



## I. Starting the Engine & Warm Up

1. Dive Break retracted, control lever in position '0'
2. Flaps retracted, control lever in position '0'
3. RPM control lever fully forward (higher RPM)
4. Supercharger control lever pushed in to setting 'Automatic'
5. Throttle on idle or minimally forward
6. Upon engine start pull back RPM control lever (lower RPM)
7. Increase RPM to 600 – 800 until oil pressure gauge shows reaction
8. In case oil pressure gauge shows no reaction within 10 seconds immediately stop engine.
9. Increase RPM to 1000 and hold there
10. Begin warm up until the following values are reached:

Coolant Temperature:	min. 60° C
Oil Temperature:	min. 20° C
Oil Pressure:	5.5 – 9.0 atü

11. Increase RPM to max 1600
12. Continue warm up until the following values are reached:

Coolant Temperature:	min. 60° C
Oil Temperature:	min. 30° C

13. To reach minimum Oil Temperature of 30° C faster close radiator so that the Coolant Temperature reaches 80 to 100° C.

## II. Taxiing

1. Set tail wheel arrestor lever to 'loose'
2. Fully open radiator and oil cooler
3. Set flaps to 'Take-Off' position
4. Oil Temperature during taxiing must not exceed 60° C (Winter) or 75° C (Summer)
5. Use brakes carefully, not brake continuously to avoid overheating
6. Turning on a wheel is strictly prohibited!
7. Maximum RPM during taxiing: 1600 to 1800

## III. Take-Off

1. Roll straight for a few meters to align tail wheel, then set tail wheel arrestor to 'lock'
2. Check that flaps are in 'Take-Off' position
3. RPM control lever fully forward
4. Smoothly increase throttle until max
5. 1-min-setting: 2600 RPM at 1.40 ata
6. After lifting off immediately pull back throttle and RPM control lever to 30-minute-setting of 1.25 ata at 2400 RPM
7. Do not retract flaps until reaching a certain altitude (ca 200m) and  $V_0 = 180$  km/h because the aircraft will lose altitude when the flaps are being retracted
8. Reduce power setting no later than 30 minutes after Take-Off to maximum continuous output (2250 RPM at 1.15 ata)



## IV. Flight

### Optimum Climb Speed (Weight Table see Chap. VI)

<b>Weight</b>	4800 kg	5300 kg	5800 kg	6600 kg
<b>V<sub>0</sub> (km/h)</b>	200 - 210	210	220	230

### Engine Data

#### a) RPM and Manifold Pressure

	<b>RPM</b>	<b>Manifold Pressure ata</b>
<b>1-Minute-Setting</b>	2600	1.40
<b>30-Minute-Setting</b>	2400	1.25
<b>Max. Continuous Setting</b>	2250	1.15
<b>Economic Setting</b>	1900	1.00

#### b) Oil Temperature

	<b>Temperature</b>
Minimum	30° C
Maximum	105° C

#### c) Coolant Temperature

##### Maximum Temperatures at altitude (km)

<b>Altitude in km</b>	1	4	8
<b>° C</b>	110	100	90

If set to automatic the supercharger will switch automatically at around 3000m (+- 300m).

## V. Landing

1. Leave RPM control lever at 2250 at RPM (in case of touch-and-go)
2. Set flaps as required
3. Fully open cooling flaps
4. Depending on weight conduct final approach at 150 – 160 km/h
5. With flaps fully extended and a gross weight of 4900 kg roll distance is about 400m
6. Whenever possible landing should be conducted into the wind



## VI. Weight Table

Loadout	Weight (in kg)
7,92mm x 1000	4800
1x SC 250 + 4x SC 70	5430
1x SC 500	5320
1x SC 500 + 4x SC 70	5680
1x SC 500 + 2x SC 250	5880
3x SC 250	5750
1x SC 1000	5800
<b>1x SC 1800</b>	<b>6600</b>

Attention! Maximal take-off weight is 5900kg. The loadout containing the SC 1800 exceeds this limit and is not to be used unless specifically ordered! Overload considerably changes take-off characteristics (see table below)!

Take-Off Weight	Rolling Distance in m	Lift-Off speed in km/h	Distance to reach altitude of 20m
5880 kg	500	155	750
6600 kg	700	165 - 170	1000

## VII. Approaching the Target & Dive Attack

1. Open bottom window
2. Set RPM to 2250 RPM (max RPM for diving)
3. Supercharger control remains on 'Automatic'
4. Engage siren (if ordered)
5. Reduce throttle to idle (below 0.8 ata)
6. Close cooling flaps
7. Trim aircraft somewhat front-heavy so that it can be kept in the dive with minimal stick pressure
8. Extend dive brake. Attention: Extending the dive brake while already diving is prohibited! Do not commence dive until the brake is fully extended!
9. Commence diving attack
10. Retract dive brake after pulling out of the dive.
11. Disengage siren (below 350 km/h)
12. Set RPM to 2400 RPM
13. Set throttle to 1.25 ata
14. Fully open cooling flaps
15. In case of enemy defenses 1-minute-power (1.40 ata at 2600 RPM) can be used.