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Reality Expansion Pack for X-Plane

Pilatus PC-12

Checklists & References

Before Engine Start

1. Pre-Flight Inspection Completed
2. Parking Brake Set
3. Flight Control Lock Removed
4. Oxygen Lever On
5. Pax Oxy Supply Auto
6. Oxygen Mask Checked
7. Circuit Breakers Checked
8. EPS Check + Arm
9. Ldg Gear Handle Down
10. Trim Inter Switch Normal
11. Flap Inter Switch Normal
12. MOR Lever Off
13. PCL Lever Idle
14. Condition Lever Cut Off
15. Flap Lever 0°
16. Fuel Emerg Shutoff Full In
17. ECS Emerg Shutoff Full In
18. Doors/DV Windows Closed

19. Standby Bus Switch	On
20. Overhead Switches	All Off
21. Electrical Switches	All Off
22. Clearance	Obtain
23. GPS Flight Plan	Set
24. Battery 1 & 2 Switches	On
25. Battery Voltage	>24V
26. Beacon/Nav Lights	On

NOTE

Avoid prolonged use of the beacon and logo lights (if installed), as this can cause a decrease in battery power and affect the engine starting.

27. Fuel Pumps	Audio/Visual Check
28. Lamp	Checked
29. Fire Warning	Checked
30. EIS	Checked
31. Fuel Contents	Checked/Set

Engine Start

1. Prop Area Clear
2. Starter Switch Press 2 Seconds
3. Condition Lever >12%Ng Ground Idle
4. Oil Pressure Check
5. ITT and Ng Monitored
6. Engine Instruments Checked
7. Gen 1 then Gen 2 On
8. Inverter Batt or Gen
9. Avionics 1 and 2 On
10. Pax Advisory On
11. Standby Bus OFF
12. Air Conditioning As required
13. ECS Auto
14. Pressurization Set Cruise Alt +500ft
15. Flaps Set 15°

Before Taxi

1. Flaps 15° Checked
2. AHRS No Flag
3. Autopilot Checked
4. Pusher Test
5. CAWS Checked
6. Inertial Separator Check Open
7. De-Ice Check (if ice)
8. Flight Controls Free
9. Trim Set +3
10. Engine Instruments Checked
11. Fuel Quantity Re-check
12. Com/Nav Set
13. EGPWS/Traffic Checked
14. Cabin Pressurization/ECS Checked
15. FD/ALT Set

Taxi

- 1. Taxi Light On
- 2. Brakes Checked
- 3. Flight Instruments Checked

Before Take-Off

- 1. Take-Off Brief Completed

Line Up

- 1. Taxi/Ldg + Recog Lights On
- 2. Strobes On
- 3. Windshield Heat On
- 4. Probes On
- 5. CAWS Check Clear
- 6. Pressurization/ECS Re-Check
- 7. Oxygen Re-Check On
- 8. Flaps set 15° Re-Check
- 9. Condition Lever Flight Idle
- 10. Transponder ALT

After Take-Off

- 1. Gear (positive rate) Up
- 2. Yaw Damper On
- 3. Taxi/Landing Lights Off
- 4. Flaps >100 KIAS Up
- 5. Climb Power Set 36.9 @ ~150 KIAS
- 6. Pressurization Check

Transition

- 1. Altimeter Set 1013
- 2. Recog Lights Off
- 3. Inertial Separator Closed (as req)
- 4. Pax Advisory On
- 5. Pressurization Check
- 6. Clearance Obtain

Top of Climb

- 1. Power Set
- 2. Trend Monitor Completed

Before Descent

- 1. ATIS Received
- 2. Briefing Completed
- 3. Fuel Qty Checked

Top of Descent

- 1. Pressurization Set Field Elev + 500ft

Transition

- 1. Altimeter Set area QNH
- 2. Recog Lights On
- 3. Inertial Separator Open (as req)
- 4. Pax Advisory On
- 5. Pressurization Check

Approach

- 1. Altimeter Check QNH
- 2. Landing Gear Down <177 KIAS
- 3. Flaps As required <163 KIAS
- 4. Taxi/Landing Lights As Required
- 5. WX Radar Standby

Final

- 1. Runway Clear
- 2. Final approach 100-120 KIAS - 150
- 3. Runway threshold 80-100 KIAS - 30 or 400
- 4. Landing Gear 3 Green
- 5. Flaps As Required
- 6. Yaw Damper Off

After Landing

- 1. Condition Lever Ground Idle
- 2. Trims Reset to Green
- 3. Flaps Up
- 4. Windshield Heat Off
- 5. Probes Off
- 6. Strobes Off
- 7. Landing/Recog Lights Off

Shut-Down

- 1. Parking Brake On
- 2. Avionics 1 and 2 Off
- 3. Gen 2 then Gen 1 Off
- 4. ECS Off
- 5. Condition Lever Cut-Off
- 6. Oxygen Lever Off
- 7. EPS Off
- 8. Battery Master Off <10%Ng

REJECTED TAKEOFF (Not engine related)

- 1. PCL Idle
- 2. Reverse As required
- 3. Braking As required

If the aircraft cannot be stopped on the remaining runway:

- 4. PCL Idle
- 5. CONDITION LEVER CUT-OFF
- 6. FUEL EMER Press latch down (if installed) and pull lever up
- 7. MASTER POWER switch EMERGENCY OFF
- 8. After the aircraft has stopped Evacuate.

CAUTION

A REJECTED TAKEOFF MAY CAUSE OVERHEATING OF WHEEL AND BRAKE ASSEMBLY COMPONENTS. THE MAIN WHEELS AND BRAKES SHOULD BE INSPECTED FOR DAMAGE IN ACCORDANCE WITH THE RESPECTIVE COMPONENT MANUALS BEFORE THE NEXT FLIGHT.

ENGINE FAILURE BEFORE ROTATION

- 1. PCL Idle
- 2. Braking As required

If runway overrun or collision is likely, then:

- 3. CONDITION LEVER CUT-OFF
- 4. FUEL EMERG SHUT OF Press latch down and pull lever up
- 5. MASTER POWER switch EMERGENCY OFF
- 6. After the aircraft has stopped Evacuate.

**ENGINE FAILURE AFTER ROTATION - LANDING GEAR
DOWN**

If altitude is not sufficient to select a runway, land straight ahead turning only to avoid obstructions

- 1. Flaps 40
- 2. Final Approach Speed 84 KIAS
- 3. PCL Idle
- 4. CONDITION LEVER CUT-OFF
- 5. FUEL EMERG SHUT OF Press latch down and pull lever up

After touch down:

- 6. MASTER POWER switch EMERGENCY OFF
- 7. After the aircraft has stopped Evacuate.

ENGINE FAILURE AFTER ROTATION - LANDING GEAR UP

- 1. Landing Gear DOWN
- 2. NON ESS OVRD switch NON ESS OVRD (Overhead Panel)
- 3. Flaps 40°
- 4. Final Approach Speed 98 KIAS Flaps 15°
- 5. Final Approach Speed 84 KIAS Flaps 40°
- 6. PCL Idle
- 7. CONDITION LEVER CUT-OFF
- 8. FUEL EMERG SHUT OF Press latch down and pull lever up

After touch down:

- 9. MASTER POWER switch EMERGENCY OFF

ENGINE FAILURE IN FLIGHT - PARTIAL POWER LOSS 1/2

Indications: Uncommanded engine power reduction.

No response to PCL movement.

1. PCL Idle
- 2 Pull upwards and move slowly forward until engine responds
If engine compressor stalls and/or ITT exceeded:
3. Manual Override Leve Retard and move very slowly forward
If engine falls below 50% Ng:
4. STARTER switch Push for 2 seconds

CAUTION

WHEN THE STARTER SWITCH IS PUSHED ON AIRCRAFT WITH A SINGLE BATTERY INSTALLED, THE AUTOPILOT MAY DISENGAGE AND THE AHRS AND EFIS MAY GO OFF-LINE.

ENGINE FAILURE IN FLIGHT - PARTIAL POWER LOSS 2/2

1. Manual Overrid Move forward to required power ($N_g > 80\%$)
2. Land as soon as practical.

CAUTION

WHEN MOR IS IN OPERATION DO NOT PERMIT N_g TO FALL BELOW 65% AND OBSERVE ENGINE LIMITATIONS

1. In descent and until touch down ... maintain at least 75% N_g .

WARNING

DEPENDING ON AIRFIELD CONDITIONS AND AIRCRAFT WEIGHT AND CONFIGURATION, THE AVAILABLE POWER MIGHT NOT BE SUFFICIENT TO ENSURE A GO AROUND.

1. Touch down CONDITION LEVER CUT-OFF/FEATHER

CAUTION

- DO NOT MOVE PCL AFT OF IDLE DETENT.
- TOTAL LANDING DISTANCE IS INCREASED BY A FACTOR OF 2.
- DO NOT USE MOR ON GROUND FOR TAXIING.

ENGINE FAILURE IN FLIGHT - TOTAL POWER LOSS

- 1. PCL Idle
- 2. CONDITION LEVER CUT-OFF
- 3. Remaining fuel Check

If above 13500 ft make an emergency descent

If engine air start is not successful make a forced landing

Reference Speeds

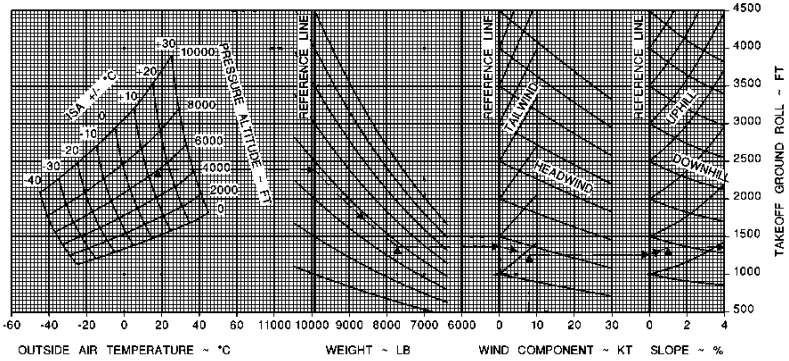
VMO (maximum operating)	240KIAS
VNE (never exceed)	236KIAS
VD (maximum diving speed)	280KIAS
VRE (rotation)	80KIAS
Vx (best angle of climb)	110KIAS
VY (best rate of climb)	120 KIAS
VCLIMB (climb airspeeds)	
0' 160 KIAS	
15,000' 150KIAS	
20,000' 140 KIAS	
25,000' 130KIAS	
30,000' 115KIAS	
VA (design maneuvering)	158 KIAS
VFE (maximum 15°flaps)	163KIAS
VLE (maximum gear extended)	236 KIAS
VLO (maximum gear operating)	177KIAS
VSI (stall, clean)	86KIAS
VSO (stall, landing configuration)	60 KIAS

TAKEOFF GROUND ROLL - FLAPS 30°
(STANDARD UNITS)

WEIGHT ~ LB	V _R ~ KIAS
6400	58
7300	62
8200	66
9100	70
10000	73
10450	75

EXAMPLE:
 ALTITUDE 6000 FT
 OAT 18 °C
 WEIGHT 7716 LB
 HEADWIND COMPONENT 8 KT
 UPHILL COMPONENT 1 %
 TAKEOFF GROUND ROLL 1350 FT

ASSOCIATED CONDITIONS:
 REFER TO THE SPEED SCHEDULE TABLE
 LIFT OFF AT 1.1 V_{S1}
 RUNWAY SURFACE: TARMAC

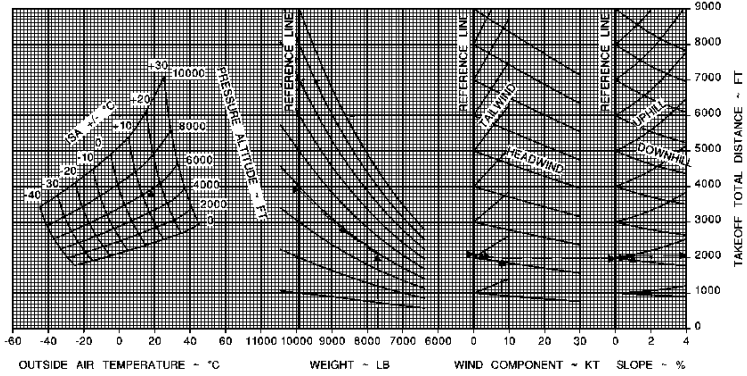


TAKEOFF TOTAL DISTANCE - FLAPS 30°
OVER 50 FT OBSTACLE; (STANDARD UNITS)

ASSOCIATED CONDITIONS:
LIFT OFF AT 1.1 V_{S1}
OBSTACLE AT 1.3 V_{S1}
REFER TO THE SPEED SCHEDULE TABLE
RUNWAY SURFACE: TARMAc

WEIGHT - LB	V _R - KIAS	V _{SMP} - KIAS
6400	58	71
7300	62	76
8200	66	81
9100	70	85
10000	73	89
10450	75	91

EXAMPLE:
ALTITUDE 6000 FT
CAT 18 °C
WEIGHT 7716 LB
HEADWIND COMPONENT 8 KT
UPHILL COMPONENT 1 %
TAKEOFF TOTAL DISTANCE 2050 FT

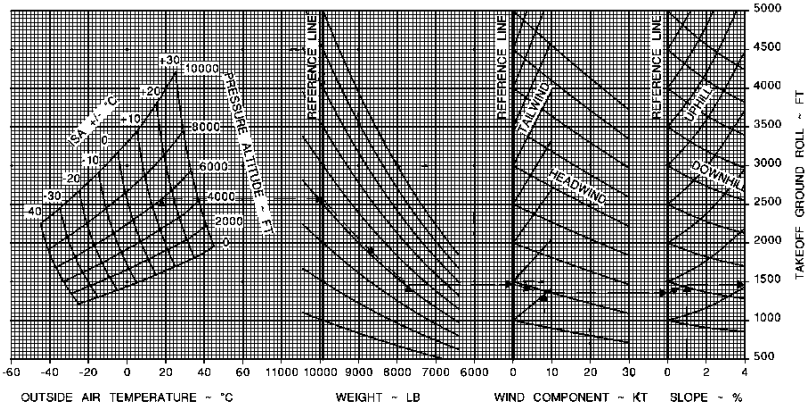


TAKEOFF GROUND ROLL - FLAPS 15°
(STANDARD UNITS)

ASSOCIATED CONDITIONS:
LIFT OFF AT 1.1 V_{st}
REFER TO THE SPEED SCHEDULE TABLE
RUNWAY SURFACE: TARMAc

WEIGHT - LB	V _R ~ KIAS
6400	63
7300	67
8200	71
9100	75
10000	79
10450	81

EXAMPLE:
ALTITUDE 6000 FT
OAT 18 °C
WEIGHT 7716 LB
HEADWIND COMPONENT 8 KT
UPHILL COMPONENT 1 %
TAKEOFF GROUND ROLL 1450 FT

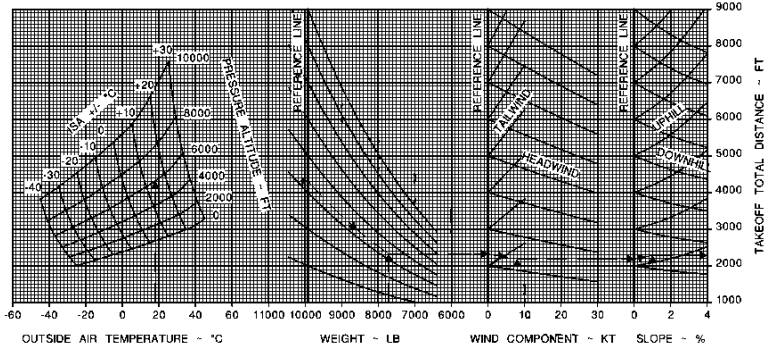


TAKEOFF TOTAL DISTANCE - FLAPS 15°
OVER 50 FT OBSTACLE: (STANDARD UNITS)

ASSOCIATED CONDITIONS:
LIFT OFF AT 1.1 V₃₁
OBSTACLE AT 1.3 V₃₁
REFER TO THE SPEED SCHEDULE TABLE
RUNWAY SURFACE: TARMAc

WEIGHT ~ LB	V _R ~ KIAS	V _{50FT} ~ KIAS
6400	63	78
7300	67	83
8200	71	88
9100	75	93
10000	79	98
10450	81	100

EXAMPLE:
ALTITUDE 6000 FT
OAT 18 °C
WEIGHT 7716 LB
HEADWIND COMPONENT 8 KT
UPHILL COMPONENT 1 %
TAKEOFF TOTAL DISTANCE 2300 FT



MAXIMUM CRUISE POWER

NOTE: IOAT, TORQUE AND FUEL FLOW BASED ON 8000 lb (3629 kg)

ISA (°C)	Altitude (ft)	IOAT (°C)	OAT (°C)	Torque (psi)	Fuel flow		@ 7000 lb (3175 kg)		@ 8000 lb (3629 kg)		@ 9000 lb (4082 kg)		@ 9800 lb (4445 kg)	
					(lb/h)	(kg/h)	IAS (kt)	TAS (kt)	IAS (kt)	TAS (kt)	IAS (kt)	TAS (kt)	IAS (kt)	TAS (kt)
0	0	19	15	36.9	613	278	228	232	227	231	226	231	225	230
	2000	15	11	36.9	594	269	226	237	225	236	224	235	223	234
	4000	12	7	36.9	576	261	224	241	223	240	222	239	221	238
	6000	8	3	36.9	561	254	221	246	221	245	220	244	218	243
	8000	4	-1	36.9	548	249	219	251	219	250	217	249	216	247
	10000	0	-5	36.9	537	244	217	256	216	255	215	253	214	252
	12000	-3	-9	36.9	528	240	215	261	214	260	213	258	211	257
	14000	-7	-13	36.6	518	235	212	266	211	265	210	263	208	261
	16000	-11	-17	35.5	499	226	208	268	206	267	205	265	203	263
	18000	-15	-21	33.7	473	214	201	269	200	266	198	264	197	262
	20000	-19	-25	31.9	448	203	195	269	193	266	191	264	190	262
	22000	-23	-29	30.2	423	192	188	268	187	266	185	264	183	260
	24000	-27	-33	28.4	399	181	182	268	180	265	177	262	175	258
	26000	-31	-37	26.6	374	170	175	267	173	263	170	259	167	255
	28000	-35	-41	24.8	350	159	168	265	165	261	162	256	159	252
30000	-39	-44	23.1	327	148	160	262	157	257	153	252	150	247	

LONG RANGE CRUISE

NOTE: IOAT BASED ON 6000 lb (3629 kg)

ISA (°C)	Altitude (ft)	IOAT (°C)	OAT (°C)	@ 7000 lb (3175 kg)				@ 8000 lb (3629 kg)				@ 9000 lb (4082 kg)				@ 9800 lb (4445 kg)			
				Torque (psl)	Fuel flow (lb/h)(kg/h)	IAS (kt)	TAS (kt)	Torque (psl)	Fuel flow (lb/h)(kg/h)	IAS (kt)	TAS (kt)	Torque (psl)	Fuel flow (lb/h)(kg/h)	IAS (kt)	TAS (kt)	Torque (psl)	Fuel flow (lb/h)(kg/h)	IAS (kt)	TAS (kt)
0	0	19	15	30.0	561 254 211	215	30.0	561 254 210	214	30.0	561 255 209	213	30.0	562 255 207	211				
	2000	15	11	28.8	527 239 206	216	28.9	529 240 205	215	29.0	530 240 204	214	29.1	531 241 203	213				
	4000	11	7	27.5	494 224 200	216	27.8	496 225 200	216	28.1	499 226 199	215	28.2	501 227 198	214				
	6000	7	3	26.4	462 209 195	217	26.8	465 211 194	216	27.1	469 213 194	216	27.4	471 214 193	215				
	8000	3	-1	25.2	433 197 189	217	25.7	438 198 189	217	26.2	442 200 189	216	26.5	445 202 188	216				
	10000	-1	-5	24.0	408 185 184	217	24.8	413 187 184	217	25.2	418 190 184	217	25.6	422 191 183	217				
	12000	-5	-9	22.8	382 173 178	217	23.5	389 176 178	217	24.2	395 179 179	218	24.7	400 181 178	217				
	14000	-9	-13	21.6	357 162 172	218	22.4	365 166 173	217	23.3	373 169 173	218	23.8	379 172 173	217				
	16000	-13	-17	20.4	334 151 166	218	21.4	343 158 167	217	22.3	353 160 168	218	23.0	359 163 168	218				
	18000	-17	-21	19.2	311 141 160	214	20.3	322 146 161	216	21.4	333 151 162	217	22.1	340 154 162	218				
	20000	-21	-25	18.0	290 132 153	212	19.2	302 137 156	216	20.4	315 143 158	217	21.2	323 147 157	217				
	22000	-25	-29	16.8	270 122 146	210	18.1	284 129 149	213	19.4	298 135 150	215	20.3	307 139 151	216				
	24000	-29	-33	15.6	251 114 138	207	17.0	268 121 142	211	18.5	281 128 144	214	19.4	292 132 145	215				
	26000	-33	-37	14.4	232 105 132	203	16.0	249 113 135	208	17.5	266 120 138	212	18.6	277 126 139	213				
	28000	-37	-41	13.2	214 97 124	198	14.9	232 105 128	204	16.6	260 114 131	209	17.7	264 120 132	211				
	30000	-41	-44	12.0	198 89 118	192	13.8	216 98 120	199	15.6	236 107 124	204	16.9	251 114 125	207				

**LANDING TOTAL DISTANCE - FLAPS 40°
FROM 50 FT; (STANDARD UNITS)**

ASSOCIATED CONDITIONS:

APPROACH AT 1.3 V_{S1}

REFER TO THE SPEED SCHEDULE TABLE

AVERAGE BRAKING TECHNIQUE

GROUND IDLE AFTER TOUCH DOWN

RUNWAY SURFACE: TARMAc

SEE SECTION 2 - LIMITATIONS

WEIGHT ~ LB	V _{APP} ~ KIAS
8400	67
7300	72
8200	76
9100	80
10000	84

EXAMPLE:

ALTITUDE ~ FT

OAT ~ °C

WEIGHT ~ LB

HEADWIND COMPONENT ~ KT

UPHILL COMPONENT ~ %

LANDING TOTAL DISTANCE ~ FT

6000 FT

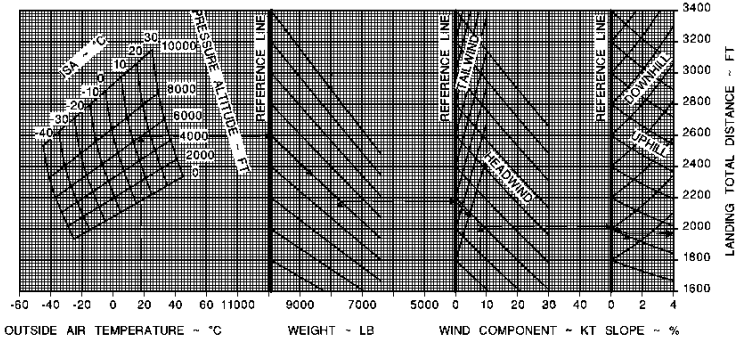
18 °C

7716 LB

8 KT

1 %

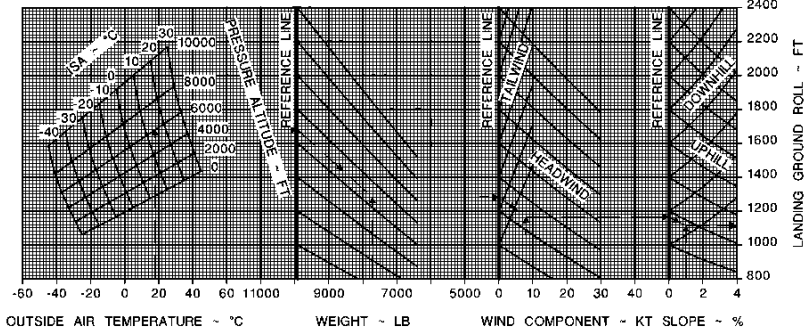
1970 FT



LANDING GROUND ROLL - FLAPS 40° (STANDARD UNITS)

ASSOCIATED CONDITIONS:
 AVERAGE BRAKING TECHNIQUE
 GROUND IDLE AFTER TOUCH DOWN
 RUNWAY SURFACE: TARMAAC
 SEE SECTION 2 - LIMITATIONS

EXAMPLE:
 ALTITUDE ~ FT 6000 FT
 OAT ~ °C 18 °C
 WEIGHT ~ LB 7716 LB
 HEADWIND COMPONENT ~ KT 8 KT
 UPHILL COMPONENT ~ % 1 %
 LANDING GROUND ROLL ~ FT 1110 FT



See FLIGHT IN ICING CONDITIONS para for info on effect of icing

LANDING TOTAL DISTANCE WITH REVERSE THRUST - FLAPS 40° FROM 50 FT; (STANDARD UNITS)

ASSOCIATED CONDITIONS:

APPROACH AT 1.3 V_{S1}

REFER TO THE SPEED SCHEDULE TABLE

AVERAGE BRAKING TECHNIQUE

FULL REVERSE THRUST AFTER TOUCH DOWN

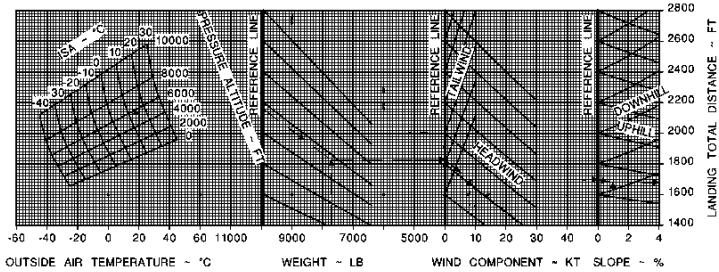
RUNWAY SURFACE: TARMAAC

SEE SECTION 2 - LIMITATIONS

WEIGHT ~ LB	V _{APP} ~ KIAS
8400	67
7300	72
6200	76
5100	80
4000	84

EXAMPLE:

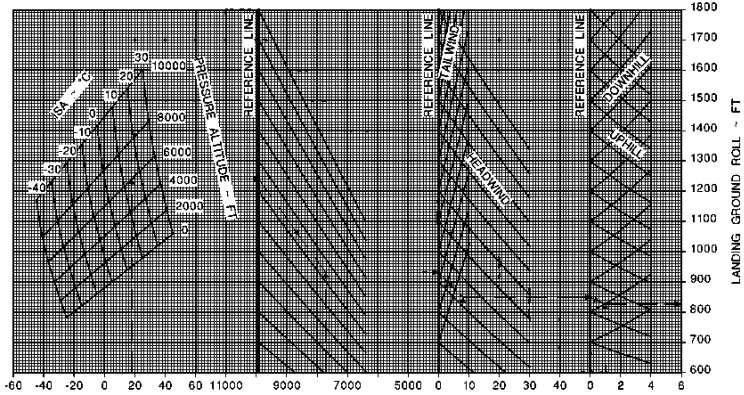
ALTITUDE ~ FT	6000 FT
OAT ~ °C	18 °C
WEIGHT ~ LB	7716 LB
HEADWIND COMPONENT ~ KT	8 KT
UPHILL COMPONENT ~ %	1 %
LANDING TOTAL DISTANCE ~ FT	1680 FT



LANDING GROUND ROLL WITH REVERSE THRUST - FLAPS 40°
(STANDARD UNITS)

ASSOCIATED CONDITIONS:
 AVERAGE BRAKING TECHNIQUE
 FULL REVERSE THRUST AFTER TOUCH DOWN
 RUNWAY SURFACE: TARMAAC
 SEE SECTION 2 - LIMITATIONS

EXAMPLE:
 ALTITUDE - FT 6000 FT
 OAT - °C 18 °C
 WEIGHT - LB 7716 LB
 HEADWIND COMPONENT - KT 8 KT
 UPHILL COMPONENT - % 1 %
 LANDING GROUND ROLL - FT 825 FT



See FLIGHT IN ICING CONDITIONS para for info on effect of Icing

