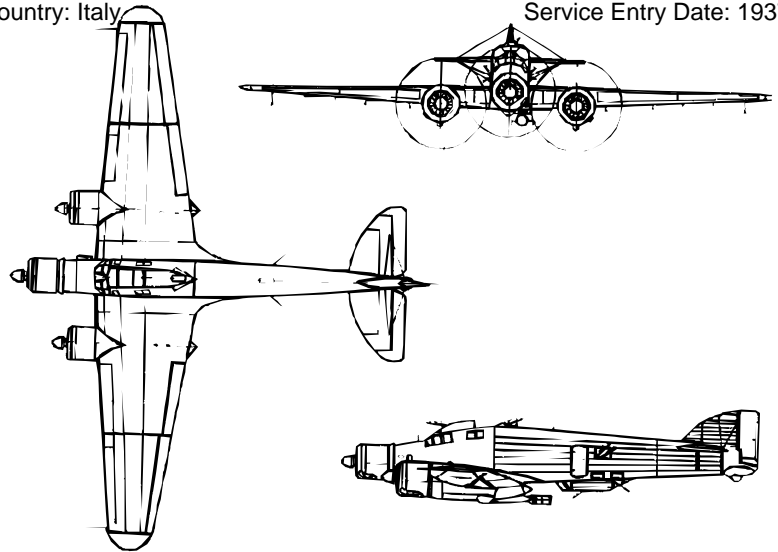


# SM.79 "Sparviero"

A/C Type: Medium Bomber  
 Engine(s): Three Alfa-Romeo A.R. 126  
 Eng. Pwr: 750 HP, Radial Air Cooled  
 A/C Crew: 2 Pilots, Bombardier,  
 2 gunners  
 Maximum Speed: 265 MPH at 13000  
 Maximum Ceiling: 23000/19000/15000  
 Defense Factor: 6      Size Modifier: +1  
 Damage Factor: 16/24      Endurance: 340  
 Cockpit View: Fair      Blind Area: None  
 Protection: Cockpit +2 Fuel +1 Engine +0  
 Climb Decel / Dive Accel: 2.0/1.0  
 Weight and Load Limit: 2750/5-14  
 Wpn Stations      Weight      Allowed Loads  
 Bomb Bay 1      2750      Bombs

Country: Italy

Service Entry Date: 1937



Class: M

Victory Points: 6-12

## AIRCRAFT PERFORMANCE CHART

Altitude Levels	Band	Minimum Speed	Maximum Speed	Maximum Dive Spd.	Min. TT(2)	Min. HT(3)	Min. BT	Min. ET	Altitude Band	Levels	Average Rate Of Climb
43+	UH	—	—	—	—	—	—	—	UH	43+	—
37-42	EH	—	—	—	—	—	—	—	EH	37-42	—
31-36	VH	—	—	—	—	—	—	—	VH	31-36	—
25-30	HI	—	—	—	—	—	—	—	HI	25-30	—
19-24	MH	2.0	4.5	8.0	3.0	4.5	—	—	MH	19-24	300
13-18	ML	2.0	5.0	8.0	3.0	4.0	—	—	ML	13-18	600
7-12	LO	2.0	5.0	7.5	2.5	3.5	—	—	LO	7-12	1,000
1-6	VL	1.5	4.5	7.0	2.5	3.5	—	—	VL	1-6	1,100

## FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
N1	One 12.7mm MG	14	3
DG, VG	One 12.7mm MG	20	3
LG, RG	One 7.7mm MG	30	4

## GUN ATTACK FACTORS

Range	N1	DG, VG	LG, RG
0	9	7	4
1	6	5	3
2	4	4	2
3	3	2	2
4	2	2	1
5	1.5	1	1
6	1	1	—
7	—	—	—

## WEAPONS STATIONS DIAGRAM

## POWER VERSUS SPEED CHART

Levels	Band	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	2	—	—	—	MH
13-18	ML	4	2	—	—	ML
7-12	LO	5	3	—	—	LO
1-6	VL	5	—	—	—	VL
Banking FPs:		2	3	5	—	
Side Slip FPs:		2	4	6	—	

## DEFENSIVE GUN COVERAGE

DG: Rear +30 level to high; 6:00 high  
 VG: Rear low (Bombardier)  
 LG/RG: Left, right rear -30 low to high

## NOTES AND VARIANTS

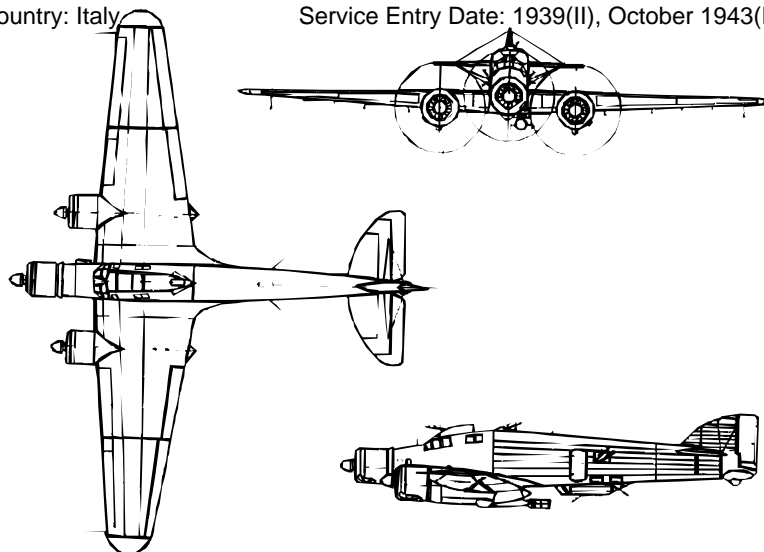
Slatted wings. Only one of LG and RG can fire in a turn. Station 1 is bomb bay for 2 500kg bombs, 5 250kg bombs or 12 100 kg bombs.

# SM.79-II "Sparviero"

A/C Type: Torpedo Bomber  
 Engine(s): Three Piaggio P.XI RC.40  
 Eng. Pwr: 1000 HP, Radial Air Cooled  
 A/C Crew: 2 Pilots, Bombardier,  
 2 gunners  
 Maximum Speed: 270 MPH at 15000  
 Maximum Ceiling: 23000/19000/15000  
 Defense Factor: 6      Size Modifier: +1  
 Damage Factor: 17/25      Endurance: 340  
 Cockpit View: Fair      Blind Area: None  
 Protection: Cockpit +2 Fuel +2 Engine +0  
 Climb Decel / Dive Accel: 2.0/1.0  
 Weight and Load Limit: 2750/5-14  
 Wpn Stations      Weight      Allowed Loads  
 1, 3      1000      Torpedo  
 Bomb Bay 2      2750      Bombs

Country: Italy

Service Entry Date: 1939(II), October 1943(III)



Class: M

Victory Points: 6-13

## AIRCRAFT PERFORMANCE CHART

Altitude Levels	Band	Minimum Speed	Maximum Speed	Maximum Dive Spd.	Min. TT(2)	Min. HT(3)	Min. BT	Min. ET	Altitude Band	Levels	Average Rate Of Climb
43+	UH	—	—	—	—	—	—	—	UH	43+	—
37-42	EH	—	—	—	—	—	—	—	EH	37-42	—
31-36	VH	—	—	—	—	—	—	—	VH	31-36	—
25-30	HI	—	—	—	—	—	—	—	HI	25-30	—
19-24	MH	2.5	5.0(5.5)	8.0	3.0	4.5	—	—	MH	19-24	400
13-18	ML	2.0	5.5(6.0)	8.0	3.0	4.0	—	—	ML	13-18	800
7-12	LO	2.0	5.5	7.5	2.5	4.0	—	—	LO	7-12	1,300
1-6	VL	1.5	5.0	7.0	2.5	3.5	—	—	VL	1-6	1,300

## FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
N1(II)	One 12.7mm MG	14	3
N1(III)	One 20mm MG-151	10	2
DG,VG	One 12.7mm MG	20	3
LG,RG	One 7.7mm MG	30	4

## GUN ATTACK FACTORS

Range	N1(II)	N1(III)	DG,VG	LG,RG
0	9	26	7	4
1	6	20	5	3
2	4	13	4	2
3	3	9	2	1
4	2	6	2	1
5	1.5	4	1	1
6	1	3	1	—
7	—	—	—	—

## WEAPONS STATIONS DIAGRAM

## POWER VERSUS SPEED CHART

Levels	Band	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	3	2	—	—	MH
13-18	ML	5	3	—	—	ML
7-12	LO	6	4	—	—	LO
1-6	VL	6	4	—	—	VL
Banking FPs:		2	3	5	—	
Side Slip FPs:		2	4	6	—	

## DEFENSIVE GUN COVERAGE

DG: Rear +30 level to high; 6:00 high  
 VG: Rear low (Bombardier)  
 LG,RG: Left, right rear -30 low to high

## NOTES AND VARIANTS

**All:** Slatted wings. Only one of LG and RG can fire in a turn. Station 2 is bomb bay for 2 500kg bombs, 5 250kg bombs or 12 100 kg bombs. Bombs may not be dropped if station 1 or 3 is occupied.

**SM-79 II:** Fuel protection +1 before 1941.

**SM-79 III:** Use speeds in (). Add 100 to ROC and 1000 to ceilings.

LG and RG upgraded to 12.7mm MG; firepower as DG.

All RSI SM.79/II's upgraded to /III by early 1944.

# SM.84

A/C Type: Medium Bomber  
 Engine(s): Three Piaggio P.XI RC.40  
 Eng. Pwr: 1000 HP, Radial Air Cooled  
 A/C Crew: 2 Pilots, Bombardier,  
 2 gunners  
 Maximum Speed: 268 MPH at 15000  
 Maximum Ceiling: 26000/22000/18000  
 Defense Factor: 6      Size Modifier: +1  
 Damage Factor: 18/27      Endurance: 340  
 Cockpit View: Fair      Blind Area: None  
 Protection: Cockpit +1 Fuel +2 Engine +0  
 Climb Decel / Dive Accel: 3.0/1.0  
 Weight and Load Limit: 4400/5-15  
 Wpn Stations      Weight      Allowed Loads  
 1, 3      1000      Torpedo  
 2      4400      Bombs

Country: Italy

Service Entry Date: 1942

Class: M

## AIRCRAFT PERFORMANCE CHART

Altitude Levels	Band	Minimum Speed	Maximum Speed	Maximum Dive Spd.	Min. TT(3)	Min. HT(4)	Min. BT	Min. ET	Altitude Band	Levels	Average Rate Of Climb
43+	UH	—	—	—	—	—	—	—	UH	43+	—
37-42	EH	—	—	—	—	—	—	—	EH	37-42	—
31-36	VH	—	—	—	—	—	—	—	VH	31-36	—
25-30	HI	3.0	4.5	8.0	4.0	5.5	—	—	HI	25-30	300
19-24	MH	2.5	5.0	8.0	3.5	5.0	—	—	MH	19-24	500
13-18	ML	2.5	5.0	8.0	3.0	4.5	—	—	ML	13-18	800
7-12	LO	2.0	5.0	7.5	3.0	4.0	—	—	LO	7-12	1,100
1-6	VL	2.0	5.0	7.0	2.5	4.0	—	—	VL	1-6	1,300

## FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
N1	One 12.7mm MG	13	3
DG	One 12.7mm MG	-	3
LG,RG	One 12.7mm MG	-	3

## GUN ATTACK FACTORS

Range	N1	DG	LG,RG
0	10	7	7
1	8	5	5
2	5	4	4
3	4	2	2
4	3	2	2
5	2	1	1
6	1	1	1
7	—	—	—

## WEAPONS STATIONS DIAGRAM

## POWER VERSUS SPEED CHART

Levels	Band	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	2	—	—	ML
7-12	LO	5	3	—	—	LO
1-6	VL	5	3	—	—	VL
Banking FPs:		2	4	6	—	
Side Slip FPs:		3	5	6	—	

## DEFENSIVE GUN COVERAGE

DG: Rear +30 level to high; front high

LG,RG: Left, right rear -30 low to high

All: Only one of LG and RG can fire in a turn. Station 2 is bomb bay. Bombs may not be dropped if station 1 or 3 occupied.

Appearance similar to SM.79 without defensive gun "hump."

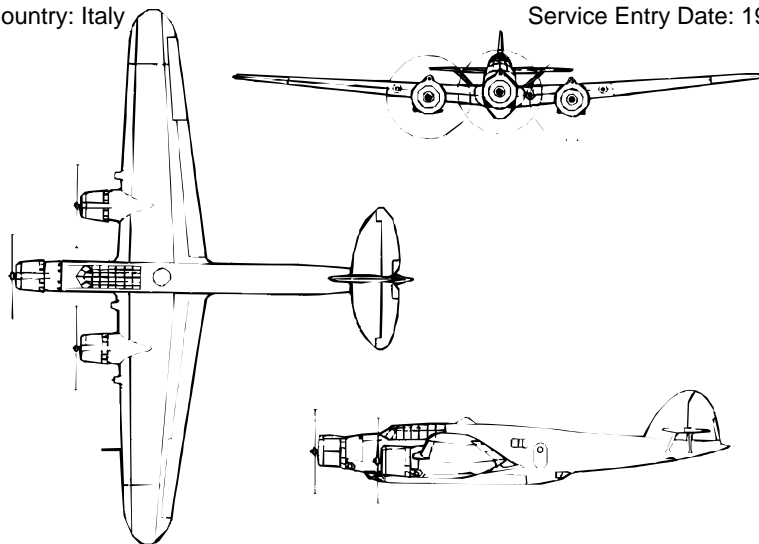
Torpedo: weight 1000, load 5.0.

# Z.1007bis "Alcione"

A/C Type: Medium Bomber  
 Engine(s): Three Piaggio P.XI RC.40  
 Eng. Pwr: 1000 HP, Radial Air Cooled  
 A/C Crew: Pilots, Copilot, Bombardier,  
 2 gunners  
 Maximum Speed: 283 MPH at 15000  
 Maximum Ceiling: 26500/21500/17000  
 Defense Factor: 6      Size Modifier: +1  
 Damage Factor: 18/27      Endurance: 350  
 Cockpit View: Fair      Blind Area: None  
 Protection: Cockpit +2 Fuel +1 Engine +0  
 Climb Decel / Dive Accel: 2.0/1.0  
 Weight and Load Limit: 4620/5-15  
 Wpn Stations      Weight      Allowed Loads  
 1, 3      1100      Bomb  
 Bomb Bay 2      2420      Bombs

Country: Italy

Service Entry Date: 1940



Class: M

Victory Points: 6-12

## AIRCRAFT PERFORMANCE CHART

Altitude Levels	Band	Minimum Speed	Maximum Speed	Maximum Dive Spd.	Min. TT(2)	Min. HT(3)	Min. BT	Min. ET	Altitude Band	Levels	Average Rate Of Climb
43+	UH	—	—	—	—	—	—	—	UH	43+	—
37-42	EH	—	—	—	—	—	—	—	EH	37-42	—
31-36	VH	—	—	—	—	—	—	—	VH	31-36	—
25-30	HI	2.5	5.0	8.5	3.5	5.0	—	—	HI	25-30	300
19-24	MH	2.5	5.5	8.0	3.0	4.5	—	—	MH	19-24	600
13-18	ML	2.0	5.5	8.0	3.0	4.0	—	—	ML	13-18	900
7-12	LO	2.0	5.5	7.5	2.5	4.0	—	—	LO	7-12	1,300
1-6	VL	1.5	5.0	7.0	2.5	3.5	—	—	VL	1-6	1,500

## FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
DT	One 12.7mm MG	20	3
VG	One 12.7mm MG	20	3
LG,RG	One 7.7mm MG	30	4

## GUN ATTACK FACTORS

Range	DT	VG	LG,RG
0	8	5	4
1	6	4	3
2	4	3	2
3	3	2	1
4	2	1	1
5	1	1	1
6	1	1	—
7	—	—	—

## WEAPONS STATIONS DIAGRAM

## POWER VERSUS SPEED CHART

Levels	Band	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	2	1	—	—	HI
19-24	MH	3	2	—	—	MH
13-18	ML	4	2	—	—	ML
7-12	LO	5	3	—	—	LO
1-6	VL	5	3	—	—	VL
Banking FPs:		3	4	5	—	
Side Slip FPs:		3	5	7	—	

## DEFENSIVE GUN COVERAGE

DT: All level to high except front high only (Copilot)  
 VG: rear low  
 LG,RG: Left, right rear -30 low to high

## NOTES AND VARIANTS

**Z.1007bis:** Many had single fin tail. DG may not fire level on 6:00 line.  
**Z.1007ter:** 1943 model with 1175 HP Piaggio P.XIX engines.  
 Add .5 to max level and dive speeds, 1 to all power numbers, 200 to average ROC, and 4000 to ceilings.

# Piaggio P.108

A/C Type: Heavy Bomber  
 Engine(s): Four Piaggio P.XII RC.35  
 Eng. Pwr: 1500 HP, Radial Air Cooled  
 A/C Crew: Pilot, Copilot, Bombardier  
 4 gunners  
 Maximum Speed: 267 MPH at 13000  
 Maximum Ceiling: 27000/22000/18000  
 Defense Factor: 6      Size Modifier: +2  
 Damage Factor: 24/36      Endurance: 850  
 Cockpit View: Good      Blind Area: None  
 Protection: Cockpit +2 Fuel +1 Engine +0  
 Climb Decel / Dive Accel: 3.0/1.0  
 Weight and Load Limit: 7700/8-22  
 Wpn Stations      Weight      Allowed Loads  
 1                      7700              Bombs, Torpedoes

Country: Italy

Service Entry Date: June 1942

Class: H

## AIRCRAFT PERFORMANCE CHART

Altitude Levels	Band	Minimum Speed	Maximum Speed	Maximum Dive Spd.	Min. TT(2)	Min. HT(3)	Min. BT	Min. ET	Altitude Band	Levels	Average Rate Of Climb
43+	UH	—	—	—	—	—	—	—	UH	43+	—
37-42	EH	—	—	—	—	—	—	—	EH	37-42	—
31-36	VH	—	—	—	—	—	—	—	VH	31-36	—
25-30	HI	2.5	4.5	7.5	4.0	5.5	—	—	HI	25-30	300
19-24	MH	2.5	5.0	7.5	3.5	5.0	—	—	MH	19-24	500
13-18	ML	2.5	5.0	7.0	3.0	4.5	—	—	ML	13-18	900
7-12	LO	2.0	5.0	7.0	3.0	4.0	—	—	LO	7-12	1,200
1-6	VL	2.0	4.5	6.0	2.5	3.5	—	—	VL	1-6	1,400

## FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
LT,RT	Two 12.7mm MG	30	3
FG	One 12.7mm MG	-	3
LG,RG	One 12.7mm MG	-	3
VG	One 12.7mm MG	-	3

## GUN ATTACK FACTORS

Range	LT,RT	FG	LG,RG	VG
0	15	5	7	7
1	12	4	5	5
2	8	3	4	4
3	5	2	2	2
4	4	1	2	2
5	3	1	1	1
6	2	1	1	1
7	1	—	—	—

## WEAPONS STATIONS DIAGRAM

## POWER VERSUS SPEED CHART

Levels	Band	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	0.75	—	—	—	HI
19-24	MH	1	0.75	—	—	MH
13-18	ML	1.25	1	—	—	ML
7-12	LO	1.25	1	—	—	LO
1-6	VL	1.25	—	—	—	VL
Banking FPs:		3	5	7	—	
Side Slip FPs:		4	6	8	—	

## DEFENSIVE GUN COVERAGE

LT: Left rear, left half of rear, 6:00, level to high; left front high  
 RT: Right rear, right half of rear, 6:00, level to high; right front high  
 FG: Front +30 high to low  
 LG: Left rear -30 low to high  
 RG: Right rear -30 low to high  
 Station 1 is bomb bay for 3 torpedoes (weight 1000, load 5.0)  
 or 7 500kg bombs.

# BR.20M "Cicogna"

A/C Type: Medium Bomber  
 Engine(s): Two Fiat A.80 RC.41  
 Eng. Pwr: 1000 HP, Radial Air Cooled  
 A/C Crew:

Maximum Speed: 268 MPH at 16400  
 Maximum Ceiling: 36000/29500/24000

Defense Factor: 6      Size Modifier: +1  
 Damage Factor: 14/21      Endurance: 500  
 Cockpit View: Fair      Blind Area: None

Protection: Cockpit +2 Fuel +1 Engine 0

Climb Decel / Dive Accel: 2.0/1.0  
 Weight and Load Limit: 3520/4-14

Wpn Stations	Weight	Allowed Loads
Bomb Bay 1	3300	Bombs

Country: Italy

Service Entry Date: 1937

Class: M

Victory Points: 6-12

## AIRCRAFT PERFORMANCE CHART

Altitude Levels	Band	Minimum Speed	Maximum Speed	Maximum Dive Spd.	Min. TT(2)	Min. HT(3)	Min. BT	Min. ET	Altitude Band	Levels	Average Rate Of Climb
43+	UH	—	—	—	—	—	—	—	UH	43+	—
37-42	EH	—	—	—	—	—	—	—	EH	37-42	—
31-36	VH	2.5	4.5	7.5	3.5	5.0	—	—	VH	31-36	200
25-30	HI	2.0	4.5	8.0	3.0	4.5	—	—	HI	25-30	300
19-24	MH	2.0	5.0	7.5	3.0	4.0	—	—	MH	19-24	500
13-18	ML	2.0	5.0	7.5	2.5	3.5	—	—	ML	13-18	800
7-12	LO	1.5	5.0	7.5	2.5	3.5	—	—	LO	7-12	900
1-6	VL	1.5	4.5	7.0	2.0	3.0	—	—	VL	1-6	1,000

## FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
FG	One 7.7mm MG	30	4
DT	Two 7.7mm MG	30	4
VG	One 7.7mm MG	30	4

## GUN ATTACK FACTORS

Range	FG	DT	VG
0	4	12	5
1	3	9	4
2	2	6	3
3	1	4	2
4	1	3	2
5	1	2	1
6	—	1	—
7	—	—	—

## WEAPONS STATIONS DIAGRAM

## POWER VERSUS SPEED CHART (per engine)

Levels	Band	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	0.5	—	—	—	VH
25-30	HI	1	—	—	—	HI
19-24	MH	1.5	0.5	—	—	MH
13-18	ML	2	1	—	—	ML
7-12	LO	2	1	—	—	LO
1-6	VL	2	—	—	—	VL
Banking FPs:		2	4	6	—	
Side Slip FPs:		2	4	6	—	

## DEFENSIVE GUN COVERAGE

DT: All high; left and right rear level to high.  
 VG: Rear low  
 FG: Front +30 low to high