

SECTION 5**PERFORMANCE**

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NOISE LIMITATION

In compliance with the decree dated 19.02.1987, the maximum acceptable noise level for the DR400/180R aircraft at a certified gross weight of (2205 lb) 1000 kg is 73.3 dB (A) (ICAO Annexe 16, Chapter 06).

The noise level determined under the conditions of the above mentioned decree, at max. continuous power, with the APR muffler is 65.3 dB (A).

The DR400/180R aircraft has received the noise limitation certificate nr N45.

STALL SPEEDS

Engine idle Weight: 1000 kg (2205 lb)	VI km/h (kt)		
	0°	30°	60°
Bank angle			
Flaps up	99 (54)	106 (58)	140 (76)
Flaps 1 st notch, take-off position	93 (51)	99 (54)	131 (71)
Flaps 2 nd notch, landing position	87 (47)	93 (51)	123 (67)

CALIBRATION OF THE AIR SPEED INSTALLATION

$VC = (VI + \text{calibration})$ is substantially equal to VI.

TAKE-OFF PERFORMANCE

Without wind, flaps 1st notch, propeller: SENSENICH 76-58.

- In each cell: - total distance in meter (m) from stop to 15 m (50 ft)
clearance at $v=1.3 V_{s1}$.
- (ground run to reach $1.1 V_{s1}$).

Headwind influence : Multiply by 0.79 per 10 kt
Multiply by 0.64 per 20 kt
Multiply by 0.53 per 30 kt

ALTITUDE (feet)	TEMPERATURE (°C)	WEIGHT 1000 kg	
		Paved runway	Unpaved runway
0	-5	360 (180)	410 (230)
	Std = 15	400 (205)	455 (260)
	+35	440 (225)	505 (290)
4000	-13	475 (240)	550 (315)
	Std = 7	530 (275)	620 (365)
	+27	590 (305)	695 (410)
8000	-21	640 (325)	765 (450)
	Std = -1	715 (370)	870 (525)
	+19	800 (415)	985 (600)

ALTITUDE (feet)	TEMPERATURE (°C)	WEIGHT 850 kg	
		Paved runway	Unpaved runway
0	-5	235 (115)	255 (135)
	Std = 15	255 (125)	280 (150)
	+35	280 (140)	310 (170)
4000	-13	305 (150)	335 (180)
	Std = 7	335 (165)	375 (205)
	+27	370 (185)	415 (230)
8000	-21	395 (200)	450 (255)
	Std = -1	445 (225)	510 (290)
	+19	490 (250)	570 (330)

CLIMB PERFORMANCE

Standard atmosphere, flaps up (retracted)
Full throttle, optimum mixture setting
Propeller: SENSENICH 76-58

Weight 1000 kg

Maximum vertical speed at ground level: 5.6 m/s
Decrease by 0.25 m/s per 1000 ft
Operational ceiling: 20 000 ft
Optimum speed at ground level: 160 km/h (86 kt)
140 km/h (75 kt) at ceiling

Weight 800 kg

Maximum vertical speed at ground level: 7.7 m/s
Decrease by 0.28 m/s per 1000 ft
Operational ceiling: 25 000 ft

Temperature influence

Each 10°C above standard lowers the ceiling by 1000 ft and reduces rate of climb by 0.25 m/s.

Glide performance

Engine off, the aircraft glides 9.3 times the height at 145 km/h (78 kt) with no wind.

Altitude and temperature do not have a noticeable influence.

CRUISE PERFORMANCE

Maximum weight 1000 kg.

Standard atmosphere, without wind

Optimum mixture setting, no fuel reserve

Propeller: SENSENICH 76-58

Pressure altitude (ft)	Power %	RPM	Fuel Consumption (l/h)	True airspeed (km/h)	Endurance (h.min)	Range (km)
0	70	2700	36.5	230	3	690
	64	2600	34	221	3.14	715
	58	2500	31	212	3.33	750
	52	2400	28	198	3.56	780
6 000	63	2700	33.5	228	3.17	750
	58	2600	31	218	3.33	750
	54	2500	29	208	3.48	790
	49	2400	27	194	4.04	790
12 000	56	2700	30	226	3.40	825
	53	2600	28.5	215	3.52	830
	50	2500	27.5	204	4	815
	47	2400	26	190	4.14	805

LANDING PERFORMANCE

Without wind, flaps 2nd notch.

In each cell: - total distance in meter (m) from 15 m (50 ft) clearance at $V=1.3 V_{SO}$ to stop.

- (ground run after touch down at V_{SO}).

Headwind influence : Multiply by 0.79 per 10 kt

Multiply by 0.64 per 20 kt

Multiply by 0.53 per 30 kt

ALTITUDE (feet)	TEMPERATURE (°C)	WEIGHT 1000 kg	
		Moderate braking Paved runway or unpaved runway	No braking Unpaved (grass) runway
0	-5	445 (205)	550 (310)
	Std = 15	470 (220)	580 (330)
	+35	500 (235)	615 (350)
4000	-13	490 (230)	605 (345)
	Std = 7	520 (250)	640 (370)
	+27	550 (270)	680 (400)
8000	-21	540 (260)	670 (390)
	Std = -1	575 (280)	715 (420)
	+19	610 (300)	760 (450)

ALTITUDE (feet)	TEMPERATURE (°C)	WEIGHT 800 kg	
		Moderate braking Paved runway or unpaved runway	No braking Unpaved (grass) runway
0	-5	380 (165)	460 (245)
	Std = 15	400 (175)	490 (265)
	+35	420 (190)	515 (285)
4000	-13	410 (185)	500 (275)
	Std = 7	435 (200)	535 (300)
	+27	460 (215)	565 (320)
8000	-21	450 (205)	555 (310)
	Std = -1	480 (225)	590 (335)
	+19	505 (240)	625 (360)