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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. Pax Oxy Supply Auto
5. Oxygen Mask Checked
6. Circuit Breakers Checked
7. EPS Check + Arm
8. Ldg Gear Handle Down
9. Trim Inter Switch Normal
10. Flap Inter Switch Normal
11. MOR Lever Off
12. PCL Lever Idle
13. Condition Lever Cut Off
14. Flap Lever 0°
15. Fuel Emerg Shutoff Full In
16. ECS Emerg Shutoff Full In
17. Doors/DV Windows Closed

18. Battery 1 & 2 Switches	On
19. Battery Voltage	>24V
20. Avionics 1	On
21. ATIS	Received
22. Altimeters	Set
23. Clearance	Obtain
24. Avionics 1	Off
25. 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.

26. Fuel Pumps	Audio/Visual Check
27. Lamp	Checked
28. Fire Warning	Checked
29. EIS	Checked
30. 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. GPS Flight Plan Set
12. Standby Bus OFF
13. Air Conditioning As required
14. ECS Auto
15. Pressurization Set Cruise Alt +500ft
16. 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. Flaps set 15° Re-Check
- 8. Condition Lever Flight Idle
- 9. 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 - 15°
- 3. Runway threshold 80-100 KIAS - 30° or 40°
- 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. EPS Off
- 7. 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 EMERG SHUT OFF Press latch and pull lever
- 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 OFF Press latch and pull lever
- 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 OFF Press latch and pull lever

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 OFF Press latch and pull lever

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. Manual Override 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

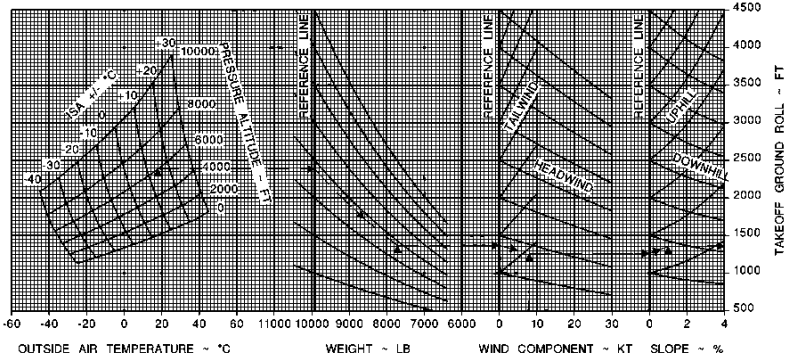
VMO (maximum operating)	240KIAS
VNE (never exceed)	236KIAS
VD (maximum diving speed)	280KIAS
VRE (rotation)	80KIAS
Vx (best angle of climb)	110KIAS
VY (best rate of climb)	120 KIAS
VCLIMB (climb airspeeds)	
0' 160 KIAS	
15,000' 150KIAS	
20,000' 140 KIAS	
25,000' 130KIAS	
30,000' 115KIAS	
VA (design maneuvering)	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)

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

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

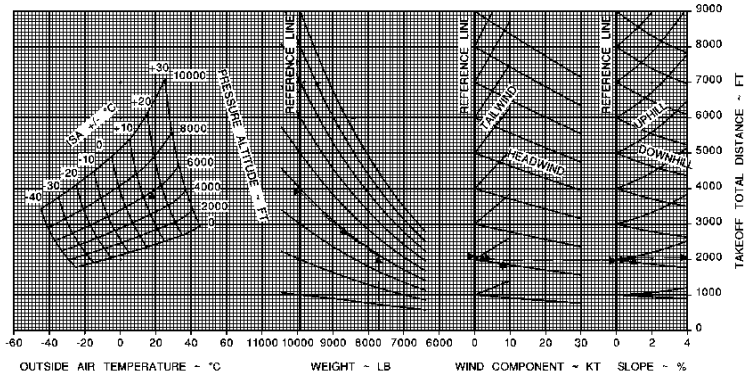


TAKEOFF TOTAL DISTANCE - FLAPS 30°
OVER 50 FT OBSTACLE; (STANDARD UNITS)

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

WEIGHT - LB	V _R - KIAS	V _{50FT} - 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

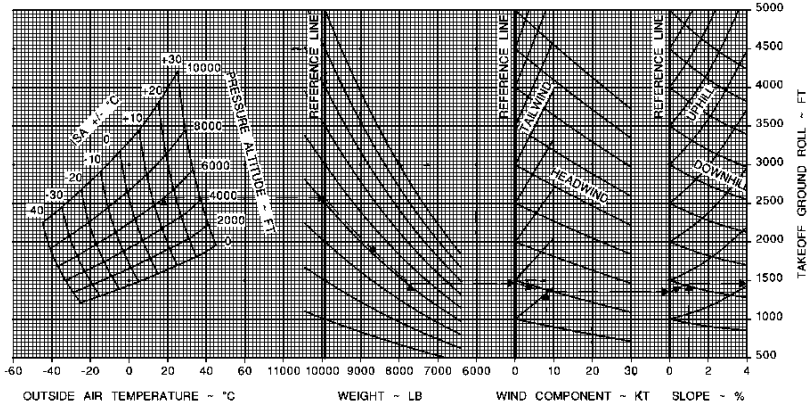


TAKEOFF GROUND ROLL - FLAPS 15°
(STANDARD UNITS)

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

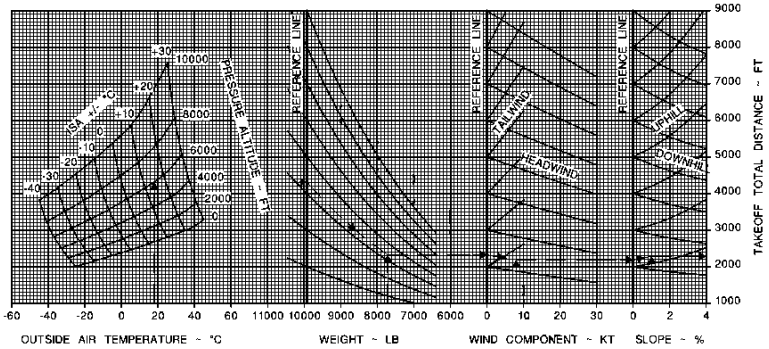


TAKEOFF TOTAL DISTANCE - FLAPS 15°
OVER 50 FT OBSTACLE; (STANDARD UNITS)

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

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 (lb/h) (kg/h)		@ 7000 lb (3175 kg)		@ 8000 lb (3629 kg)		@ 9000 lb (4082 kg)		@ 9800 lb (4445 kg)	
							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 8000 lb (3629 kg)

ISA (°C)	Altitude (ft)	IOAT (°C)	OAT (°C)	@ 7000 lb (3175 kg)				@ 8000 lb (3629 kg)				@ 9000 lb (4082 kg)				@ 8000 lb (4445 kg)							
				Torque (psl)	Fuel flow (lb/h)	IAS (kt)	TAS (kt)	Torque (psl)	Fuel flow (lb/h)	IAS (kt)	TAS (kt)	Torque (psl)	Fuel flow (lb/h)	IAS (kt)	TAS (kt)	Torque (psl)	Fuel flow (lb/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	24.6	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	216	24.7	400	181	178	217
	14000	-9	-13	21.6	357	162	172	216	22.4	365	168	173	217	23.3	373	169	173	216	23.8	379	172	173	217
	16000	-13	-17	20.4	334	151	166	216	21.4	343	156	167	217	22.3	353	160	168	216	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	155	215	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	18.8	277	128	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)

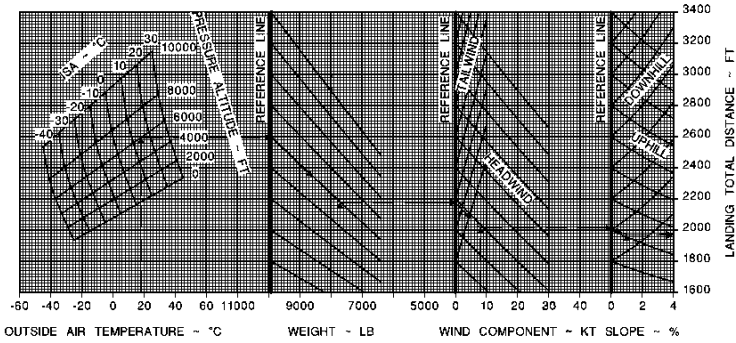
ASSOCIATED CONDITIONS:

APPROACH AT 1.3 V_{SI}
REFER TO THE SPEED SCHEDULE TABLE
AVERAGE BRAKING TECHNIQUE
GROUND IDLE AFTER TOUCH DOWN
RUNWAY SURFACE: TARMAAC
SEE SECTION 2 - LIMITATIONS

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

EXAMPLE:

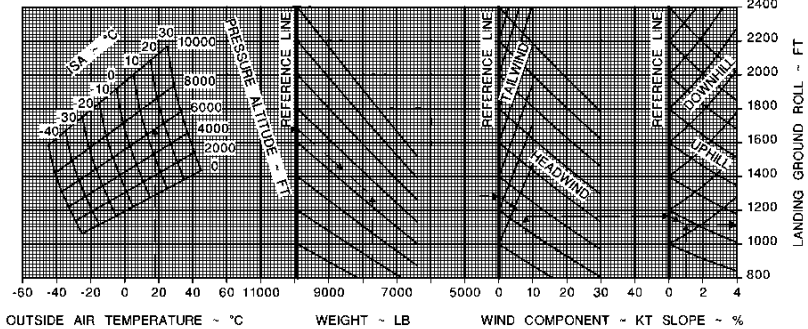
ALTITUDE - FT 6000 FT
OAT - °C 18 °C
WEIGHT - LB 7716 LB
HEADWIND COMPONENT - KT 8 KT
UPHILL COMPONENT - % 1 %
LANDING TOTAL DISTANCE - FT 1970 FT



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

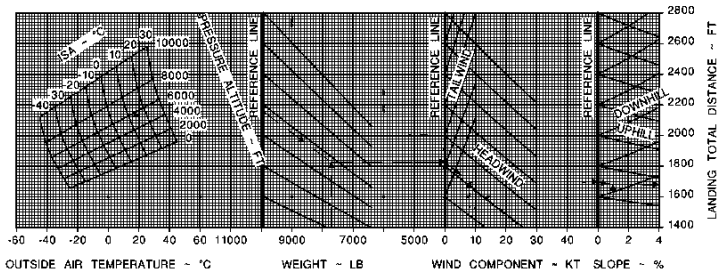
RUNWAY SURFACE: TARMAc

SEE SECTION 2 - LIMITATIONS

WEIGHT ~ LB	V _{APP} ~ KIAS
8400	87
7300	72
6200	76
9100	80
10000	84

EXAMPLE:

ALTITUDE ~ FT	8000 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)

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

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

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

