410**

A/C Type: Day fighter

Engine(s): One Hispano-Suiza 12Y31
Eng. Pwr: 830-860 hp, Liquid-cooled, No F.I.

A/C Crew: Pilot

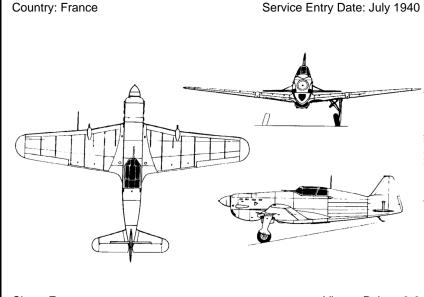
Maximum Speed: 304 mph at 14,700 ft Maximum Ceiling: 32,820 ft./26,900 ft

Defense factor: 5 Size Modifier: +0
Damage Factor: 7/10 Endurance: 100
Cockpit View: Fair Blind Area: Rear

Protection: Cockpit +0 Fuel +0 Engine +0 Climb Dece/ Dive Accel: 3.0 / 1.0

Weight and Load Limit: 630 / 2
Won Stations Weight Allowed I

Wpn StationsWeight<br/>315Allowed Loads<br/>32-gal drop tank



Class: F Victory Points: 3-6

## AIRCRAFT PERFORMANCE CHART

Altit	ude	Minimum	Maximum	Maximum	Min	Min	Min	Min	Altitu	ide	Average
Levels	Bands	Speed	Speed	Dive Spd	TT(3)	HT(4)	BT(5)	ET(6)	Levels	Bands	Rate of Climb
43+	UH								43+	UH	
37-42	EH								37-42	EH	
31-36	VH	2.5	5.0	9.0	4.0	5.5	6.5	7.5	31-36	VH	300
25-30	HI	2.5	5.5	9.5	3.5	5.0	6.0	7.0	25-30	HI	600
19-24	MH	2.0	5.5	9.5	3.0	4.5	5.5	6.0	19-24	MH	1,300
13-18	ML	2.0	6.0	9.5	3.0	4.0	5.0	5.5	13-18	ML	1,900
7-12	LO	2.0	5.5	8.5	2.5	3.5	4.5	5.5	7-12	LO	2,600
1-6	VL	1.5	5.0	7.5	2.5	3.5	4.0	5.0	1-6	VL	3,300

#### **FIRE POWER CHART**

Guns	Type Weapons	Ammo	Criticals
N1	One 20mm HS404	3	2
W1	Two 7.5mm MAC34 1939	12	4
W2	Two 7.5mm MAC34 1939	12	4

#### **GUN ATTACK FACTORS**

Range	N1	W1	W2	Total
0	22	10	10	42
1	16	8	8	32
2	11	6	6	23
3	7	4	4	15
4	5	3	3	11
5	4	2	2	8
6	3			3
7				

#### WEAPON STATION LOCATION

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	1				VH
25-30	HI	2	1			HI
19-24	MH	3	1			MH
13-18	ML	5	2			ML
7-12	LO	6	3			LO
1-6	VL	6	3			VL
Bankii	ng FPs	2	3	4	6	
Side S	Slip FPs	2	3	5	7	

**POWER VERSUS SPEED CHART** 

## **NOTES AND VARIANTS**

**MS.410**: Available July 1940. Post-occupation development with 2 belt-fed MAC34 1939 MGs in each wing. Wing structure strengthened. Updated wing to be included on each MS.406 repaired after being sent to a central repair point. 79 repairs were started before 25-Jun-40. Vichy France fielded 70; Finland 9. Several of the Vichy MS.410s ended up with the Croatian Air Force after November 1942, along with 36 MS.406s.

Semi-Retractable Radiator: To reach max speed, a/c must retract its radiator (takes one game turn), else max speed is listed-0.5. After 10 turns with radiator retracted, roll die after any turn power > cruise used. If result ≤2, engine overheats (treat as temporary coolant critical). Engine returns to normal temp 10 min. after radiator re-extended.

**32-gal FT**: **Wgt**: 315 lbs. **Ld**: 2

**Ld**: 2.0/1.5 **End**: +35 each

2

1

# **Potez 631C.2**

A/C Type: Heavy fighter

Engine(s): Two Hispano-Suiza 14AB radial Eng. Pwr: 2x725 hp, air-cooled, Non-F.I.

A/C Crew: Pilot, gunner

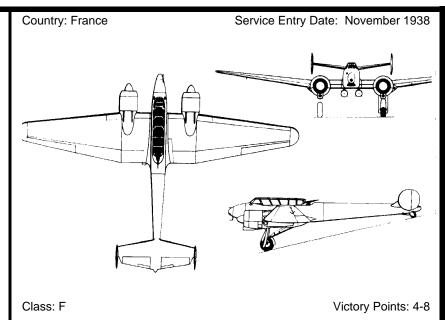
Maximum Speed: 273 mph at 15000

Maximum Ceiling: 32,800 ft.

Defense factor: 5 Size Mod: +0
Damage Factor: 13/20 Endurance: 205
Cockpit View: Fair Blind Area: Rear,low

Protection: Cockpit +0 Fuel +0 Engine +0 Climb Dece/ Dive Accel: 3.0 / 1.0 Weight and Load Limit: None

Wpn Stations Weight Allowed Loads



# AIRCRAFT PERFORMANCE CHART

Altit	ude	Minimum	Maximum	Maximum	Min	Min	Min	Min	Altitu	ide	Average
Levels	Bands	Speed	Speed	Dive Spd	TT(3)	HT(4)	BT(5)	ET(6)	Levels	Bands	Rate of Climb
43+	UH								43+	UH	
37-42	EH								37-42	EH	
31-36	VH	3.0	4.5	8.5	4.0	4.5	6.5	8.0	31-36	VH	300
25-30	HI	3.0	5.0	9.0	3.5	4.5	6.0	7.5	25-30	HI	600
19-24	MH	2.5	5.5	9.0	3.5	4.0	5.5	7.0	19-24	MH	900
13-18	ML	2.5	5.5	9.0	3.0	4.0	5.0	6.5	13-18	ML	1200
7-12	LO	2.0	5.5	8.5	3.0	3.5	4.5	6.0	7-12	LO	1500
1-6	VL	2.0	5.0	8.0	2.5	3.5	4.5	5.5	1-6	VL	1800

#### **FIRE POWER CHART**

Guns	Type Weapons	Ammo	Criticals
N1	Two 20mm HS404	3	2
W1	One 7.5mm MAC34 mg	9	4
W2	Two 7.5mm MAC34 mg	9	4
W3	Two 7.5mm MAC34 mg	9	4
W4	One 7.5mm MAC34 mg	9	4
DG	One/two 7.5mm MAC34	(2x3)	4

#### **GUN ATTACK FACTORS**

Rng	N1	W1	W2	W3	W4	DG	Total
0	44	5	11	11	5	6/12	76
1	32	4	8	8	4	4/8	58
2	22	3	6	6	3	3/5	40
3	14	2	4	4	2	2/3	26
4	10	1	3	3	1	1/2	18
5	8	1	2	2	1	1	16
6	6						6
7							

# WEAPON STATION LOCATION

# 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	1.0				VH
25-30	HI	1.5	.5			HI
19-24	MH	2	1			MH
13-18	ML	3.0	1.5			ML
7-12	LO	3.5	2.0			LO
1-6	VL	3.5	2.0			VL
Bankir	ng FPs	3	4	6	8	
Side S	lip FPs	3	5	7	9	

## **NOTES AND VARIANTS**

DG: Rear, level to high

**Potez 630**: Available February, 1938. Potez 630 series was a multi-purpose platform. Prototype built in quantity (80). Similar to 631, but with only 20mm cannon. Crew includes radio operator. Endurance = 250. Retired in winter 1940 as other fighters became available. Problematic engines - +1 toward "aircraft aborts" for take-off attrition rolls.

**Potez 631**: 210 built. W1-W4 available after February, 1940. Armed 5 night-fighter and two naval fighter squadrons. On roll of 7+, DG is twin MAC34; use DG values to the right of the slash.

HS404 jams on 10+ for any attack.

# Caudron C.714 "Cyclone"

A/C Type: Short range day fighter
Engine(s): One Renault 12 Rol radial
Eng. Pwr: 450 hp, air-cooled, Non-F.I.

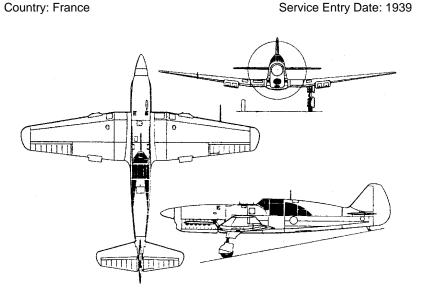
A/C Crew: Pilot

Maximum Speed: 302 mph Maximum Ceiling: 29,700 ft.

Defense factor: 5 Size Modifier: +0
Damage Factor: 5/8 Endurance: 148
Cockpit View: Fair Blind Area: Rear

Protection: Cockpit +0 Fuel +0 Engine +0 Climb Dece/ Dive Accel: 3.0 / 1.0 Weight and Load Limit: None

Wpn Stations Weight Allowed Loads



Class: F Victory Points: 3-5

# AIRCRAFT PERFORMANCE CHART

Altit	ude	Minimum	Maximum	Maximum	Min	Min	Min	Min	Altitu	de	Average
Levels	Bands	Speed	Speed	Dive Spd	TT(4)	HT(5)	BT(6)	ET(7)	Levels	Bands	Rate of Climb
43+	UH								43+	UH	
37-42	EH								37-42	EH	
31-36	VH								31-36	VH	
25-30	HI	2.5	5.0	8.5	4.0	5.0	6.0	7.0	25-30	HI	300
19-24	MH	2.5	5.5	8.5	3.5	4.5	5.5	6.5	19-24	MH	800
13-18	ML	2.0	5.5	9.0	3.0	4.0	5.0	6.0	13-18	ML	1300
7-12	LO	1.5	6.0	9.0	2.5	3.5	4.5	5.5	7-12	LO	1800
1-6	VL	1.0	5.5	8.0	2.5	3.0	4.0	5.0	1-6	VL	2100

# **FIRE POWER CHART**

Guns	Type Weapons	Ammo	Criticals
W1	Two 7.5mm MAC34 mg	12	4
W2	Two 7.5mm MAC34 mg	12	4

#### **GUN ATTACK FACTORS**

Rng	W1	W2	Total
0	11	11	22
1	8	8	16
2	6	6	12
3	4	4	8
4	3	3	6
5	2	2	4
6			
7			

# WEAPON STATION LOCATION

# **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	1				HI
19-24	MH	2	1			MH
13-18	ML	4	1			ML
7-12	LO	5	3			LO
1-6	VL	5	3			VL
Bankir	ng FPs	2	3	4	5	
	lip FPs	3	5	7	9	

## **NOTES AND VARIANTS**

**C.714 Cyclone:** Light fighter developed from C.710 racer. Built mostly of wood to preserve strategic materials. Not stressed for combat, underarmed, and lacking in climb speed, it was not very successful. Only 98 of the initial order were accepted. Ring and Bead backup sight.

50 assigned to Finland - of which only 6 were delivered accepted by the Finns before the end of the Winter War.

About 40 were delivered to l'Armee de l'Air assigned to Free Polish units serving in France in late May-early June, 1940.

# **Arsenal VG.33**

A/C Type: Day fighter

Engine(s): One Hispano Suiza Y-31 V-12 Eng. Pwr: 860 hp, liquid-cooled, Non-F.I.

A/C Crew: Pilot

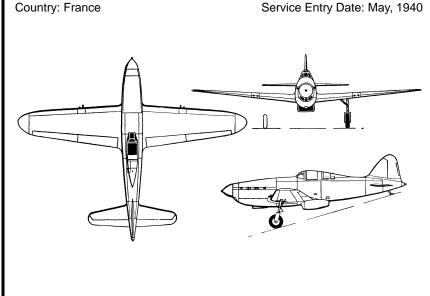
Maximum Speed: 347 mph at 17,060 ft.

Maximum Ceiling: 36,090 ft.

Defense factor: 5 Size Modifier: +0
Damage Factor: 6/9 Endurance: 170
Cockpit View: Fair Blind Area: Rear, Low

Protection: Cockpit +0 Fuel +0 Engine +0 Climb Dece/ Dive Accel: 3.0 / 1.0 Weight and Load Limit: 500 / 2-3

Wpn StationsWeightAllowed Loads1,220022-gal FT



Class: F Victory Points: 3-6

# AIRCRAFT PERFORMANCE CHART

Altit	ude	Minimum	Maximum	Maximum	Min	Min	Min	Min	Altitu	ide	Average
Levels	Bands	Speed	Speed	Dive Spd	TT(3)	HT(4)	BT(5)	ET(6)	Levels	Bands	Rate of Climb
43+	UH								43+	UH	
37-42	EH								37-42	EH	
31-36	VH	3.0	5.5	9.5	4.5	6.0	7.0	8.0	31-36	VH	400
25-30	HI	2.5	6.0	10.0	4.0	5.5	6.5	7.5	25-30	HI	800
19-24	MH	2.5	6.5	10.0	3.5	5.0	6.0	7.0	19-24	MH	1,100
13-18	ML	2.0	7.0	10.0	3.0	4.5	5.5	6.5	13-18	ML	1600
7-12	LO	2.0	6.5	9.5	3.0	4.0	5.0	6.0	7-12	LO	1900
1-6	VL	2.0	6.0	8.5	2.5	3.0	4.0	5.0	1-6	VL	2100

# **FIRE POWER CHART**

Guns	Type Weapons	Ammo	Criticals
W1	One 20mm HS404	3	2
W2	Two 7.5mm MAC34 1939	12	4
W3	Two 7.5mm MAC34 1939	12	4
W4	One 20mm HS404	3	2

#### **GUN ATTACK FACTORS**

Range	W1	W2	W3	W1	Total
0	22	6	6	22	56
1	16	4	4	16	40
2	11	3	3	11	28
3	7	2	2	7	18
4	5	1	1	5	12
5	4	1	1	4	10
6	3			3	6
7					

# WEAPON STATION LOCATION

# **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	6	3			ML
7-12	LO	6	3			LO
1-6	VL	6	3			VL
Banking FPs		2	2	4	6	
Side Slip FPs		2	3	5	7	

## **NOTES AND VARIANTS**

**Arsenal VG-33**: One of the four designs for a replacement for the MS.406 (another was the D.520). 200 of the all-wood aircraft were ordered at the time of the Munich crisis. Of the 160 in various states of assembly, only 12 could be flown out of the Occupied Zone. They were placed in storage by the Vichy Air Force and discovered by the Germans in November, 1942. Could use attached 22-gal tanks on each wing. Hydraulic flaps.

HS404 jams on 10+ for any attack.

**22-gal fixed FT**: Wgt: 175 lb. Ld: 1.5/1.0 End: +30 each

1 2