

# Heinkel He70F-2

Country: Germany

Service Entry Date: 1935

A/C Type: Lt Bomber / recon  
 Engine(s): One BMW VI 7.3 V-12 in-line  
 Eng. Pwr: 750 hp, liquid-cooled, Non-F.I.  
 A/C Crew: Pilot, Nav/bombadier  
 Radio Op/Gunner

Maximum Speed: 224 mph at 11,155 ft  
 Maximum Ceiling: 17,800 ft.

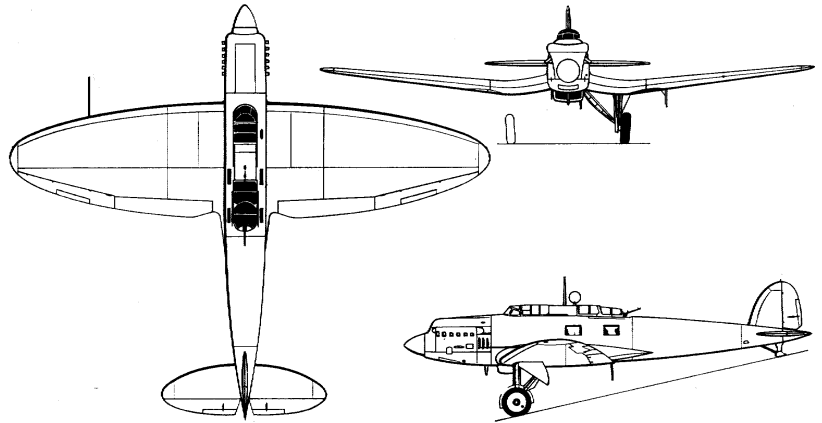
Defense factor: 5 Size Modifier: +0  
 Damage Factor: 7/11 Endurance: 110  
 Cockpit View: Poor Blind Area: Rear, low

Protection: Cockpit +0 Fuel +0 Engine +0

Climb Dece/ Dive Accel: 2.0 / 1.0

Weight and Load Limit: 660 / 3-5

Wpn Stations      Weight    Allowed Loads  
 660 lbs            6x 50 kg bombs or  
                          24x 10 kg



Class: L

Victory Points: 3-5

## AIRCRAFT PERFORMANCE CHART

Altitude		Minimum Speed	Maximum Speed	Maximum Dive Spd	Min TT(2)	Min HT(3)	Min BT(4)	Min ET(5)	Altitude		Average Rate of Climb
Levels	Bands								Levels	Bands	
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	--	--	--	--	--	--	--	19-24	MH	--
13-18	ML	2.0	4.0	7.5	2.5	3.5	4.5	5.5	13-18	ML	900
7-12	LO	1.5	4.5	7.5	2.0	3.0	4.0	5.0	7-12	LO	1,200
1-6	VL	1.5	4.0	6.5	2.0	2.5	3.5	4.5	1-6	VL	1,300

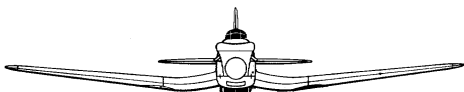
## FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
DG	One 7.92mm MG15 mg	3x3	4

## GUN ATTACK FACTORS

Range	DG
0	4
1	3
2	2
3	1
4	1
5	1
6	--
7	--

## WEAPON STATION LOCATION



1

## 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	--	--	--	--	MH
13-18	ML	3	--	--	--	ML
7-12	LO	4	--	--	--	LO
1-6	VL	4	--	--	--	VL
Banking FPs		3	4	5	--	
Side Slip FPs		3	5	6	--	

## NOTES AND VARIANTS

### Defensive Gun Coverage

DG: Rear, level-high. 6:00-line high only.

**Heinkel He70:** Line of light/recon bombers developed from a 4-passenger high speed transport. First "modern" bomber in Luftwaffe. Used an elliptical wing similar to that of the He111. Not liked by crews who were used to slower but more maneuverable aircraft. 265 He70E and F models built.

**He70E-1:** Available 1934. First production version. few built.

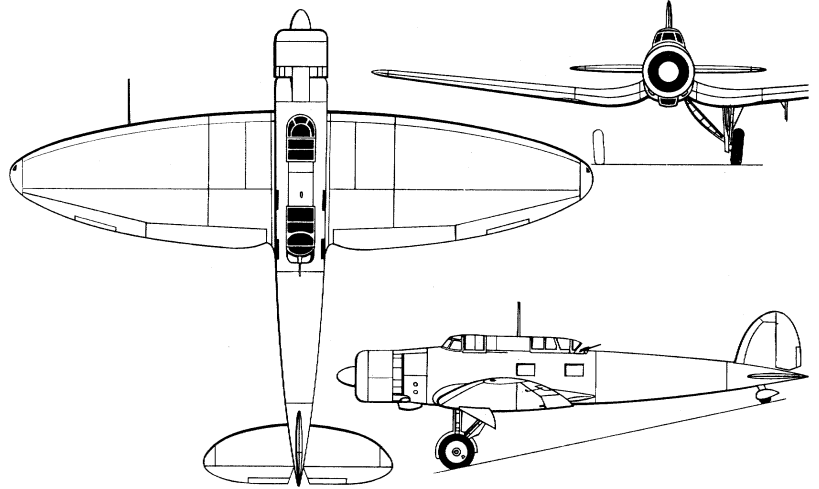
**He70F-2:** Main production version. One staffel (A/88) of 18 sent to Spain in 1936 (later replaced by Do17s) for recon purposes. 12 survivors given to Spanish Nationalist AF in 1938 and served until 1945. Others served as liaison aircraft with the Luftwaffe through WW2.

# Heinkel He170A

Country: Hungary

Service Entry Date: 1938

A/C Type: Recon Bomber  
 Engine(s): One Manfred-Weiss MW-K-14  
 Eng. Pwr: 910 hp, air-cooled, Non-F.I.  
 A/C Crew: Pilot, Nav/Camera Operator  
 Radio Op/Gunner  
 Maximum Speed: 270 mph at 11,155 ft  
 Maximum Ceiling: 27,200 ft.  
 Defense factor: 5 Size Modifier: +0  
 Damage Factor: 7/11 Endurance: 85  
 Cockpit View: Poor Blind Area: Rear, low  
 Protection: Cockpit +0 Fuel +0 Engine +0  
 Climb Decel/ Dive Accel: 3.0 / 1.0  
 Weight and Load Limit: none  
 Wpn Stations Weight Allowed Loads



Class: L

Victory Points: 3-5

## AIRCRAFT PERFORMANCE CHART

Altitude		Minimum	Maximum	Maximum	Min	Min	Min	Min	Altitude		Average
Levels	Bands	Speed	Speed	Dive Spd	TT(2)	HT(3)	BT(4)	ET(5)	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	4.0	8.0	3.5	5.0	6.0	7.0	25-30	HI	500
19-24	MH	2.0	4.5	8.0	3.0	4.0	5.0	6.0	19-24	MH	900
13-18	ML	2.0	5.0	8.5	2.5	3.5	4.5	5.5	13-18	ML	1,200
7-12	LO	1.5	5.5	8.5	2.0	3.0	4.0	5.0	7-12	LO	1,400
1-6	VL	1.5	4.5	7.5	2.0	2.5	3.5	4.5	1-6	VL	1,400

## FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
DG	Two 7.8mm Gebauer mg	9	4

## GUN ATTACK FACTORS

Range	DG
0	8
1	6
2	4
3	3
4	2
5	1
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	--	--	--	MH
13-18	ML	4	1	--	--	ML
7-12	LO	5	2	--	--	LO
1-6	VL	5	--	--	--	VL
Banking FPs		3	4	5	--	
Side Slip FPs		3	5	6	--	

## NOTES AND VARIANTS

### Defensive Gun Coverage

DG: Rear, level-high. 6:00-line high only.

**Heinkel He170A:** Available November, 1937. Recon version of the Heinkel He70 produced for the Hungarian Air Force. Equipped 1st Independent Long Range Recon Group (2 squadrons). Summer of 1940, performed Photo recon over Rumania, eluding Rumanian PZL P-24s. Summer of 1941, flew about 30 missions over Russia, then withdrawn from combat due to poor vision. Burns easily: -2 to fuel criticals. 20 built.

**Auxiliary fuel:** doubles endurance; treat aircraft as loaded until down to normal endurance.

# Heinkel He111B-1

A/C Type: Medium Bomber  
 Engine(s): Two Daimler-Benz DB600C inline  
 Eng. Pwr: 1700-1760hp, liquid-cooled, NonFI  
 A/C Crew: Pilot, Bomabdiar, RadioOp/Gunner  
 Gunner

Maximum Speed: 230 mph at 13,120 ft  
 Maximum Ceiling: 22900 ft./31,200 ft/26,000 ft

Defense factor: 6 Size Modifier: +1  
 Damage Factor: 10/15 Endurance: 190  
 Cockpit View: Fair Blind Area: None

Protection: Cockpit +0 Fuel +0 Engine +0

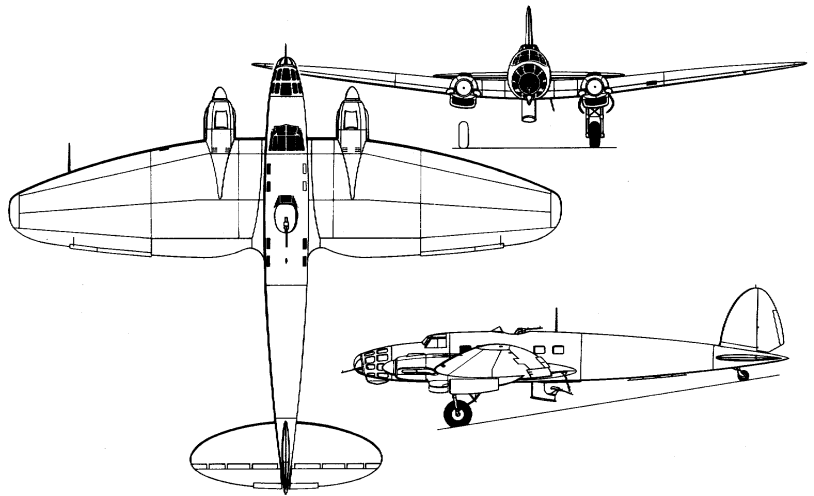
Climb Decel/ Dive Accel: 2.0 / 1.0

Weight and Load Limit: 3307 / 6-10

Wpn Stations Weight Allowed Loads  
 1, 2 (bombbays) 1653 lbs Bombs up to  
 200Kg

Country: Germany

Service Entry Date: December, 1936



Class: M

Victory Points: 5-9

## AIRCRAFT PERFORMANCE CHART

Altitude		Minimum Speed	Maximum Speed	Maximum Dive Spd	Min TT(2)	Min HT(3)	Min BT(-)	Min ET(-)	Altitude		Average Rate of Climb
Levels	Bands								Levels	Bands	
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	2.0	4.5	8.0	3.5	4.5	--	--	19-24	MH	1,700
13-18	ML	2.0	4.5	8.0	3.0	4.0	--	--	13-18	ML	2,400
7-12	LO	1.5	4.0	7.0	2.5	3.5	--	--	7-12	LO	3,100
1-6	VL	1.5	3.5	6.0	2.5	3.5	--	--	1-6	VL	3,300

## FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
FG	One 7.92mm MG17 mg	5x3	4
DG	One 7.62mm MG17 mg	5x3	4
VG	One 7.62mm MG17 mg	5x3	4

## GUN ATTACK FACTORS

Range	FG	DG	VG
0	3	4	4
1	2	3	3
2	2	2	2
3	1	1	1
4	1	1	1
5	1	1	1
6	--	--	--
7	--	--	--

## 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	--	--	--	--	EH
31-36	VH	--	--	--	--	VH
25-30	HI	--	--	--	--	HI
19-24	MH	0.5	--	--	--	MH
13-18	ML	1.0	--	--	--	ML
7-12	LO	2	--	--	--	LO
1-6	VL	2	--	--	--	VL
Banking FPs		3	4	5	--	
Side Slip FPs		3	5	7	--	

## NOTES AND VARIANTS

### Defensive Gun Coverage

FG: Front, level

VG: Rear, low

DG: Rear, level to high; 6:00 high only

**He111A-1:** Avail early 1937. Used underpowered 690hp BMW VI in-line engines; ceiling = 17600; Power -1/-0.5 per engine at (LO,VL)/ML; -0.5 Max speed at ML. 10 sold to China.

**He111B-1:** First He111 used by Luftwaffe. 30 sent to Spain in Feb '37 as two staffeln of KGr 88. First used vs Repub airfields at Alcala and Berajas. Typical load 8 SC100s.

**He111B-2:** Available October 1937. Equipped I,II/KG154. Had supercharged DB600CG engine: add 0.5 per engine at ML & MH. About 300 He111Bs built.

**Dustbin:** VG dustbin position lowered only for enemy fighters. While lowering or raising (2 turns each) and while lowered, causes 2 decel/turn.

# Heinkel He111E-3

A/C Type: Medium Bomber  
 Engine(s): Two Junkers Jumo 211A-1 inline  
 Eng. Pwr: 1920-2020hp, liquid-cooled, NonFI  
 A/C Crew: Pilot, Bomabdiar, RadioOp/Gunner  
 Gunner

Maximum Speed: 283 mph at 10,100 ft  
 Maximum Ceiling: 26,100 ft. / 22,500 ft

Defense factor: 6 Size Modifier: +1  
 Damage Factor: 11/16 Endurance: 225  
 Cockpit View: Fair Blind Area: None

Protection: Cockpit +0 Fuel +0 Engine +0

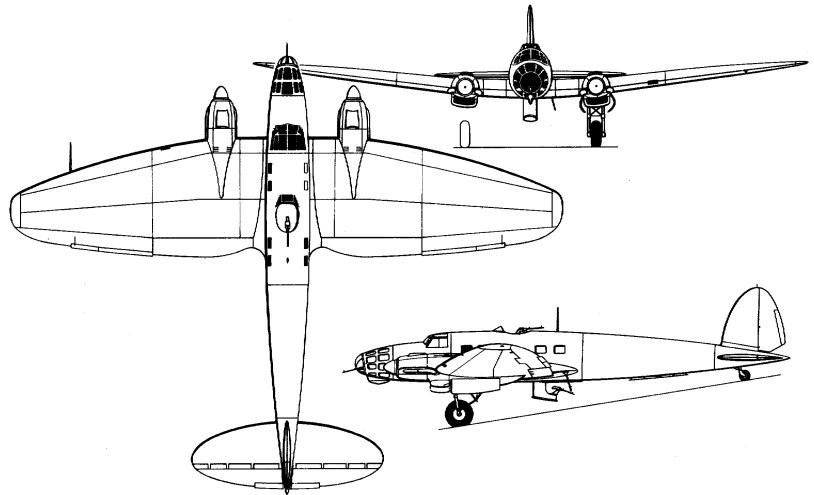
Climb Dece/ Dive Accel: 2.0 / 1.0

Weight and Load Limit: 4400 / 6-10

Wpn Stations	Weight	Allowed Loads
1,4 (E4 & E5)	1100	bombs
2,3	2200	Bombs to 200kg

Country: Germany

Service Entry Date: April 1938



Class: M

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(-)	Min ET(-)	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	2.5	4.0	8.0	3.5	5.0	--	--	25-30	HI	900
19-24	MH	2.0	4.5	8.0	3.0	4.5	--	--	19-24	MH	1,600
13-18	ML	2.0	5.0	8.5	2.5	4.0	--	--	13-18	ML	2,100
7-12	LO	1.5	5.5	8.5	2.5	3.5	--	--	7-12	LO	2,300
1-6	VL	1.5	4.5	7.5	2.0	3.0	--	--	1-6	VL	2,400

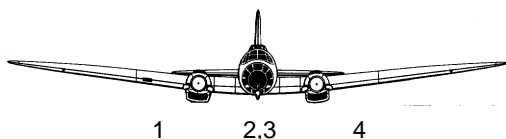
## FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
FG	One 7.92mm MG17 mg	5x3	4
DG	One 7.62mm MG17 mg	5x3	4
VG	One 7.62mm MG17 mg	5x3	4

## GUN ATTACK FACTORS

Range	FG	DG	VG
0	3	4	4
1	2	3	3
2	2	2	2
3	1	1	1
4	1	1	1
5	1	1	1
6	--	--	--
7	--	--	--

## WEAPON STATION LOCATION



## 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	--	--	--	--	EH
31-36	VH	--	--	--	--	VH
25-30	HI	0.5	--	--	--	HI
19-24	MH	1	--	--	--	MH
13-18	ML	1.5	0.5	--	--	ML
7-12	LO	2.5	1.5	--	--	LO
1-6	VL	2.5	--	--	--	VL
Banking FPs		3	4	5	--	
Side Slip FPs		3	5	7	--	

## NOTES AND VARIANTS

### Defensive Gun Coverage

FG: Front, level  
 VG: Rear, low  
 DG: Rear, level to high; 6:00 high only

**He111E-1:** Available Feb '38. Sent to Spain to equip 4 staffeln of KG.88, replacing B-3s. Often fought with mixed crews. Several left with Spain in 1939.

**He111E-3:** Available March '38. Luftwaffe version.

**He111E-4:** Available March '38. Few built. Included wing hardpoints (1&4).

**He111E-5:** Available March '38. Few built. E-4 with larger fuel tanks: End = 250.

About 190 He111Es were built.