

Junkers Ju86D-1

Country: Germany

Service Entry Date: April, 1937

A/C Type: Medium Bomber
 Engine(s): Two Jumo 205C-4 6-cyl diesels
 Eng. Pwr: 1000-1200 hp, liquid-cooled
 A/C Crew: Pilot, navigator, radio-op/bombdr, Gunner

Maximum Speed: 202 mph at 9,840 ft
 Maximum Ceiling: 19360 / 15,700 / 11,200 ft.

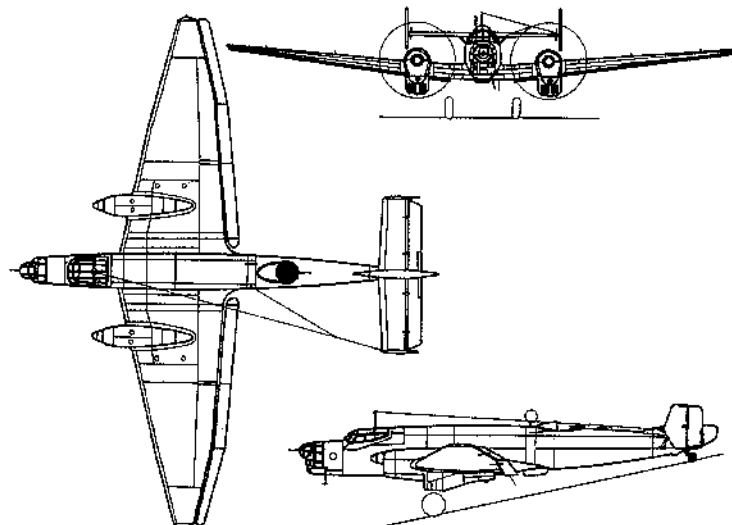
Defense factor: 6 Size Modifier: +1
 Damage Factor: 10/15 Endurance: 190
 Cockpit View: Poor Blind Area: None

Protection: Cockpit +0 Fuel +0 Engine +0

Climb Dece/ Dive Accel: 2.0 / 1.0

Weight and Load Limit: 1760 / 4-8

Wpn Stations	Weight	Allowed Loads
1,2 BB	880	8x 50kg bombs or 1x250kg bomb
3,4 (internal)	115	Aux FT - End +25



Class: M

Victory Points: 6-11

AIRCRAFT PERFORMANCE CHART

Altitude Levels	Bands	Minimum Speed	Maximum Speed	Maximum Dive Spd	Min TT(2)	Min HT(3)	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	--	--	--	--	--	--	--	25-30	HI	--
19-24	MH	2.0	3.5	7.0	2.5	3.5	--	--	19-24	MH	100
13-18	ML	2.0	3.5	7.0	2.5	3.5	--	--	13-18	ML	500
7-12	LO	1.5	4.0	6.5	2.0	3.0	--	--	7-12	LO	800
1-6	VL	1.5	3.5	6.0	2.0	3.0	--	--	1-6	VL	900

FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
FG	One 7.92mm MG15 mg	3x3	4
N1	One .303 Vickers	8	4
DG	One 7.92mm MG15 mg	4x3	4
VG ^a	One 7.92mm MG15 mg	4x3	4

a. **Dustbin gun position:** Had to lower it for use. -1 accel each turn is being lowered, in position, or being raised. Can lower in tac-scale if enemy spotted. 3 turns to raise or lower in combat.

GUN ATTACK FACTORS

Range	FG	DG	VG	N1
0	3	4	4	6
1	2	3	3	4
2	1	2	2	3
3	1	1	1	2
4	1	1	1	1
5	1	1	1	1
6	--	--	--	--
7	--	--	--	(Z only)

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	0.5	--	--	MH
13-18	ML	0.5	0.5	--	--	ML
7-12	LO	1.0	1.0	--	--	LO
1-6	VL	1.0	1.0	--	--	VL
Banking FPs		2	3	5	--	
Side Slip FPs		3	4	6	--	

NOTES AND VARIANTS

Defensive Gun Arcs

FG: Front, level to high
 DT: Rear +60, lvl to high
 VG: Rear +30, Low to level

Ju86D: Diesel-powered Medium bomber. Used in Spanish Civil War by KGr 88 (Oct-38). Phased out by Sep-39. 140 built.

205C Diesel: Diesels did not like rapid changes in RPM. If power changed by >1 accel/turn, roll 1D10 for each engine: engine cuts out on 10+.

Ju86Z-7: 18 Civilian transport sold to South Africa in 1937 w/ Hornet engines (+0.5 pwr/engine). In 1939, all reconfigured as a bomber (as Ju86D armed with NG,DG,VG .303s = MG15). Used in East Africa against the Italians.

Ju86K: Purchased by Sweden (20) and license-built (30) with various gas engines; (+).5 pwr/engine. Used throughout the war as bomber or patrol. Used by Hungary (24), for both sqdn of 3rd (bomber) Regt in 1939.

Junkers Ju86G-1

Country: Germany

Service Entry Date: Sept, 1938

A/C Type: Medium Bomber
 Engine(s): Two BMW 132N radials
 Eng. Pwr: 1000-1200 hp, air-cooled
 A/C Crew: Pilot, navigator, radio-op/bombdr, Gunner

Maximum Speed: 236 mph at 13,120 ft
 Maximum Ceiling: 25,265 / 15,700 / 11,200 ft.

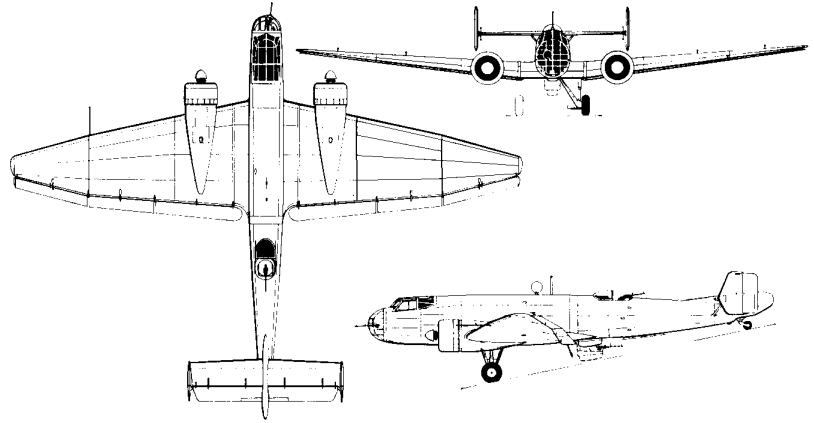
Defense factor: 6 Size Modifier: +1
 Damage Factor: 10/15 Endurance: 160
 Cockpit View: Fair Blind Area: None

Protection: Cockpit +0 Fuel +0 Engine +0

Climb Dece/ Dive Accel: 2.0 / 1.0

Weight and Load Limit: 1760 / 4-8

Wpn Stations	Weight	Allowed Loads
1,2 BB	880	8x 50kg bombs or 1x250kg bomb
3,4 (internal)	115	Aux FT - End +25



Class: M

Victory Points: 6-12

AIRCRAFT PERFORMANCE CHART

Altitude Levels	Bands	Minimum Speed	Maximum Speed	Maximum Dive Spd	Min TT(2)	Min HT(3)	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	2.0	3.5	7.0	3.0	4.0	--	--	25-30	HI	200
19-24	MH	2.0	4.0	7.5	2.5	3.5	--	--	19-24	MH	400
13-18	ML	2.0	4.5	7.5	2.5	3.5	--	--	13-18	ML	600
7-12	LO	1.5	4.5	7.0	2.0	3.0	--	--	7-12	LO	900
1-6	VL	1.5	4.0	6.0	2.0	3.0	--	--	1-6	VL	1,100

FIRE POWER CHART

Guns	Type	Weapons	Ammo	Criticals
FG	One	7.92mm MG15 mg	3x3	4
DG	One	7.92mm MG15 mg	4x3	4
VG ^a	One	7.92mm MG15 mg	4x3	4

a. **Dustbin gun position:** Had to lower it for use. -1 accel each turn is being lowered, in position, or being raised. Can lower in tac-scale if enemy spotted. 3 turns to raise or lower in combat.

GUN ATTACK FACTORS

Range	FG	DG	VG
0	3	4	4
1	2	3	3
2	1	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	0.5	--	--	--	HI
19-24	MH	1.0	--	--	--	MH
13-18	ML	1.5	--	--	--	ML
7-12	LO	2.0	--	--	--	LO
1-6	VL	2.0	--	--	--	VL
Banking FPs		2	3	--	--	
Side Slip FPs		3	4	--	--	

NOTES AND VARIANTS

Defensive Gun Arcs

FG: Front, level to high
 DG: Rear +60, lvl to high
 VG: Rear +30, Low to level

Ju86G: Radial-powered medium bomber used by Luftwaffe as improvement over diesels. Mostly phased out by Sep-39 - only IV/KG-1 armed with 30 Ju86G-1 over

Poland, then deactivated after Polish campaign. Other Ju86s scrapped or sent to schools. IV/KG-1. 40 built.

Stalingrad: Ju86s formed into two transport gruppen: KGrzbV.21 and 22 for use at Stalingrad with 58 aircraft in Nov-42. 42 aircraft lost by Jan-43.

Junkers Ju86P-1

Country: Germany

Service Entry Date: Oct, 1940

A/C Type: Strategic Recon aircraft
 Engine(s): Two Jumo 207A-1 diesel engines
 Eng. Pwr: 1900 hp, liquid-cooled
 A/C Crew: Pilot, navigator/radar operator, radar operator/gunner

Maximum Speed: 224 mph at 19685 ft
 Maximum Ceiling: 39,370 /31,200 /26,000 ft

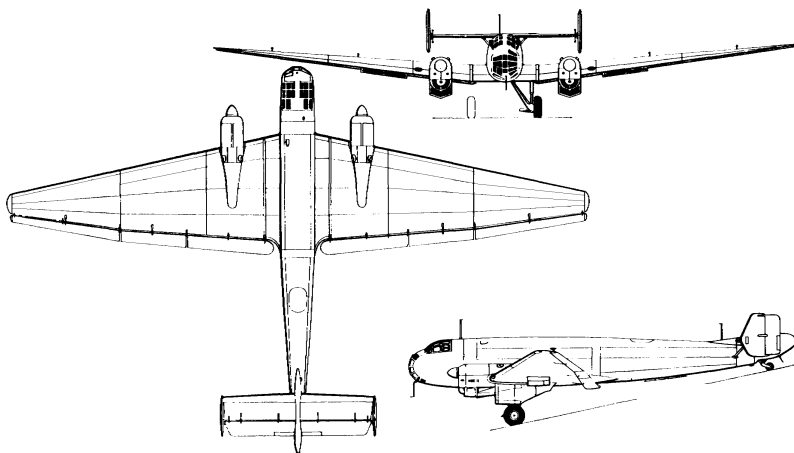
Defense factor: 6 Size Modifier: +1
 Damage Factor: 12/18 Endurance: 150
 Cockpit View: Fair Blind Area: Rear,Low

Protection: Cockpit +1 Fuel +0 Engine +0

Climb Dece/ Dive Accel: 2.0 / 1.0

Weight and Load Limit: 2,220 / 7-12

Wpn Stations	Weight	Allowed Loads
1 (BB)	2205	4x 250 kg bomb or 16x 50 kg bombs or Aux FT



Class: M

Victory Points: 8-15

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	3.0	3.5	7.0	5.0	6.5	--	--	37-42	EH	300
31-36	VH	3.0	4.0	7.5	4.5	6.0	--	--	31-36	VH	500
25-30	HI	2.5	4.0	7.5	4.0	5.5	--	--	25-30	HI	700
19-24	MH	2.5	4.5	7.5	3.5	4.5	--	--	19-24	MH	800
13-18	ML	2.0	4.5	7.5	3.0	4.0	--	--	13-18	ML	900
7-12	LO	2.0	4.5	7.0	3.0	3.5	--	--	7-12	LO	1,000
1-6	VL	2.0	4.5	6.5	2.5	3.0	--	--	1-6	VL	1,000

FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
TG	One 7.92mm MG81 mg (remote controlled)	8	4

GUN ATTACK FACTORS

Rng	TG
0	3
1	2
2	2
3	1
4	1
5	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	1.0	--	--	--	EH
31-36	VH	1.5	--	--	--	VH
25-30	HI	1.5	--	--	--	HI
19-24	MH	2.0	--	--	--	MH
13-18	ML	2.0	--	--	--	ML
7-12	LO	2.0	--	--	--	LO
1-6	VL	2.0	--	--	--	VL
Banking FPs		4	5	6	--	
Side Slip FPs		5	6	7	--	

NOTES AND VARIANTS

Defensive Gun Arcs

TG: Rear + 30 low to level

Junkers Ju86P-1: Available Oct-40. Converted from the Ju86G bomber. Wingspan and area increased; engines upgraded. Main defense was altitude. TG added Sep-42. P-2 was unarmed, camera-only recon version Used over Russia before the invasion, over southern England, Mid-East, and Med - until attacked by a few stripped Spitfire Vs. Pressurized cabin. 40 converted.

268-gal Aux FT: Wgt: 1400 lb Ld: 6.0/2.0 End: +180

