Appendix: Engine Data Tables

Piston

T. Bose, *Airbreathing Propulsion: An Introduction*,
Springer Aerospace Technology, DOI 10.1007/978-1-4614-3532-7,

Country	Company	Model No.	No. of Cyl.	Cyl. Dia.	Stroke length	Displ. Vol.	Take-off power	R.P.M. (k-rpm)	Weight (KG)	Spec. fuel consumption (mu-g/J)	Volume compression ratio	Otto/ diesel, No. of stroke	Remarks
CZ	AVIA	M337	6	105	115	5.97	170	2.6	148	72.7	6.3	O4	INV INLINE
CZ	AVIA	MINR6111	6			5.97	125	2.3	127	83.1		O4	
CZ	AVIA	M137	6	105	115	5.97	140	2.6	137	77.4	6.3	O4	
CZ	AVIA	M332	4	105	101	3.98	100	2.4	102	77.4	6.3	O4	
CZ	AVIA	M462	9	105	130	10.16	190	1.9		83.1	6.4	O4	
FR	RECTIM	4AR1200	4				40	3.6	61		7	O4	USES VW ENGINE
FR	RECTIM	4AR1600	4				61	3.6	64		8	O4	USES VW ENGINE
DE	BMW	HORNET	9	156	162	27.5	335	1.8	350	82	5	O4	
DE	JUNKER	JUMO205E	6	105	160	16.6	447	2	521	59.6	8.2	D4	DIESEL
DE	LIMBAC	SL1700E	4	88	69	1.68	61	3.2	73		8	O4	HORIZ OPPOSED
DE	PIEPER	STAM1500	4			1.5	45		60			O4	MODIFIED VW
DE	PULCH	003A	6	90	70	2.7	150	5	110			O4	RADIAL
DE	PULCH	003B	6	94	70	2.9	180	5.5	120			O4	RADIAL
PL	JANWSK	SAT500	2	70	65	0.5	25	4	27	111.5	8.5	O4	HORIZ OPPOSED
PL	BORZEC	2RB	4	70	35	0.54	16	4.5	15	126.7	7.2	O4	HORIZ OPPOSED
PL	WSKPZL	AI14RA	9	105	130	10.16	132	1.7	197	76.4	5.9	O4	INLINE RADIAL
PL	PZLRZE	PZL-3S	7	155.5	155	20.6	550	2.1	411	105	6.4	O4	RADIAL
PL	WSKPZL	ASZ62IR	9	155.5		29.87	611	2.1	579	110	6.4	O4	
PL	PZLFRA	2A-120C	2	117.5	88.9	1.91	60	3.2	75		8.5	O4	HORIZ OPPOSED
PL	PZLFRA	4A-235B	4	117.5	88.9	3.85	125	2.8	118		8.5	O4	HORIZ OPPOSED

PL	PZLFRA	6A-350C	6	117.5	88.9	5.74	220	2.8	167		10.5	O4	HORIZ OPPOSED
PL	PZLFRA	6AS-350A	6	117.5	88.9	5.74	250	2.8	189		7.4	O4	HORIZ OPPOSED
PL	PZLFRA	6A-350D	6	117.5	88.9	5.74	235	3.2	145		10.5	O4	HORIZ OPP HELE E
PL	PZLFRA	6V-350B	6	117.5	88.9	5.74	235	3.2	144		10.5	O4	VERT OPPO-HELE E
RU	ASH	ASH-62M	9	155.5		29.87	738	2	567	71.5	6.4	O4	Superch.
RU	ASH	ASH-82T	14	155.5	155	41.2	1,630	2.4	1,020		6.9	O4	
RU	ASH	ASH-82V	14	155.5	155	41.2	1,530	2.4	1,070			O4	
RU	IVCHEN	AI-14RT	9	105	130	10.2	223	2.4	217	74.5	6.2	O4	Superch.,An-14, Yak-18A
RU	IVCHEN	AI-14VF	9	105	130	10.2	208	2.4	242	78.2	6.2	O4	Heli
RU	IVCHEN	AI-26V	9	155.5	150	20.6	428	2.2	450	83.8	6.4	O4	Heli
RU	VEDEN	M14V26	9	105	130	10.2	242	2.8	245	78.2	6.2	O4	Heli,Superch.
UK	LEONID	MAJ755/1	14	122	112	18.3	593	2.9	483	95	6.8	O4	Heli
UK	LEONID	524/1	9	122	112	11.8	388	3.2	340	83.8	6.5	O4	Heli
UK	LEONID	531/8	9	122	122	12.8	71	2.6	84	87.6	7	O4	
UK	ROLASN	ARDEMMKX		83	69	1.5	53	3.6			8.5	O4	HORIZ OPPOSED
UK	ROLASN	ARDEMKXI		85.5	69	1.5	55	3.6	72		8.5	O4	HORIZ OPPOSED
UK	ROLSRO	CO0-240A	4	122.5	98.4	3.93	98	2.5	112	71	8.5	O4	HORIZ OPPOSED
UK	ROLSRO	CO10-368	4	133.4	108	6.02	145		136	74.4	8.2	O4	
UK	ROLSRO	CO-O-200	4	103	98	3.3	74	2.7	86	92.8	7	O4	
UK	ROLSRO	CO-O-240	4	112.5	98.4	3.9	97	2.8	97	84.6	8.5	O4	
UK	ROLSRO	CO-O-300	6	103	98	4.9	108	2.7	122	85.7	7	O4	
UK	WESLAK	TYP274-6	2	66	40	0.27	18	6.5	7	186		O4	SIMULT FIRING

(continued)

Country	Company	Model No.	No. of Cyl.	Cyl. Dia.	Stroke length	Displ. Vol.	Take-off power	R.P.M. (k-rpm)	Weight (KG)	Spec. fuel consumption (mu-g/J)	Volume compression ratio	Otto/ diesel, No. of stroke	Remarks
UK	WESLAK	TYPE430	2				40		11	149		O2	2 STROKE
UK	WESLAK	TYPE1527	4	90	60	1.52	71	5.5	45	84.5		O4	
UK	NAPIER		12	152	187	41.1	2,668	2	1,630	59.6	27	D4	DIESEL
US	AVLYCO	0-235C	4	111	98.4	3.85	115	2.7	98		8.5	O4	
US	AVLYCO	0-235H	4	111	98.4	3.85	115	2.6	96		8.5	O4	
US	AVLYCO	O-235-L	4	111	98.4	3.85	115	2.7	98		8.5	O4	
US	AVLYCO	O290-D2C	4	124	98	4.7	104	2.8	120	78.2	7	O4	
US	AVLYCO	O-320-A	4	130	98.4	5.2	150	2.7	110		7	O4	
US	AVLYCO	O-320-D	4	130	98.4	5.2	160	2.7	114		8.5	O4	
US	AVLYCO	0-320-E	4	130	98.4	5.2	160	2.7	113		7	O4	
US	SALYCO	O-320-H	4	130	98	5.2	160	2.7	115		9	O4	
US	AVLYCO	AEO320-E	4	130	98.4	5.2	150	2.7	117		7	O4	
US	AVLYCO	O-360-A	4	130	111	5.92	180	2.7	118		8.5	O4	
US	AVLYCO	LO-360-A	4	130	111	5.92	180	2.7	120		8.5	O4	
US	AVLYCO	O-360-C	4	130	111	5.92	180	2.7	116		8.5	O4	
US	AVLYCO	O-360-E	4	130	111	5.92	180	2.7	122		9	O4	
US	AVLVCO	LO-360-E	4	130	111	5.92	180	2.7	122		9	O4	
US	AVLYCO	O-360-F	4	130	111	5.92	180	2.7	122		8.5	O4	
US	AVLYCO	IV-360-A	4	130	111	5.92	180	2.7	124		8.5	O4	
US	AVLYCO	TO-360-C	4	130	111	5.92	210	2.6	154		8.5	O4	
US	AVLYCO	IO-360-A	4	130	111	5.92	200	2.7	133		8.5	O4	
US	AVLYCO	IO-360-B	4	130	111	5.92	180		122		8.5	O4	
US	AVLYCO	IO-350-C	4	130	111	5.92	200		134		8.7	O4	
US	AVLYCO	HI0360-C	4	130	111	5.92	205		132		8.7	O4	
US	AVLYCO	HIO360-D	4	130	111	5.92	190		132		10	O4	
US	AVLYCO	HIO360-E	4	130	111,0	5.92	190		132		8	O4	

US	AVLYCO	TIO360-E	4	130	111,0	5.7	181	2.6	181	84.6	7.3	O4	
US	AVLYCO	AEIO360A	4	130	111	5.92	200		139		8.7	O4	
US	AVLYCO	AEIO360B	4	130	111	5.92	180		125		8.5	O4	
US	AVLYCO	AEIO360H	4	130	111	5.92	180		122		8.5	O4	
US	AVLYCO	O-540-B	6	130	111	8.86	235	2.6	166		7.2	O4	
US	AVLYCO	O-540-E	6	130	111	8.86	260	2.7	167		8.5	O4	
US	AVLYCO	O-540-G	6	130	111	8.86	260		174		8.5	O4	
US	AVLYCO	O-540-J	6	130	111	8.86	235	2.4	162		8.5	O4	
US	AVLYCO	VO435-23	6	124	98	7.5	194	3.4	181	93.1	7.3	O4	Mil.Heli.
US	AVLYCO	TVO-435	6	124	98	7.5	201	3.2	210	84.6	7.3	O4	Superch.
US	AVLYCO	GO-480	6	124	98	7.9	220	3.4	198	78.2	8.7	O4	Horiz.oop.
US	AVLYCO	IGSO480	6	130	98	7.9	253	3.4	218	81.2	7.9	O4	Horiz.oop.
US	AVLYCO	VO-540-B	6	130	111	8.86	305	3.2	202		7.3	O4	
US	AVLYCO	IGSO540	6	130	111	8.6	283	3.4	241	81.2	7.3	O4	Horiz.opp.
US	AVLYCO	VO-540-C	6	130	111	8.86	305	3.3	200		8.7	O4	
US	AVLYCO	IO-540-C	6	130	111	8.86	250	2.6	170		8.7	O4	
US	AVLYCO	IO-540-E	6	130	111	8.86	290	2.6	187		8.5	O4	
US	AVLYCO	IO-540-K	6	130	111	8.86	300	2.7	201		8.5	O4	
US	AVLYCO	IO-540-S	6	130	111	8.86	300	2.7	201		8.7	O4	
US	AVLYCO	IO-540-T	6	130	111	8.86	260	2.7	171		8.5	O4	
US	AVLYCO	AEIO540D	6	130	111	8.86	260	2.7	174		8.5	O4	
US	AVLYCO	TIO540-A	6	130	111	8.86	310	2.7	232		7.3	O4	
US	AVLYCO	TIO540-C	6	130	111	8.86	250	2.6	205		7.2	O4	
US	AVLYCO	TIO540-F	6	130	111	8.86	325	2.6	233		7.3	O4	
US	AVLYCO	LTIO540F	6	130	111	8.86	325	2.6	233		7.3	O4	
US	AVLYCO	TIO540-J	6	130	111	8.86	350	2.6	235		7.3	O4	
US	AVLYCO	LTIO540J	6	130	111	8.86	350	2.6	235		7.3	O4	
US	AVLYCO	TIO540-R	6	130	111	8.86	350	2.5	238		7.3	O4	
US	AVLYCO	TIO540-S	6	130	111	8.86	300	2.7	228		7.3	O4	

(continued)

Country	Company	Model No.	No. of Cyl.	Cyl. Dia.	Stroke length	Displ. Vol.	Take-off power	R.P.M. (k-rpm)	Weight (KG)	Spec. fuel consumption (mu-g/J)	Volume compression ratio	Otto/ diesel, No. of stroke	Remarks
US	AVLYCO	TIO541-E	6	130	111	8.86	380	2.9	270		7.3	O4	
US	AVLYCO	TIGO541D	6	130	111	8.86	450	3.2	311		7.3	O4	
US	AVLYCO	TIG0541E	6	130	111	8.86	425	3.2	319		7.3	O4	
US	AVLYCO	IO-720-A	8	130	111	11.84	400	2.7	257		8.7	O4	
US	AVLYCO	IO-720-B	8	130	111	11.84	400	2.7	252		8.7	O4	
US	CTOTIA	460	1	88	75	0.46	20	3.5	14			O2	2 STROKE
US	FRANK	SPORT4	4	117	89	3.8	97	2.8	121	82.7	8.5	O4	Horiz.opp.
US	FRANK	4A235	4	117	89	3.8	93	2.8	117	82.7	8.5	O4	Horiz.opp.
US	FRANK	6A-335A	6	114	89	5.5	134	2.8	144	83.8	7	O4	Horiz.opp.
US	FRANK	6AS335A	6	114	89	5.5	194	3.2	157	81.2	7	O4	Horiz.opp.
US	FRANK	6A-350	6	117	89	5.6	164	2.8	145	77.5	10.5	O4	Horiz.opp.
US	FRANK	6AS350	6	117	89	5.6	186	2.8	171	84.5	7.4	O4	Horiz.opp.
US	JACOBS	R-755-A	7	133	127	12.3	300	2.2	229			O4	RADIAL
US	TELCON	O-200-A	4	103.2	98.4	3.28	100	2.8	98		7	O4	
US	TELCON	O-300-A	6	103	98	4.9	108	2.7	121	85.7	7	O4	Horiz.opp.
US	TELCON	IO-346	4	133	102	5.6	123	2.7	134	81.2	7.5	O4	Horiz.opp.
US	TELCON	IO-360-A	6	113	98	5.7	156	2.8	133	74.5	8.5	O4	Horiz.opp.
US	TELCON	IO-360-B	6	113	98	5.7	134	2.7	151		6.5	O4	Horiz.opp.
US	TELCON	IO-360-D	6	112.5	98.4	5.9	210	2.8	148		8.5	O4	
US	TELCON	TSIO360A	6	113	98	5.7	156	2.8	136	74.5	7.5	O4	Horiz.opp.
US	TELCON	TSIO360D	6	112.5	98	5.9	225	2.8	136		7.5	O4	
US	TELCON	TSIO360E	6	112.5	98.4	5.9	200	2.6	175		7.5	O4	
US	TELCON	TSIO360F	6	112.5	98.4	5.9	200	2.6	175		7.5	O4	
US	TELCON	Tia4-180	4	123	92	4.3	134	4	120	76	9	O4	Horiz.opp.
US	TELCON	Tia6-260	6	123	92	6.5	194	4	160	76	7.5	O4	Horiz.opp.
US	TELCON	TiT6-260	6	123	92	6.5	194	4	160	85.7	8	O4	Horiz.opp.

US	TELCON	TiT6-285	6	123	92	6.5	212	4	182	85.7	8	O4	Horiz.opp.
US	TELCON	TiT6-320	6	123	92	6.5	238	4	187	85.7	8	O4	Horiz.opp.
US	TELCON	TiT8-450	8	123	92	8.6	335	4.5	233	76	8	O4	Horiz.opp.
US	TELCON	IO-470-H	6	127	101.6	7.7	260	2.6	203		8.6	O4	
US	TELCON	O-470-R	6	127	101.6	7.7	230	2.6	193		7	O4	
US	TELCON	O-470-S	6	127	101	7.7	230	2.6	193		7	O4	
US	TELCON	A65	4	98	92	2.8	48	2.3	77	83.8	6.3	O4	Horiz.opp.
US	TELCON	C-90	4	103	98	3.3	71	2.6	84	87.6	7	O4	Horiz.opp.
US	TELCON	GIO470A	6	127	102	7.7	231	3.2	229	89.4	7.7	O4	Horiz.opp.
US	TELDYN	TSIO470D	6	127	101.6	7.7	260	2.6	232		7.5	O4	
US	TELDYN	IO-520-A	6	133	101.6	8.5	285	2.7	216		8.5	O4	
US	TELDYN	IO-520-B	6	133	101.6	8.5	285	2.7	207		8.5	O4	
US	TELDYN	IO-520-D	6	133	101.6	8.5	285	2.7	208		8.5	O4	
US	TELDYN	IO-520-M	6	133	101.6	8.5	285	2.7	188		8.5	O4	
US	TELDYN	TSIO520B	6	133	101.6	8.5	285	2.7	219		8.5	O4	
US	TELDYN	TSIO520C	6	133	101.6	8.5	285	2.7	209		7.5	O4	
US	TELDYN	TSIO520E	6	133	101.6	8.5	300	2.7	219		7.5	O4	
US	TELDYN	TSIO520J	6	133	101.6	8.5	310	2.7	221		7.5	O4	
US	TELDYN	TSIO50-N	6	133	101.6	8.5	310	2.7	221		7.5	O4	
US	TELDYN	TSIO520L	6	133	101.6	8.5	310	2.7	245		7.5	O4	
US	TELDYN	TSIO520M	6	133	101.6	8.5	285	2.6	198		7.5	O4	
US	TELDYN	TSIO520R	6	133	101.6	8.5	285	2.6	198		7.5	O4	
US	TELDYN	GTSI520C	6	133	101.6	8.5	340	3.2	253		7.5	O4	
US	TELDYN	GTSI520F	6	133	101.6	8.5	435	3.4	290		7.5	O4	
US	TELDYN	GTSI520K	6	133	101.6	8.5	435	3.4	290		7.5	O4	
US	TELDYN	GTSI520H	6	133	101.6	8.5	375	3.4	250		7.5	O4	
US	TELDYN	GTSI520L	6	133	101.6	8.5	375	3.4	250		7.5	O4	
US	TELDYN	GTSI520M	6	133	101.6	8.5	375	3.4	250		7.5	O4	
US	TELDYN	C90-16F	4	103.2	98.4	3.28	90	2.5	85		7	O4	

(continued)

Country	Company	Model No.	No. of Cyl.	Cyl. Dia.	Stroke length	Displ. Vol.	Take-off power	R.P.M. (k-rpm)	Weight (KG)	Spec. fuel consumption (mu-g/J)	Volume compression ratio	Otto/ diesel, No. of stroke	Remarks
US	TELDYN	O-200-B	4	103.2	98.4	3.28	100	2.8	100		7	O4	
US	TELDYN	TSIO360A	6	112.5	98.4	5.9	210	2.8	152		7.5	O4	
US	TELDYN	IO-470-D	6	127	101.6	7.7	260	2.6	193		8.6	O4	
US	TELDYN	IO-520-B	6	133	101.6	8.5	285	2.7	207		8.5	O4	
US	TELDYN	GTSI520D	6	133	101.6	8.5	375	3.4	250		7.5	O4	
US	TELDYN	GTSI520G	6	133	101.6	8.5	375	3.4	253		7.5	O4	
US	TELDYN	4-180	4	123.8	92.1	4.44	135	3.6	120		9	O4	
US	TELDYN	6-285A	6	123.8	92.1	6.65	214	3.7	161		9	O4	
US	TELDYN	T6-285	6	123.8	92.1	6.65	214	3.6	182		8	O4	
US	TELDYN	6-320	6	123.8	92.1	6.65	240	4	161		9.6	O4	
US	TELDYN	T6-320	6	123.8	92.1	6.65	240	4	187		8	O4	
US	TELDYN	T8-450	6	123.8	92.1	8.88	338	4	233		8	O4	
US	WRIGHT	R1820-76	9	156	174	30	1,077	2.7	627	82	7.2	O4	SIKORSKY
US	WRIGHT	R3350-34	18	156	160	55	2,460	2.9	1,600	68.9	6.7	O4	SUPCONSTEL G
US	WRIGHT	R3350-40	18	155	160	54.9	2,758	2.9	1,667	63.3			
US	LYCOM	R1300-3	7	156	160	21.4	605	2.6	490	82	7.2	O4	
US	P&W	2800CB16	18	146	152	45.7	1,815	2.8	1,090	82		O4	

Turbojet

Country	Company	Model No.	Mass flow rate (kg/s)	Take-off thrust(kN)	Overall compression ratio	Turbine inlet temp. (Deg. C)	Diameter(m)	Weight(kg)	Specific fuel consumption (milligram/N-s)	By-pass ratio	No. of spools	No. of axial fan stages	Fan pressure	No. of compressor stages	krpm
CA	UACL	JT15D-1	34.1	9.8	10	960	0.69	230	15.29	3.3	2	1	1.5		
CA	UACL	JT15D-4	34.1	10.6	10	960			15.92	3.3	2	1	1.5		
CA	ORENDA	14	59	33.3	6		1.09	1,120	25.5		1			10	7.8
CA		ORENDA14	59	33.3	6		1.09	1,120	25.48		2			10	7.8
CA		IROQUOIS	152	98.1	8		1.19	2,270			2				
CZ	MOTORLET	M701	16.9	8.7	4.3				32.28		1			1	15.4
CZ	MOTORLET	AI25													
FR	MICROTUR	COGUA022		0.8				28	35.4		1				48.5
FR	SNECMA	ATAR101E	24.9	34.3	5.5						1			8	8.4
FR	SNECMA	ATAR 8	26	43.1	6.9						1			9	8.4
FR	SNECMA	SUPRATAR	49		6.2				27.5		1			5	
FR	SNECMA	ATAR09C3	68	42	5.7	890	0.79	1,409	28.63		1			9	8.4
FR	SNECMA	TF306	122	52	17	1,100	1.2	1,760	18.42		2	3	2	6	9.6
FR	TURBOMEC	ARBIZO3B	6	3.2	5.5			115	31.44		1			1	32
FR	MICROTUR	ECLAIR		0.8				35			1			1	47
FR	SERMEL	TRS18		1			0.32	30	41.06		1			1	
FR	TURBOMEC	ASTFAN2G		6.9				285	10.76	7					
FR	TURBOMEC	MARBORE	9.8	4.7	3.8	613		140	30.86		1			1	21.5
FR	TURBOMEC	TR281		3.6			0.41	105	27.75		1	1		1	32.3
FR	TUR-SNEC	LARZAC03	27	12.3	10		0.45	265	19.12	1.2	2	2		4	22.3
FR	TUR-SNEC	LARZAC04	27.6	13.2	10.7	1,130	0.45	290	20.1	1.1	2	2		4	22.8
FR	TURBOMEC	MARBORII	7.6	3.9	4		0.57	133	30.58		1			1	22.6
FR	TURBOMEC	PALAS	3.1	1.6	4		0.41	72	31.15		1			1	34
FR	TURBOMEC	GOURDON		6.4			0.57	104	28.28		1	1		1	
FR	TURBOMEC	GABIZO	14.8	10.8	5.1		0.67	172	29.45		1	1		1	
FR		DASSALR7	24.9	13.3	3.8		0.69	340	30.9		1			7	11.8
FR		HISPR804	26	14.7	4.8		0.69	305	30.24		1			7	12
DE	MTU	6012-C	1		3.1			46			1			4	45
DE	HEINKEL	HES053	100	63.8	7.4		1.1	1,570	26.33		1			11	6
DD		PIRNA104	50	30.9			0.98	1,000	24.07		1			12	
IN	HAL	HJE-2500	20.4	11.1	4.2		0.66	265	27.75		1			1	12.5
IT	FIAT	4002.01	6.3	3.2	4		0.57	88	34.26		1			1	25
IT	FIAT	4032	50	26.5	5.5		1.01	490	27.75		1			9	8.2
IT	FIAT	ORPH803	38.2	22.3	4.4		0.82	372	30.02		1			7	10
IT	FIAT	J79GE19	77	52.8	13.5	1,038	0.99	1,745	23.79		1			17	
IT	ALPHSROM	J85GE13A	20	18.2	7		0.53	271	35.71		1			8	
IT	PIAGGIO	VIPER500	23.9	15	5.6	892	0.49	347	28.6		1			8	13.8
JP	IHI	J3-IHI-7	25.4	13.7	4.5		0.63	430	29.74		1			8	
JP	IHI	J3-IHI-8	25.4	15.2	4.5		0.63	430	29.74		1			8	13
JP	IHI	JR100F	27.5	14	3.9	850	0.6	156	32.56		1			1	
JP	IHI	JR100H	27.5	14.9	3.9	850	0.6	156	32		1			1	
JP	IHI	JR200	37.2	17.9	4	850		127	33.13		1			5	
JP	NAL	FJR 710		49			1.52	980	9.83	6.5	2			1	
JP	NAL	JR 200	37.2	20.4	4	850		127	33.2		1			5	12.5
PL	IL	IL-SO-1		8.7	4.8			303	29.6		1			7	15.1
PL	IL	IL-SO-3		9.8	4.8			325	29.6		1			7	15.1
RU	SOLOVIEV	D-30P		68.1	18.6	1,030		1,520	17.3	1	2			4	8
RU	SOLOVIEV	D-20P	113	54	13		0.98	1,470	22.1	1	2			3	8.5
RU	SOLOVIEV	D-30K		115	20		1.56	2,150	14.1	2.3				3	
RU		VK-1		27				900							

Compression ratio	Type of compressor	No. of turbine stages	No. of compressor stages2	krpm2	Compression ratio2	Type of compressor2	No. of turbine stages2	No. of compressor stages3	krpm3	Compression ratio3	Type of compressor3	No. of turbine stages3	Combustor type	Remarks
		2	1		6.7	Centrifugal	1						Annulus	REVERSE FLOW
		2	1		6.7	Centrifugal	1						Annulus	RF CC
	Axial	2				Centrifugal								
6	Axial	2											Can	Turbojet
		2					1						Annulus	Turbofan
4.3	Centrifugal	1											Annulus	Turbojet
													Annulus	Turbojet
5.5	Axial	1											Annulus	Turbojet
6.9	Axial	2											Annulus	Turbojet
	Axial	2											Annulus	Turbojet
5.7	Axial	2											Annulus	Turbojet ABF=58.9kN,sfc=57.5.Mirage3/5.
	Axial	3	7	14.2		Axial	1						Cannular	Turbofan ABF=101kN, sfc=56.7
5.5	Axial	1											Annulus	Turbojet
	Centrifugal	1											Annulus	REV
	Centrifugal	1											Annulus	FOLD
													Annulus	ASTZ18
3.8	Axial	1											Annulus	
	Centrifugal	1											Annulus	
		1											Annulus	
		1											Annulus	
4	Centrifugal	1											Annulus	Turbojet
4	Centrifugal	1											Annulus	Turbojet
	Centrifugal	1											Annulus	Turbojet
5.1	Centrifugal	1											Annulus	Turbojet
3.8	Axial	1											Annulus	Turbojet
4.8	Axial	1											Annulus	Turbojet
3.1	Centrifugal	1											Annulus	TS
7.4	Axial	2											Annulus	Turbojet
	Axial	2											Annulus	Turbojet
4.2		1											Cannular	Turbojet
4	Centrifugal	1											Cannular	Turbojet
5.5	Axial	1											Cannular	Turbojet
4.4	Axial	1											Cannular	Turbojet
	Axial	3											Cannular	Turbojet ABF=79.7kN, sfc=55.5
7	Axial	2											Annulus	Turbojet ABF=18.1kN, sfc=62.4
5.6	Axial	1											Annulus	Turbojet
	Axial	1											Annulus	Turbojet
	Axial	1											Annulus	Turbojet
	Axial	1											Annulus	LIFTJET
	Axial	1											Annulus	LIFTJET
	Axial	1											Annulus	LIFTJET
			1				2						Annulus	Turbofan
4	Axial	1											Annulus	LIFTJET
4.8	Axial	1											Annulus	Turbojet
4.8	Axial	1											Annulus	Turbojet
	Axial	2	10	11.6		Axial	2						Cannular	Turbofan
2.6	Axial	2	8	11.7	5	Axial	1						Cannular	TurbofanAB
	Axial	4	11			Axial	2						Cannular	Turbofan,IL-62
													Cannular	Afterburner Thrust 34.5kN, Mig-17

(continued)

Country	Company	Model No.	Mass flow rate (kg/s)	Take-off thrust(kN)	Overall compression ratio	Turbine inlet temp. (Deg. C)	Diameter(m)	Weight(kg)	Specific fuel consumption (milligram/N-s)	By-pass ratio	No. of spools	No. of axial fan stages	Fan pressure	No. of compressor stages	krpm
RU		NK-8		105						1	2			3	
RU		NK-144		113	15		1.5	2,850			2			5	
RU		RD-9F	44	21.5		710	0.67	720	25.48		1			9	11.2
RU		R11-F	65.2	39		936	0.9	1,126	29		2			3	11.1
RU		R-25	67	41		1,040	0.9	1,210	29		2			3	11.1
RU		R-29B	105	80		1,130	0.99	1,772	29		2			5	
RU	IVCHENKO	AI-25	45	14.7	8	950	0.6	330	16.44	2	2	3	2.2	2	10.7
RU	KUZNETSO	NK-8-2		93.2		1,143		2,350	21.53	1	2	2	2.2	2	5.4
RU	KUZNETSO	NK-144	250	127.5	15	1,000	1.5	2,850	19.84	1	2	2		2	
RU	LOTAREV	D-36	63.7					1,080	10.62	5.3					
RU	SOLOVIEV	D-20P	113	53	13		0.98	1,468	20.4	1	2			3	8.6
RU	KUZNETSO	NK-8-4	99.1			870		2,400	22.1	1	2	2	2.2	2	5.4
RU	SOLOVIEV	D-30	125	66.7	17.4		1.05	1,550	17.56	1	2			4	7.7
RU	SOLOVIEV	D-30K	269	108	20	1,122	1.56	2,650	13.88	2.4	2			3	4.7
RU	KUZNETSO	NK-144		171.6	15		1.5	2,850		1	2			5	
SE	FLYGMOTO	RM6B	71	49	7.7		1.07	1,700			1			15	8
SE	FLYGMOTO	RM6C	79	56.4	8.4		1.07	1,770			1			16	8.1
SE	FLYGMOTO	RM8A	145	115.6	16.5		1.4	2,100		1	2	2		4	
SE	FLYGMOTO	RM8B	145	25	16.5		1.4	2,350		1	2	2		4	
SE	FLYGMOTO	RM8	146	115.8	16.5		1.34	2,100	17.57	1	2	2	2.1	4	8.6
CH	SULZER	ATAR09C	68	42	5.6	890	0.79	1,372	28.63		1			9	5.6
SE	FLYGMOTO	RM6B	71	49	7.7		1.07	1,700			1			15	8
SE	FLYGMOTO	RM6C	79	56.4	8.4		1.07	1,770			1			16	8.1
SE	FLYGMOTO	RM8A	145	115.6	16.5		1.4	2,100		1	2	2		4	
SE	FLYGMOTO	RM8B	145	25	16.5		1.4	2,350		1	2	2		4	
SE	FLYGMOTO	RM8	146	115.8	16.5		1.34	2,100	17.57	1	2	2	2.1	4	8.6
CH	SULZER	ATAR09C	68	42	5.6	890	0.79	1,372	28.63		1			9	5.6
UK	ALVIS	RO TJ125		0.5				18	37.09		1			1	
UK	BUDWORTH	PUFFIN	1.5	0.8		927	0.38	31			1			1	
UK	ARMSTROM	SAP:ASA7	70	49	8		0.95	1,375	25.06		1			13	8.6
UK	ARMSTROM	VIPEASV8	14.5	7.8	3.8		0.71	231	31.7		1			7	13.8
UK	ARMSTROM	VIPASV10	19	89	4		0.71	260	28.5		1			7	13.4
UK	ARMSTROM	VIPASV11	19	10.9	4		0.71	260	31.4		1			7	13.4
UK	ARMSTROM	PALAS600	3.3	1.7	4.1		0.43	67	33.98		1			1	
UK	BRISTOL	OLYMP104		57.9			1.02	1,600			2			8	
UK	BRISTOL	OLYMP301	131	88.3	13.1		1.13	1,946	21.26		2			6	6.8
UK	BRISTOL	OLYMP593	188	170.7	14		1.21	2,640	19.84		2			6	6.5

Compression ratio	Type of compressor	No. of turbine stages	No. of compressor stages2	krpm2	Compression ratio2	Type of compressor2	No. of turbine stages2	No. of compressor stages3	krpm3	Compression ratio3	Type of compressor3	No. of turbine stages3	Combustor type	Remarks
	Axial	2	8			Axial	1							Turbofan, Tu-154
													Annulus	Afterburner Thrust 175.kN, Tu144(SST)
7.5	Axial	2											Can	Afterburner Thrust 37.3kN, sfc=59.5.Mig-19.
			3	11.4									Cannular	Mig-21 FL/M
3.3	Axial		5	11.4	2.9	Axial								B Mig-21/Bis
			6	8.8									Annulus	Mig-27M
1.7	Axial	2	8	16.3	4.7	Axial	1						Cannular	Turbofan.Yak40
	Axial	2	6	6.8	10	Axial	1						Annulus	Turbofan REVERSER.IL62, Tu154.
	Axial	2	11			Axial	1						Annulus	Turbofan. ABF=171.7kN. Tu144(M=2.2)
2.4	Axial	2	8	11.2	5	Axial	1						Cannular	Turbofan
	Axial	2	6	7	10.8	Axial	1						Annulus	Turbofan
2.7	Axial	2	10	11.6	7.1	Axial	2						Cannular	Turbofan
	Axial	4	11	10.5			2						Cannular	Turbofan REVERSER
	Axial	2	11				1						Annulus	Turbofan
7.7	Axial	2											Cannular	Turbojet ABF=64.7kN, sfc=48.2
8.4	Axial	2											Cannular	Turbojet ABF=78.4kN, sfc=53.8
	Axial	3	7			Axial	1						Cannular	Turbofan ABsfc=70.0
	Axial	3	7			Axial	1						Cannular	Turbofan ABsfc=71.4
	Axial	3	7	11.9		Axial	1						Cannular	Turbofan ABF=115.8kN, sfc=73.7.Viggen.
8.4	Axial	2											Annulus	TurbojetABF=58.9kN, sfc=57.5
7.7	Axial	2											Cannular	Turbojet ABF=64.7kN, sfc=48.2
8.4	Axial	2											Cannular	Turbojet ABF=78.4kN, sfc=53.8
	Axial	3	7			Axial	1						Cannular	Turbofan ABsfc=70.0
	Axial	3	7			Axial	1						Cannular	Turbofan ABsfc=71.4
	Axial	3	7	11.9		Axial	1						Cannular	Turbofan ABF=115.8kN, sfc=73.7.Viggen.
8.4	Axial	2											Annulus	TurbojetABF=58.9kN, sfc=57.5
	Centrifugal	1											Annulus	Turbojet
	Centrifugal	1											Annulus	Turbojet
8	Axial	2											Annulus	Turbojet
3.8	Axial	1											Annulus	Turbojet
4	Axial	1											Annulus	Turbojet
4	Axial	1											Annulus	Turbojet
4.1	Centrifugal	1											Annulus	Turbojet
	Axial	1	7				1						Cannular	Turbofan
	Axial	1	7	8		Axial	1						Cannular	Turbojet Vulcan B2.
	Axial	1	7	8.8		Axial	1						Cannular	Turbojet ABsfc=33.59. Concorde

(continued)

Country	Company	Model No.	Mass flow rate (kg/s)	Take-off thrust(kN)	Overall compression ratio	Turbine inlet temp. (Deg. C)	Diameter(m)	Weight(kg)	Specific fuel consumption (milligram/N-s)	By-pass ratio	No. of spools	No. of axial fan stages	Fan pressure	No. of compressor stages	krpm
UK	BRISTOL	OLYMB1.7		75.5			1.06	1,630	22.65		2			7	
UK	BRISTOL	ZEPHIER	104	55.5	10		1.04	1,630	20.33		2			7	
UK	BRISTOL	ORPHBOR3	38.2	22.3	4.4		0.82	372	30.02		1			7	10
UK	DEHAVILL	GOBLIN35	28.5	15.6	3.7		1.77	726	32.28		1			1	
UK	DEHAVILL	GHOST105	40	23.5			1.34	975	33.7		1			1	
UK	DEHAVILL	GYROP442		82.3			1.26	1,900	29.4		1			7	
UK	DEHAVILL	GYDGJ10R		44.4			0.82				1			8	
UK	ROLSROYS	NENE RN6	43	24	4.5		1.25	735	30.02		1			1	12.5
UK	ROLSROYS	AVONRA21		35.6			1.07	1,116	27.04		1			12	7.9
UK	ROLSROYS	AVONRA24		50			1.05	1,305			1			15	
UK	ROLSROYS	AVONRA28	72.8	44.4	8		1.05	1,305	24.4		1			15	8
UK	ROLSROYS	AVONRA29	78.5	46.7	9.3		1.05	1,500	21.9		1			16	8
UK	ROLSROYS	AV-RB146	80	56.5	8.4		1.07	1,724	24.09		1			16	8
UK	ROLSROYS	RB108		8.9							1			5	
UK	ROLSROYS	RB145		12.3			0.51				1			7	
UK	ROLLSROY	RB162-81	38.5	26.7	4.5		0.74	188			1			6	
UK	ROLLSROY	RB162-86	38.5	23.4	4.5		0.74	236			1			6	
UK	ROLLSROY	ADOUR		19.6			0.56	600	19.27	1.1	2			2	
UK	ROLLSROY	CONWAY42	104	90.6	14.8		1.29	2,270	17	0.6	2	4		3	7.2
UK	ROLLSROY	CONWAY43	102	97	15.8		1.29	2,300	16.72	0.6	2	4		4	7.2
UK	ROLLSROY	RB21122B	626	187	25		2.17	4,171	17.7	5	3			1	
UK	ROLLSROY	RB163555	90.3	42.1	15		0.94	995	15.57	1	2			4	11.9
UK	ROLLSROY	RB163505	90.3	42.1	15		0.94	998	15.43	1	2			4	12.3
UK	ROLLSROY	RB163506	92	44.5	17.2		0.94	1,024	15.74	1	2			4	12.4
UK	ROLLSROY	RB163512	94.4	55.8	21.2		0.94	1,168	22.7	0.6	2			5	12.6
UK	ROLLSROY	RB202		57.9			1.9	392	12.76	10	2			1	
UK	ROLLSROY	SPEY201	95	55.8	20		0.96	1,633	18.14	0.7	2			5	8.6
UK	ROLLSROY	SPEY250		53.4			0.96	1,225	17.86		2			5	
UK	ROLLSROY	SPEY512	93	55.6	20.7		0.99	1,252	17.01	0.7	2			5	8.1
UK	ROLLSROY	SPEY555	92	43.8	15.4		0.94	995	21.26	1	2			5	8.6
UK	ROLLSROY	TRENT	136	44.4	16		0.98	806	20.12	3	3			1	8.7
UK	ROLLSROY	VIPER600	26.4	16.7	5.8		0.62		26.6		1			8	
UK	ROLLSROY	VIPER11	20	11.1	4.4	830	0.62	249	29.48		1			7	13.8
UK	ROLLSROY	VIPER601		16.7			0.62	358	26.6		1			8	
UK	ROLLSROY	VIPER632		17.8			0.62	358	26.6		1			8	
UK	ROLLSROY	VIPER535	23.9	15	5.6		0.62	354	28.6		1			8	13.8
UK	ROLLSROY	RB401-07	82.5	24.7				447	12.72	4.2	2	1			
UK	ROLLSROY	PEGAS104	196	95.6	14		1.22	1,429		1.4	2	3	2.3		
UK	ROLLSROY	PEGAS103	196	95.6	14		1.22	1,409		1.4	2	3	2.3		
UK	ROVER	TJ125	0.9	0.6	3.9	912	0.26	18			1			1	65

Compression ratio	Type of compressor	No. of turbine stages	No. of compressor stages2	krpm2	Compression ratio2	Type of compressor2	No. of turbine stages2	No. of compressor stages3	krpm3	Compression ratio3	Type of compressor3	No. of turbine stages3	Combustor type	Remarks
	Axial	1	5				1						Cannular	Turbofan
	Axial	1	5				1						Cannular	Turbofan
4.4	Axial	1											Cannular	
3.7	Centrifugal	1											Can	Turbojet
	Centrifugal	1											Can	Turbojet
	Axial	2											Annulus	Turbojet
	Axial	2											Annulus	Turbojet GYRON JUNIOR
4.5		1											Can	Turbojet
	Axial	2											Can	Turbojet
	Axial	2											Cannular	Turbojet
8	Axial	2											Cannular	Turbojet
9.3	Axial	3											Cannular	Turbojet Caravelle/ Comet4
8.4	Axial	2											Cannular	Turbojet ABF=74.5kN, sfc=56.7.Lightning/ Canberra
	Axial	1											Annulus	Turbojet
	Axial	1											Annulus	Turbojet
4.5	Axial	1											Annulus	LIFTJET
4.5	Axial	1											Annulus	LIFTJET
	Axial	1	5		9.6	Axial	1						Annulus	Turbojet ABF=64.7kN, sfc=42.5.Jaguar-B
	Axial	2	9	10		Axial	1						Cannular	Turbofan Boeing-707, VC10,DC8
	Axial	2	9	10.2		Axial	1						Cannular	Turbofan
	Axial	3	7				1	6				1	Annulus	Turbofan L101
	Axial	2	12			Axial	2						Annulus	Turbofan
	Axial	2	12			Axial	2						Annulus	Turbofan
	Axial	2	12			Axial	2						Annulus	Turbofan
	Axial	2	12			Axial	2						Annulus	Turbofan
	Axial	1				Axial	1						Annulus	Turbofan, V/STOL.HS141, Do231C.
2.7	Axial	2	12	12.6	7.4	Axial	2						Cannular	Turbofan ABF=94.8kN, sfc=55.3.Phantom.
	Axial	2	12										Cannular	
2.6	Axial	2	12	12.8	8	Axial	2						Cannular	Turbofan.Trident, Gulfstream.
2.5	Axial	2	12	12	6.3	Axial	2						Cannular	
	Axial	1	4	13		Axial	1		5	15.8	A	2	Annulus	
5.8	Axial	2											Annulus	Turbojet BUISINESS JET A/C AND MILITARY TRAINERS
4.4	Axial	1											Annulus	Turbojet HJT16.
	Axial	2											Annulus	Turbojet
	Axial	2											Annulus	Turbojet
	Axial	1											Annulus	Turbojet
		2	8		11.5	Axial	1						Annulus	Turbofan CRUISE THR:5.0KN AT12.KM
		2	8		6.1	Axial	2						Annulus	Turbofan V/STOL
		2	8		6.1	Axial	2						Annulus	Turbofan V/STOL
3.9	Centrifugal	1											Annulus	Turbojet

(continued)

Country	Company	Model No.	Mass flow rate (kg/s)	Take-off thrust(kN)	Overall compression ratio	Turbine inlet temp. (Deg. C)	Diameter(m)	Weight(kg)	Specific fuel consumption (milligram/N-s)	By-pass ratio	No. of spools	No. of axial fan stages	Fan pressure	No. of compressor stages	krpm
UK	LUCAS	CT 3201	0.9	0.5		917		19	37.1		1			1	
UK	NPT	401A	2.3	1.5	4.5	955	0.34	43	28.8		1	1		1	
UK	NPT	251	2.3	1.3		977	0.34	34	33.4		1				
UK	NPT	151	1.3	0.7		897	0.28	15	34		1				
US	ALLISON	J33-A-37	40.8	20.5	4.4		1.22	793	32.27		1			1	11.8
US	ALLISON	J35-A-29	43.2	24.9	5.5		0.94	1,020	29.73		1			11	7.8
US	ALLISON	J71-A-11	72.6	45.4	8.3		0.94	1,850	22.65		1			16	6.1
US	AVCOLYCO	ALF502L		33.4	13.7		1.07	578	11.9	5	2			2	
US	AVCOLYCO	ALF502R3		29.8	13.7		1.07	565	11.9	5.9	2			2	
US	CONTINEN	J69-T-9	7.6	4.1	4		0.57	140	32		1			1	22.7
US	DREHER	TJD-76C	0.5	0.3	2.8	770	0.15	10	42.5		1			1	
US	DREHER	TJD-79A	1.1	0.5	3		0.28	16	39.64		1			1	
US	GARRET	ATF3-6	73.5	22.4	21		0.85	431	13.6	2.8	3			1	
US	GARRET	TFE731-3	53.7	16.4	14.6	1,010	0.72	329	14.33	2.8	2	1		4	
US	GARRET	TFE731		15.6	19		0.72	283	13.88		2			4	
US	GARRET	ATF3	73.5	18	23		0.81	396	12.46	3.1	3			1	
US	GEC	GE1/10		44.5		1,093	0.97	1,360	22.67	1	2			2	
US	GEC	GE4/J5P	287	229.2	12.5	1,204	1.54	5,126	29.48		1			9	
US	GEC	J79GE-17	77	52.8	13.5	987	0.99	1,745	23.81		1			17	
US	GEC	CF700-2C	39.9	18.4	8.3		0.84	330	18.4	1.6	1			9	
US	GEC	CF700-2D	39.9	18.9	8.3		0.84	330	18.4	1.6	1			9	
US	GEC	CF7002D2	39.9	20.2	8.3		0.84	334	18.4	1.6	1			9	
US	GEC	F404	63.5	71.2	25		0.88	908		0.3	2			3	
US	GEC	TF34G400	153	41.3	21	1,225	1.33	661	10.3	6.2	2			1	7.4
US	GEC	TF34G100	153	40.3	21	1,225	1.26	647	10.5	6.2	2			1	7.4
US	GEC	CF34	139	35.5	17.5			692	10.18	6.3	2			1	7.4
US	GEC	CF6-6D	591	203.5	24.3	1,330		3,679		5.7	2	1		1	
US	GEC	CF6-50A	658	258	28.4			3,956		4.3	2	1		3	
US	GEC	CF6-80B	680	240				3,769		4.3	2	1		3	
US	GEC	CF6-80C	737	241				3,951		4.7	2	1		3	
US	GEC	CF6-80C2	812	273	31.9		2.36			5.3					
US	GEC	J85-5	20	17.2	7		0.53	265			1			8	
US	GEC	J85-13	20	18.2	7		0.53	271			1			8	
US	GEC	J85-17A	20	12.6	6.5	932	0.45	181	26.93		1			8	16.5
US	GEC	J85-21	23.8	15.6	8.1	982	0.53	301	35.15		1			9	16.6
US	GEC	CJ610-1	20	12				181	28.04		1			8	
US	GEC	CJ610-4	20	12				176	28.04		1			8	

Compression ratio	Type of compressor	No. of turbine stages	No. of compressor stages2	krpm2	Compression ratio2	Type of compressor2	No. of turbine stages2	No. of compressor stages3	krpm3	Compression ratio3	Type of compressor3	No. of turbine stages3	Combustor type	Remarks
	Centrifugal	1											Annulus	Turbojet SURVELLANCE RDV
4.5	Centrifugal	1											Annulus	Turbojet
	Centrifugal	1											Annulus	Turbojet
	Centrifugal	1											Annulus	Turbojet
4.4	Centrifugal	1											Can	Turbojet
5.5	Axial	1											Can	Turbojet
8.3	Axial	3											Cannular	Turbojet
		2	7			Axial	2						Annulus	Turbofan CAN CHALLENGER
		2	7			Axial	2						Annulus	Turbofan BAE146
4	Centrifugal	1											Annulus	Turbojet
	Mixed	1											Annulus	Turbojet PRUE215A SAILPLANE
	Mixed	1											Annulus	Turbojet
		3	5			Axial	2		1		C	1	Annulus	Turbofan REVER FLOW CC
	Axial	3	1			Centrifugal	1						Annulus	Turbofan
	Axial	3	1			Centrifugal	1						Annulus	Turbofan
	Axial	3	5			Axial	2		1		C	1	Annulus	Turbofan
	Axial	2	14			Axial	1						Annulus	Turbofan ABF=75.54kN, sfc=51.0
	Axial	2											Annulus	Turbojet ABF=305.2kN, sfc=52.7. Boeing 2707 (M=2.7)
	Axial	3											Cannular	Turbojet ABF=79.7kN, sfc=55.6. F-104,F4.
	Axial												Annulus	Turbofan DER DER:J85
	Axial												Annulus	Turbofan HIGH THER:EFF
	Axial												Annulus	Turbofan NEW DESIGN TAILPIPE
	Axial	1	7			Axial	1						Annulus	Turbofan AUG
1.5	Axial	4	14	17.9	14	Axial	2						Annulus	Turbofan
1.5	Axial	4	14	17.9	14	Axial	2						Annulus	Turbofan
1.4	Axial	4	14	17.9	12.5	Axial	2						Annulus	Turbofan CAN CHALLENGER
	Axial	5	16				2						Annulus	Turbofan
	Axial	5	16				2						Annulus	Turbofan
	Axial	4	16				2						Annulus	Turbofan
	Axial	4	16				2						Annulus	Turbofan
7	Axial	2											Annulus	Turbojet ABsfc=62.28
7	Axial	2											Annulus	Turbojet ABsfc=62.87
6.5	Axial	2											Annulus	Turbojet
8.1	Axial	2											Annulus	Turbojet ABF=22.2kN, sfc=60.37. Northrop-F5.
	Axial	2											Annulus	Turbojet
	Axial	2											Annulus	Turbojet

(continued)

Country	Company	Model No.	Mass flow rate (kg/s)	Take-off thrust(kN)	Overall compression ratio	Turbine inlet temp. (Deg. C)	Diameter(m)	Weight(kg)	Specific fuel consumption (milligram/N-s)	By-pass ratio	No. of spools	No. of axial fan stages	Fan pressure	No. of compressor stages	krpm
US	GEC	CJ610-9	20	13				189	27.85		1			8	
US	GEC	CJ610-5	20	12.4				183	27.19		1			8	
US	GEC	CF700-2C	38	18.6	7		0.91	330	18.46	1.9	1	1		8	
US	GEC	CF700-2D	38	18.9	7		0.91	330	18.46	1.9	1	1		8	
US	GEC	CF7002D2	38	19.2	7		0.91		18.21	1.9	1	1		8	
US	GEC	J79-GE-2	75		12.5		0.97	1,642			1			17	
US	GEC	J79-GE3B	75		12.5			1,508			1			17	
US	GEC	J79-GE5C	75		12.5		0.97	1,671			1			17	
US	GEC	J79-GE7A	75		12.5		0.97	1,622			1			17	
US	GEC	J79-GE-8	76.5		12.5		0.97	1,666			1			17	
US	GEC	J79-GE10	75		13.5		0.99	1,749			1			17	
US	GEC	J79-GE15	76.5		12.9		0.97	1,672			1			17	
US	GEC	J79-GE17	77	52.8	13.5	987	0.99	1,740	23.81		1			17	
US	GEC	J79GE11A	75		12.5		0.97	1,615			1			17	
US	GEC	TF34	153	40		1,201	1.3			6.2	2			13	7.4
US	GEC	CF6-6D	593	174.9	28.2	1,297		3,379	10.03	5.9	2	1		1	3.5
US	GEC	CF6-50A	658	214	30.2	1,297		3,731	11.02	4.4	2	1		3	3.8
US	GEC	CF6-50B	658	218.5	30.2	1,297		3,731	11.02	4.4	2	1		3	3.8
US	GEC	CF6-50C	658	223.4	30.2	1,297		3,731	11.16	4.4	2	1		3	3.8
US	GEC	J47-G-23	45.3	25.8	5.5		1	1,200	27.78		1			12	7.2
US	GEC	J73-GE-3	70.3	40	7		0.94	1,650	25.48		1			17	8
US	GEC	J79-GE-1	72.5	49.1	12		0.88	1,450			1				
US	GEC	J85		11.1				95			1			17	
US	GEC	CJ805	72.5	46.7	12		0.84	1,220	22.7		1				
US	GEC	CFM56-C2	465.9	139	38.3		1.84			6.6					
US	GEC	CFM56-C3	474	145	38.3		1.84			6.5					
US	GEC	CFM56-C4	483.1	151	38.3		1.84			6.4					
US	GENELEC	GE404	70.6	88	26		0.7	1,048		0.3					
US	NEIGHTIN	J34WE-46	27	15.1	4.1		0.81	550	28.32		1			11	12.5
US	NEIGHTIN	J46-WE-8	35.3	20.5	6		0.82	945	27.18		1			11	12.5
US	NEIGHTIN	J54-WE-2	45.3	28.9	8		0.89	635	24.07		1			16	
US	P&W	PW2037			32					5.8	2		1.4	4	
US	P&W	PW4000		222	30.2		2.46	4,173		4.8	2				
US	P&W	F100			25					0.8			3		
US	PRAT&WHI	JT8D-1	143	62.3	15.8			1,431	16.57	1.1	2	2	1.9	6	
US	PRAT&WHI	JT8D-1A	143	62.3	15.8			1,431	16.57	1.1	2	2		6	
US	PRAT&WHI	JT8D-7	143	62.3	15.8			1,454	16.57	1.1	2	2		6	
US	PRAT&WHI	JT8D-7A	143	62.3	15.8			1,454	16.57	1.1	2	2		6	
US	PRAT&WHI	JT8D-11	146	66.7	16.2			1,537	17.56	1.1	2	2		6	
US	PRAT&WHI	JT8D-15	146	69	16.5			1,537	17.84	1	2	2		6	

Compression ratio	Type of compressor	No. of turbine stages	No. of compressor stage2	krpm2	Compression ratio2	Type of compressor2	No. of turbine stages2	No. of compressor stages3	krpm3	Compression ratio3	Type of compressor3	No. of turbine stages3	Combustor type	Remarks
	Axial	2											Annulus	Turbojet
	Axial	2											Annulus	Turbojet
	Axial	2											Annulus	Turbofan
	Axial	2											Annulus	Turbofan
	Axial	2											Annulus	Turbofan
12.5	Axial	3											Cannular	Turbojet ABF=65.9kN, sfc=57.8.F-4A PHANTOMII, NORTH AMER. A-5A
12.5	Axial	3											Cannular	Turbojet ABF=69.4kN, sfc=62.3F-104
12.5	Axial	3											Cannular	Turbojet ABF=70.3, sfc=55.8.B-58 HUSTLER
12.5	Axial	3											Cannular	FTJ ABF=75.7,sfc=54.6 F-104 C AND CANDAIR CF-104
12.9	Axial	3											Cannular	Turbojet ABF=79.7, sfc=55.6.F-413, RF-4B,PHANTOM I I,A-5A,RA-5C
13.5	Axial	3											Cannular	Turbojet ABF=75.7, sfc=55.1, F4J,RA5-C
12.9	Axial	3											Cannular	Turbojet F-4C ,RF-4C
13.5	Axial	3											Cannular	Turbojet ABF=79.7kN, sfc=55.56.F-4
12.5	Axial	3											Cannular	Turbojet ABF=75.0, sfc=55.79. F-104G
	Axial	4	1	17.9	14.1	Axial	2						Annulus	Turbofan
		1	16				2						Annulus	Turbofan
		1	16				2						Annulus	Turbofan
		1	16				2						Annulus	Turbofan
		1	16				2						Annulus	Turbofan
5.5	Axial	1											Can	Turbojet
7	Axial	2											Cannular	Turbojet
12	Axial	3											Cannular	Turbojet
12	Axial	3											Annulus	Turbojet
4.1	Axial	2											Annulus	Turbojet
6	Axial	2											Annulus	Turbojet
8	Axial	2											Annulus	Turbojet
	Axial	5	12			Axial	2						Annulus	Turbofan
													Annulus	Turbofan Year:1987
	Axial	3	7			Axial	1						Cannular	Turbofan
	Axial	3	7			Axial	1						Cannular	Turbofan
	Axial	3	7			Axial	1						Cannular	Turbofan
	Axial	3	7			Axial	1						Cannular	Turbofan
	Axial	3	7			Axial	1						Cannular	Turbofan
	Axial	3	7			Axial	1						Cannular	Turbofan

(continued)

Country	Company	Model No.	Mass flow rate (kg/s)	Take-off thrust(kN)	Overall compression ratio	Turbine inlet temp. (Deg. C)	Diameter(m)	Weight(kg)	Specific fuel consumption (milligram/N-s)	By-pass ratio	No. of spools	No. of axial fan stages	Fan pressure	No. of compressor stages	krpm
US	PRAT&WHI	JT8D-17R	148	72.9	17.3			1,585	18.55	1	2	2		6	
US	PRAT&WHI	JT8D-209	213	82.2	17.1			2,001		1.8	2	1		6	
US	PRAT&WHI	JT8D-217	217	89	18.6			2,025		1.7	2	1		6	
US	PRAT&WHI	JT9D-3A	684	169.9	21.5	1,243	2.42	3,905	17.84	5.2	2	1	1.6	3	3.8
US	PRAT&WHI	JT9D-7	698	206	21.5	1,243	2.43	3,902	18.01	5.2	2	1	1.6	3	3.8
US	PRAT&WHI	TF30P414	112			1,137	1.29	1,905			2	3	2.1	6	
US	PRAT&WHI	TF30P100	118			1,240	1.24	1,813			2	3	2.2	6	
US	PRAT&WHI	F100P100			25	1,399	1.18	1,371		0.7	2			3	
US	PRAT&WHI	F100P200			25	1,399	1.18	1,390		0.7	2			3	
US	PRAT&WHI	JT3C-2	82	61.2	13		0.99	1,755	26.9		2			9	
US	PRAT&WHI	JT3C-6	82	60.1	13		0.99	1,922	25.7		2			9	
US	PRAT&WHI	JT3C-8	82	61.2	13		0.99	1,959	26.9		2			9	
US	PRAT&WHI	JT3C-26	82	86.2	13		1.02	2,156	21.54		2			9	
US	PRAT&WHI	JT3D-2	196	75.7	13		1.35	1,770	14.78		2			8	
US	PRAT&WHI	JT3D-3A	196	80.2	13		1.35	1,891	15.15		2			8	
US	PRAT&WHI	JT3D-3B	196	86.2	13		1.35	1,950	15.15		2			8	
US	PRAT&WHI	JT3D-7	196	84.5	13		1.35	1,950	15.58		2			8	
US	PRAT&WHI	JT3D-8A	196	93.4	16.1		1.34	2,109	15.86		2			8	
US	PRAT&WHI	JT4A-9	118	74.8	12.5		1.09	2,290	22.94		2			9	
US	PRAT&WHI	JT4A-11	118	77.9	12.5		1.09	2,315	23.79		2			9	
US	PRAT&WHI	JT4A-28	118	109	12.5		1.09	2,665	60.88		2			9	
US	PRAT&WHI	JT4A-29	118	118	12.5		1.09	2,706	62.3		2			9	
US	PRAT&WHI	JT8B-1	118	37.8	14.5		0.77	933	22.22		2			9	
US	PRAT&WHI	JT8B-3	118	41.4	14.5		0.77	961	24.35		2			9	
US	PRAT&WHI	JT8B-5	118	49.8	14.5		0.77	1,052	25.2		2			9	
US	PRAT&WHI	JT8D-5	118	54.5	14.5		1.08	1,431	16		2			9	
US	PRAT&WHI	JT8D-9	146	64.5	16.1		1.08	1,431	16.85		2			9	
US	PRAT&WHI	JT9D-15	687	209.1	22		2.43	3,833	10.05	5.1	2	1		3	
US	PRAT&WHI	JTF10A20		82.3			1.22	1,755	70.8		2				
US	PRAT&WHI	JTF10A-8		50.5			1.07	1,232	17.56		2				
US	PRAT&WHI	JTF10A-9		54.3			1.07	1,146	17.84		2				
US	PRAT&WHI	JTF10A16		59.6			1.07	1,178	18.12		2				
US	PRAT&WHI	JTF10A21	106	55.6	17		0.96	1,843	17.84		2	3	1.8	6	9.4
US	PRAT&WHI	JF10A27A		90.1			1.29	1,827			2				
US	PRAT&WHI	JT10A27D		90.6			1.28	1,869			2				
US	PRAT&WHI	JT10A27F		89											
US	PRAT&WHI	JTF10A36		87.2			1.25	1,846	73.91		2				
US	PRAT&WHI	JT11D20B	133.42								1			9	
US	PRAT&WHI	JT12A-5	13.4				0.56	203	27.19		1			9	
US	PRAT&WHI	JT12A-6A	13.4				0.56	206	27.19		1			9	
US	PRAT&WHI	JT12A-8	14.7				0.56	212	28.18		1			9	
US	PRAT&WHI	J57P20	82	50.7	13		1.02	2,150	21.82		2			9	6.5
US	PRAT&WHI	J85-P-2		44.4			0.86		22.7		2			9	
US	PRAT&WHI	JT3C-7	82	53.5	13		0.99	1,580	22.23		2			9	8
US	PRAT&WHI	JT3D-1	196	71.1			1.35	1,830	16.99		2			8	
US	PRAT&WHI	JT4A-10	118	73.6	12.5		1.12	1,910			2			9	

Compression ratio	Type of compressor	No. of turbine stages	No. of compressor stages2	krpm2	Compression ratio2	Type of compressor2	No. of turbine stages2	No. of compressor stages3	krpm3	Compression ratio3	Type of compressor3	No. of turbine stages3	Combustor type	Remarks
	Axial	3	7			Axial	1						Cannular	Turbofan
	Axial	3	7			Axial	1						Cannular	Turbofan AX:FLOW
	Axial	3	7			Axial	1						Cannular	Turbofan AX:FLOW
		4	11	7.6			2						Annulus	Turbofan
		4	11	8			2						Annulus	Turbofan
		3	7				1						Cannular	Turbofan ABF=93.0kN, sfc=78.7
		3	7				1						Cannular	Turbofan ABF=111.7kN, sfc=69.4
		2	10	13.5	8		2						Annulus	Turbofan AB
		2	10	13.5	8		2						Annulus	Turbofan AB
	Axial	2	7			Axial	1						Cannular	Turbojet J57-P-43WB
	Axial	2	7			Axial	1						Cannular	Turbojet
	Axial	2	7			Axial	1						Cannular	Turbojet J57-P-59W
	Axial	2	7			Axial	1						Cannular	Turbojet J57-P-20,-20A
	Axial	3	7			Axial	1						Cannular	Turbofan TF33-P-3
	Axial	3	7			Axial	1						Cannular	Turbofan TF33-P-5,9
	Axial	3	7			Axial	1						Cannular	Turbofan
	Axial	3	7			Axial	1						Cannular	Turbofan
	Axial	3	7			Axial	1						Cannular	Turbofan TF33-P-7
	Axial	2	7			Axial	1						Cannular	Turbofan
	Axial	2	7			Axial	1						Cannular	Turbofan
	Axial	2	7			Axial	1						Cannular	Turbofan J75-P-17
	Axial	2	7			Axial	1						Cannular	Turbofan J75-19W
	Axial	2	7			Axial	1						Cannular	Turbofan J52-P-6A
	Axial	2	7			Axial	1						Cannular	Turbofan J52-P-8A
	Axial	2	7			Axial	1						Cannular	Turbofan J52-P-408
	Axial	2	7			Axial	1						Cannular	Turbofan
	Axial	2	7			Axial	1						Cannular	Turbofan
	Axial	4	11			Axial	2						Annulus	Turbofan
														Turbofan TF30-P-1-1A
														Turbofan TF30-P-6
														Turbofan TF30-P-8
														Turbofan TF30-P-408
	Axial	3	7	13.8		Axial	1						Cannular	Turbofan ABF=89.0kN, sfc=70.8.TF30-P-3
														Turbofan ABF=90.1kN, sfc=86.1.TF 30-P-12
														Turbofan ABF=90.6kN. sfc=85.32. TF 30-P-7
														Turbofan TF30-P-412
														Turbofan TF TF
	Axial	2											Annulus	Turbojet J60-P-3,5
	Axial	2											Annulus	Turbojet J60-P-6
	Axial	2											Annulus	Turbojet
	Axial	2											Annulus	Turbojet
	Axial	2	7	9.5	13	Axial	1						Cannular	Turbojet Afterburner F=80.0kN, sfc=79.36. Crusader.
	Axial	2	7			Axial	1						Annulus	Turbofan
	Axial	2	7			Axial	1						Annulus	Turbofan
	Axial	3	7			Axial	1						Annulus	Turbofan
	Axial	2	7			Axial	1						Annulus	Turbofan

(continued)

Country	Company	Model No.	Mass flow rate (kg/s)	Take-off thrust(kN)	Overall compression ratio	Turbine inlet temp. (Deg. C)	Diameter(m)	Weight(kg)	Specific fuel consumption (milligram/N-s)	By-pass ratio	No. of spools	No. of axial fan stages	Fan pressure	No. of compressor stages	krpm
US	PRAT&WHI	JT11		133.4			1.27	2,500			1			9	
US	PRAT&WHI	JT12		13.3			0.56	195	26.3		1				
US	TELEDYNE	J69T-41A	13	8.5	6	954	0.57	159	30.89		1	1		1	22
US	TELEDYNE	J69T-406	13.8	8.5	5.5	993	0.57	163	31.18		1	1		1	22.1
US	TELEDYNE	J100C101	4.4		5.8			159	31.16		1	1		1	
US	TELEDYNE	CAJ69T25	9	4.6	3.8	788	0.57	165	32.28		1			1	21.7
US	TELEDYNE	CAJ69T29	13	7.6	5.5	871	0.57	154	30.73		1			1	22
US	TELEDYNE	J69-T406		8.6				765	31.15		1			1	22.2
US	TELEDYNE	CAEJ100-	20.4	12	6.3			193	31.15		1	2		1	20.7
US	TELEDYNE	CA35628C	24.5	15.6	8.1			240			1	2		1	
US	TELEDYNE	CA35628D	29.4	18.7	8.1			231			1	2		1	
US	TELEDYNE	CA35628E	29.4	18.7	8.1			220			1	2		1	
US	WILLIAMS	WR2-6	1	0.6	4.1	955	0.27	14			1			1	60
US	WILLIAMS	WR24-6	1.4	0.5	5.3	955	0.27	14			1			1	60
US	WILLIAMS	WR19	2	3.2	8.1	955		64		1.1	2	2		2	60
W	ROLS-MTU	RB199	75	80	25		0.75	1,028		0.9					
W	ALL-ROLS	TF41A-1	117	64	20	1,182		1,470	18.23	0.8	2	3		2	
W	ROLS-MTU	RB-193	93	45.2	16.5			1,050	18.41	1.1	2	3		2	
W	ROLS-SNE	M45H-01	106	32.3	18			673	12.91	2.8	2	1		5	
W	ROLS-SNE	OLYMP593		169.3			1.22	2,628			2			7	
W	ROLS-SNE	OLYMP593		170.9			1.22	2,628			2			7	
W	ROLS-SNE	OLYMP593		177.7			1.22	2,628			2			7	
W	ROLS-TUR	ADOUR102		29.4	11			704	27	0.8	2	2			
W	TUR-UNIO	RB19934R	70	71	23	1,327	0.87	900		1.1	3			3	
W		ATAR09C	68	42	5.5	890	0.79	1,409	28.63		1			9	8.4

Compression ratio	Type of compressor	No. of turbine stages	No. of compressor stages2	krpm2	Compression ratio2	Type of compressor2	No. of turbine stages2	No. of compressor stages3	krpm3	Compression ratio3	Type of compressor3	No. of turbine stages3	Combustor type	Remarks
	Axial	2											Annulus	
	Centrifugal	1											Annulus	Turbojet
	Centrifugal	1											Annulus	Turbojet
	Centrifugal	1											Annulus	Turbojet
3.8	Centrifugal	1											Annulus	Turbojet Cessna T37B
5.5	Centrifugal	1											Annulus	Turbojet
	Centrifugal	1											Annulus	Turbojet
6.3	Centrifugal	2											Annulus	Turbojet CA-100
8.1	Centrifugal	2											Annulus	Turbojet
8.1	Centrifugal	2											Annulus	Turbojet
8.1	Centrifugal	2											Annulus	Turbojet
4.1	Centrifugal	1											Annulus	Turbojet
5.3	Centrifugal	1											Annulus	Turbojet
	Centrifugal	2	1			Centrifugal	1						Annulus	Turbofan
	Axial	2	11		6.2	Axial	2						Annulus	Turbofan NORH
		3	6				1						Annulus	VETF
	Axial	3	7			Axial	1						Annulus	TFVFW614
	Axial	1	7			Axial	1						Annulus	Turbojet 602
	Axial	1	7			Axial	1						Annulus	Turbojet 612
	Axial	1	7			Axial	1						Annulus	Turbojet 621
		1	5			Axial	1						Annulus	Turbofan RH JAGUAR
	Axial	2	3			Axial	1		6		A	1	Annulus	Turbofan AB
5.5	Axial	2											Annulus	Turbojet ABF=58.9kN, sfc=57.5. Mirage3D.

Turbprop

Country	Company	Model No.	Mass flow rate (kg/s)	Take-off thrust(kN)	Shaft power(kW)	Overall compression ratio	Turbine inlet temp. (Deg. C)	Diameter(m)	Weight(kg)	Specific fuel consumption (micro-g/J)	No. of spools
CA	UAC	PT6B	2.5		514	6.3		0.48	111	115.6	2
CA	UAC	ST6L	2.9		536	7.1		0.48	135	94.8	2
CA	P&W	PW100	6.7			14.8					3
CZ	MOTORLET	M601	3.1	0.4	484	6.2		0.43	142	182	2
FR	SOCEMA	TGA1		5.5	1,764	3.6					1
FR	SNECMA	TYNE20	21	5	4,213	13.6		1.1	975	74.2	2
FR	TURBOMEC	ARTOUST3	4		483	5.1		0.45	151	125	1
FR	TURBOMEC	ARTOUS3B	4.3	0.4	410	5.2			154	128.6	1
FR	TURBOMEC	TURMO3	4.8		559	5.1		0.56	240	131.8	2
FR	TURBOMEC	TURMO3C	5.9		968	5.8			226	108.1	2
FR	TURBOMEC	TURMO16			1,490						
FR	TURBOMEC	ASTAZON			239			0.46	111	122.7	1
FR	TURBOMEC	ASTAZ3N	2.5	0.3	447	6		0.46	147	107.4	1
FR	TURBOMEC	ASTAZ14A	3.4	0.6	447	7.6		0.46	160	89.5	1
FR	TURBOMEC	ASTAZ16	3.4	0.4	765	8.1		0.55	206	83.9	1
FR	TURBOMEC	BASTAN			485			0.55	180	124.6	1
FR	TURBOMEC	BASTAN6	4.5	0.8	745	5.7		0.55	230	105.5	1
FR	TURBOMEC	BASTAN7	5.6	0.9	790	6.8		0.55	295	102.1	1
FR	TURBOMEC	TURMAS14	3.3	0.4	670	8		0.46	160	89.5	2
DE	KHD	T112	0.9		106	5			36	156.9	1
DE	KHD	T53	5.8	0.5	1,043	7.4		0.58	249	111.1	2
DE	MTU	6022	1.9		279	6.4			90	125.3	1
JP	IH	CT58-110	5.6	0.6	931	8.3		0.4	143		2
JP	IH	T58-8B	14		931	1.8					
JP	IH	T64-10	11	0.9	2,064	12.6					2
JP	KAWASAKI	KT5311A	5	0.6	819	6.1		0.58	225	116.3	2
JP	MITSUBI	CT63	1.4	0.1	236	6.2	996		64	117.8	2
RU		MO22	30	5.9	4,191		757	1.05	1,400	92.5	1
RU		NK12	62	11.8	8,823	13	877	1.15	2,300	98.2	1
UK	ARMSTRNG	P181	5.6	0.7	596			0.69	250	114.8	2
UK	ARMSTRNG	P182	5.6	0.9	820			0.69	272	111.4	2
UK	ARMSTRNG	MAMBA5	8.2	1.3	1,103	5.4		0.84	370	120.8	1
UK	ARMSTRNG	MAMBA8	9.6		1,454						1
UK	ARMSTRNG	DMAMBA3	16.4	3.6	2,044	5.4		1.34	1,098	128	1
UK	ARMSTRNG	DMAMBA8	19.1	3.2	2,684			1.47	1,110	114.8	1
UK	ARMSTRNG	PYTHON		5.2	3,020	5					1
UK	AUTODIES	GT15	0.1		11	3	680	0.23	10		1
UK	BLACKBRN	ART600	3.2		354	4.1		0.48	126	169.2	1
UK	BLACKBRN	TURM600	3.2		354	4.1		0.48	127	177.9	2
UK	BRISTOL	PROT755	20	5.4	2,720	7.2		1.04	1,300	102	2
UK	BRISTOL	PROT765	20.1	5.6	2,952	7.2		1.02	1,315	102	2
UK	BRISTOL	PROT720	20.1	5.6	3,077	7.2		1.02	1,315	99.3	2
UK	BRISTOL	ORION2	37.1	8.6	3,280	10	762	1.06	1,430	109.5	2
UK	NAPIER	ELAND1	14		2,004	7		0.91	715	105.7	1
UK	NAPIER	ELAND6	14		2,353	7		0.91	735	102	1
UK	NAPIER	ELAND4	14		2,809	7		0.91	818	94.8	1

Type of compressor	No. of compressor stages	kilo-rpm	No. of turbine stages	Type of compressor2	No. of compressor stages2	kilo-rpm2	No. of turbine stages2	Combustor type	Remarks
Axial	3	37.5	1	Centrifugal	1	33	1	Annulus	Helicopter
Axial	3	37.5	1	Centrifugal	1	33	1	Annulus	APU
Centrifugal	2		1	Axial	1	20	1	Annulus	
Axial	2	37.8	1	Centrifugal	1	31	1	Annulus	L410
Axial	15	6.5	1					Can	
Axial	6		3	Axial	9	15.2	1	Cannular	
Mixed	2	34.5	2					Annulus	
Mixed	2	33.5	3					Annulus	Helicopter
Axial	1	34.5	1	Centrifugal	1		1	Annulus	
Mixed	2	33.5	2			33.5	1	Annulus	HELICOPTER
Mixed	2							Annulus	
Mixed	2	43.5	3					Annulus	Helicopter
Mixed	3	89.5	3					Annulus	Helicopter
Mixed	3	43	3					Annulus	
Mixed	2	33						Annulus	
Mixed	2	33.5	3					Annulus	
Mixed	3	32	3					Annulus	
Mixed	3	43	2			29	2	Annulus	
Mixed	2	64	2					Annulus	APU
Axial	5	25.4	2	Centrifugal	1	20.1	2	Annulus	Mil.Heli.
Centrifugal	2	42	3					Cannular	MBB Heli.
Axial	10	26.3	2			19.5	1	Annulus	Helicopter
		19.5	1						
Axial	14	16.9	2			15.6	2	Annulus	
Axial	5	25.2	1	Centrifugal	1	21.2	1	Annulus	Helicopter
Axial	6	51.6	2	Centrifugal	1	35	1	Annulus	Helicopter
Axial	14	7.6	3						
Axial	14	8.2	5					Cannular	Tu-114D,An-22
Axial	2	14	1	Centrifugal	1	20	2	Annulus	
Axial	2		1	Centrifugal	1	20	2	Annulus	
Axial	10	15	3					Annulus	
Axial	11	15	3					Annulus	
Axial	10	15	3					Annulus	
Axial	11	15	3					Annulus	
Centrifugal	14	8	1					Can	
Centrifugal	1	85	1					Can	APU
Centrifugal	1		2					Annulus	
			1	Centrifugal	1		1		
Axial	12	11.6	2	Centrifugal	1		2	Can	
Axial	12		2	Centrifugal	1		2	Can	
Axial	12		2	Centrifugal	1		2	Can	
Axial	7	10	3	Axial	5		1	Cannular	
Axial	10	12.5	3					Can	
Axial	10	12.5	3					Can	
Axial	10	12.5	3					Can	

(continued)

Country	Company	Model No.	Mass flow rate (kg/s)	Take-off thrust(kN)	Shaft power(kW)	Overall compression ratio	Turbine inlet temp. (Deg. C)	Diameter(m)	Weight(kg)	Specific fuel consumption (micro-g/J)	No. of spools
UK	NAPIER	ELAND5	14		2,809	7		0.91	818	94.8	1
UK	NAPIER	GAZ2	7.2		1,228	6.4		0.85	376	115.6	2
UK	NAPIER	GAZ3	7.2		1,338	6.4		0.85	392	113.7	2
UK	NAPIER	GAZ4	7.2		1,485	6.4		0.85	408	108.8	2
UK	ROLLS	DART510	9.1	1.6	1,193	5.5	860	0.96	526	117.8	1
UK	ROLLS	DART526	10	2.2	1,423	5.7	890	0.96	565	114	1
UK	ROLLS	DART529	10.6	2.2	1,512	5.6		0.96	555	96.9	1
UK	ROLLS	DART542	12	3.2	2,049	6.3		0.96	625	92.8	1
UK	ROLLS	DART545		2.2	2,206			0.96	570	108.8	1
UK	ROLLS	TYNE1	20.8	5.7	3,354	13		1.03	940	85.3	2
UK	ROLLS	TYNE3		5	3,951			1.03		81.9	2
UK	ROLLS	TYNE12	21	4.7	3,796	13.5		1.1	987	66	2
UK	ROLLS	RS360-07	3.3		670	12.1	968	0.56	136	83.9	2
UK	ROLLS	GN-H1200	5.6	0.7	1,006	8.1	898		142	104.8	2
UK	ROLLS	GN-H1400	6	0.9	1,117	8.4	725		151	104.8	2
UK	ROLLS	GN-H1800	7		1,304	9.9			212		2
UK	ROLLS	NIM103	5.1		529	5.9		0.58	304	121.5	2
UK	ROVER	1S/60	0.6		51	3	860		63	224.8	1
UK	ROVER	2S/150A	0.9		108	3.9	927		73	154.3	2
US	ALLISON	501D13	17.7		2,581	9.2	971	0.68	793	92.5	1
US	ALLISON	250B2			184			0.49	48	120.1	2
US	ALLISON	250B17	1.6		311	7.2			86	103.3	2
US	ALLISON	250C20	1.6		298	7.2			70	108.1	2
US	ALLISON	T56A15	15	3.4	3,658	9.3	1,080	1.12	828	88	1
US	ALLISON	T56A18	14.5	3.6	3,967	9.7	1,132		705	88	1
US	BOEING	502	1.6	0.2	147	3				192	1
US	CONTIN	T51	2		209	3.7		0.53	120	171.1	1
US	GARRETT	TPE331	3.5	0.7	627	10.4	1,004	0.53	161	92.8	1
US	GARRETT	TSE36	1.4		179	4.3	912	0.71	81	141.6	1
US	GARRETT	TSE231	1.9		354	8.6	1,038	0.39	77	101.3	2
US	GARRETT	TSE331	3.5		597	10.3	1,004	0.55	161	101.3	1
US	GARRETT	GTP30	0.9		75	3	898	0.41	39		1
US	GARRETT	GTCP36	0.9		145	3	843	0.58	66		1
US	GARRETT	GTP85	2.6		149	3.7	898	0.65	104		1
US	GARRETT	GTCP85	2.5		261	3.4	871	0.66	129		1
US	GARRETT	GTCP95	0.8		276	3.6	871	0.71	135		1
US	GARRETT	GTCP105	5.2		142	5.2	843	0.66	176		1
US	GARRETT	GTCP165	2.7		95	3.7	871	0.61	103		1
US	GARRETT	GTP331	2.7		474	9	960	0.57	145		1
US	GARRETT	GTCP660	11		597	4.3	913	1.03	252		1
US	GARRETT	TSCP700					974	0.95	247		2
US	GE	T58GE2	5.6	0.3	765	8.3	880	0.4	147	113.3	2
US	GE	T58GE10	6.2	0.6	1,044	8.4		0.53	159	104.7	2
US	GE	T58GE16	6.2		1,395	8.4	1,073	0.61	200	94.6	2
US	GE	T64GE14	11	0.9	2,066	12.5	971	0.74	512	84.6	2

Type of compressor	No. of compressor stages	kilo-rpm	No. of turbine stages	Type of compressor2	No. of compressor stages2	kilo-rpm2	No. of turbine stages2	Combustor type	Remarks
Axial	10	12.5	3					Can	
	11	20.4	1	Axial	11		2	Cannular	
	11	20.4	1	Axial	11		2	Cannular	
	11	20.4	1	Axial	11		2	Cannular	
Centrifugal	2	14.5	2					Can	
Centrifugal	2	15	3					Can	
Centrifugal	2	15	3					Can	
Centrifugal	2	15	3					Can	
Centrifugal	2	15	3					Can	
Axial	6	15.2	3	Axial	9		1	Cannular	
Axial	6		3	Axial	9		1	Cannular	
Axial	6	15.2	3	Axial	9	15.2	1	Cannular	
Axial	4	40	1	Centrifugal	1	40	1	Annulus	Helicopter
Axial	10	26.3	2			26.7	1	Annulus	Helicopter
Axial	10	26.3	2			26.8	1	Annulus	Helicopter
Axial	11	26.3	2			26.3	2	Annulus	Helicopter
Axial	2	35	2	Centrifugal	1	34.2	1	Annulus	Helicopter
Centrifugal	1	46	1					Annulus	APU
Centrifugal	1	64.5	1			64.5	1	Annulus	APU
Axial	14	13.8	4					Cannular	
Axial	7		2	Centrifugal	1		1	Can	
Axial	6	52	2	Centrifugal	1	33.3	2	Annulus	
Axial	6	52	2	Centrifugal	1	33.3	2	Annulus	Helicopter
Axial	14	13.8	4					Cannular	
Axial	14	13.8	4					Annulus	
Centrifugal	1	38	1					Can	
Centrifugal	1	34	1					Annulus	
Centrifugal	2	41.7	1					Annulus	
Centrifugal	1	58	1					Annulus	Heli
Centrifugal	2	44.8	1			51	1	Annulus	Heli
Centrifugal	2	41.7	3						Heli
Centrifugal	1	59.2	1						APU
Centrifugal	1	58	1						APU
Centrifugal	2	42.2	1						APU U
Centrifugal	2	40.8	1						APU
Centrifugal	1	42	1						APU
Centrifugal	2	35.1	2						APU
Centrifugal	1	38	1					Annulus	APU
Centrifugal	2	41.7	3						APU
Axial	4	20	2					Annulus	APU
Axial	3		2	Centrifugal	1	35.3	1	Annulus	APU
Axial		19.5	1	Axial	10		2	Annulus	
		19.5	1	Axial	10	27.3	2	Annulus	Mil.Heli
			1	Axial	10	26.8	2	Annulus	Mil.Heli
Axial		15.6	2	Axial	14	17.8	2	Annulus	

(continued)

Country	Company	Model No.	Mass flow rate (kg/s)	Take-off thrust(kN)	Shaft power(kW)	Overall compression ratio	Turbine inlet temp. (Deg. C)	Diameter(m)	Weight(kg)	Specific fuel consumption (micro-g/J)	No. of spools
US	GE	T64G716	12		2,536	13	1,093	0.6	317	81.2	2
US	GE	GE12			1,119		1,093	0.4	122	149	2
US	GE	T700	4.6			15					1
US	LYCOMING	T53L3	4.9	0.5	713	5.7		0.59	225	112.2	2
US	LYCOMING	T53L11	5	0.5	820	6.1		0.58	224	116.2	2
US	LYCOMING	T53L13	5.8	0.5	1,044	7.4		0.58	249	111	2
US	LYCOMING	T55L11	11.3	1.1	2,794	8		0.61	304	94.4	2
US	LYCOMING	T55L13	5.8	0.5	1,043	7.4		0.58	249	111	2
US	LYCOMING	T53L701	5.8	0.6	1,043	7.4		0.58	312	99.9	2
US	LYCOMING	T5319	5.4	0.7	1,341	8		0.58	256	99.9	2
US	LYCOMING	T5321A	5.4	0.7	1,368	8		0.58	306	99.9	2
US	LYCOMING	LTC4B12	12	1.5	3,432	8.5		0.61	308	86.6	2
US	LYCOMING	LTC4V1	11.8	1.1	3,730			0.56	258	69.3	3
US	P&W	T34	30.5	5.5	4,117	6.7		0.86	1,200	112.5	1
US	P&W	JFTD12A	23		3,633	6.7		0.51	444	116.6	2
US	P&W	PT6A-65	4.5	0.8	900	9.2	1,127	0.22			1
US	SO-TITAN	T62T12	1		78	3.5	788	0.32	33		1
US	SO-TITAN	T62T25	0.6		60	3.5	788	0.32	32		1
US	SO-TITAN	T62T39	0.9		30	2.9	788	0.47	41		1
US	TELEDYNE	TS120G6	0.8		134	5.6	649		97		1
US	TELEDYNE	T65T1	1.5		249	6	538		59	124.9	
US	TELEDYNE	T67T1	3.2		1,266	7.8			250	98	
US	WILLIAMS	WR9-7C	1		23	4	690		43	457	1

Type of compressor	No. of compressor stages	kilo-rpm	No. of turbine stages	Type of compressor2	No. of compressor stages2	kilo-rpm2	No. of turbine stages2	Combustor type	Remarks
Axial		13.6	2	Axial	14	18.2	2	Annulus	Heli
Centrifugal	1		2	Axial	5		2	Annulus	Heli
Mixed	4		2	Axial				Annulus	Heli
Axial	5	21.5	1	Centrifugal	1		1	Annulus	
Axial	5	21.2	1	Centrifugal	1		1	Annulus	Heli
Axial	5	21.2	1	Centrifugal	1		1	Annulus	Heli
Axial	7	19	1	Centrifugal	1	16	2	Annulus	Heli
Axial	5	25.4	1	Centrifugal	1		1	Annulus	Heli
Axial	5	24.4	1	Centrifugal	1		1	Annulus	Heli
Axial	5	26.4	1	Centrifugal	1		1	Annulus	Heli
Axial	5	26.4	1	Centrifugal	1	21.3	1	Annulus	Heli
Axial	7	16	2	Centrifugal	1	19.8	2	Annulus	Heli,V/STOL
Axial	12		3	Axial		17	2	Annulus	Reverse Flow.Heli
Axial	13	11	3					Cannular	
			2	Axial	9	16.7	2	Cannular	Sikorsky
Mixed	4	17	3	Axial				Annulus	
Centrifugal	1	56.7	1					Annulus	APU
Centrifugal	1	56.7	1					Annulus	APU
Centrifugal	1	56.7	1					Annulus	APU
Mixed	2	67	1					Cannular	APU
Centrifugal	1	59.6	2					Annulus	APU

List of Symbols

A	Flow area
A_e	Exhaust area
A_w	Wall surface area
A^*	Flow area corresponding to sonic speed
a	Sonic speed
b	Bypass ratio
b	Blade width/height
$\mathbf{b}$	Acceleration vector
C_F	Force coefficient
C_M	Torque coefficient
C_P	Power coefficient
c, $\mathbf{c}$	Absolute fluid velocity
c_f	Friction coefficient
c_L	Lift coefficient
c_p	Specific heat at constant pressure
c_u	Azimuthal component of $\mathbf{c}$
c_v	Specific heat at constant volume
D	Diameter
$\mathbf{D}$	Drag force
d	Stroke length
d_f	Film thickness
F	Thrust, force
f	Frequency of oscillation
f	Displacement
f_c	Heating factor
f_m	Maximum camber
H	Work done
H^*	Isentropic work done
h, h^o	Enthalpy (static, stagnation)
h_w	Enthalpy of gas at wall
I	Specific impulse

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I	Mass moment of inertia
I	Intensity of sound
J	Advance ratio
J	Area moment of inertia
K_n	Dimensionless rpm
k	Blockage factor
$\mathbf{L}$	Lift force
L, l	Lengths
l	Chord length
l	Connecting rod length
M	Mach number
M	Bending/torque moment
$\dot{\boldsymbol{m}}$	Fluid mass flow rate
$\dot{\boldsymbol{m}}_{\mathbf{a}}$	Mass flow rate of air
$\dot{m}_{\mathrm{c}}$	Mass flow rate of cold stream
$\dot{m}_{\mathrm{f}}$	Mass flow rate of fuel
$\dot{m}_{\mathrm{H}}$	Mass flow rate of hot stream
$\dot{m}_{\mathrm{L}}$	Mass flow rate through labyrinth
N	Number
N_{B}	Number of blades
n	rpm
P	Power
P_{D}	Dissipative power
P_{E}	Increase in kinetic energy
p_{E}	Power developed from energy
P_{F}	Developed power
p, p^{o}	Pressure (static, stagnation)
p_{m}	Mean indicated pressure
$\dot{Q}$	Heat added per unit time
q	Heat per unit mass
q_{a}	Heat added
q_{r}	Heat rejected
q_{w}	Wall heat flux
$\dot{q}$	Heat added per unit mass and time
R	Radius of curvature
R	Gas constant
$\mathbf{R}$	Resultant force
r	Radius
$\hat{r}$	Reaction or degree of reaction
s	A length
s	Entropy
s	Labyrinth gap
SFC	Specific fuel consumption
SFC*	Nondimensional SFC

T, T°	Temperature (static, stagnation)
t	Time
t	Pitch
u	Azimuthal velocity
u	Flow velocity
u_{c}	Cold stream flow velocity
u_{e}	Exhaust velocity
u_{H}	Hot stream flow velocity
u_{∞}	Approaching flow velocity
V	Volume
V_{c}	Clearance volume
V_{d}	Displacement volume
V_{t}	Total volume
W	Weight of the engine
W_{b}	Moment of resistance against bending
W_{t}	Moment of resistance against torsion
w, $\mathbf{w}$	Relative flow velocity
w	Deflection
w	Work per unit mass
w_{f}	Friction work
w_{t}	Technical work
w_{u}	Azimuthal component of $\mathbf{w}$
α	Heat transfer coefficient
α, β	Blade angles
β	Mass transfer coefficient
χ	Width-to-diameter ratio
χ	Complex velocity potential
χ_{M}	Correction factor due to Mach number
χ_{R}	Correction factor due to Reynolds number
χ_{δ}	Correction factor due to blade tail thickness
γ	Specific heat ratio
Δ	Difference, gap
ΔH_{p}	Heat of reaction
Δh	Difference in enthalpy
δ	Boundary-layer thickness
δ	Pressure ratio
ε	Compression ratio
φ	Hot jet to approaching flow speed ratio
φ	Discharge coefficient
φ	Angle
φ	Mass flow coefficient
η	Efficiency
η_{ad}	Adiabatic efficiency
η_{comb}	Combustor efficiency

η^{k}	Kinetic energy efficiency
η_{p}	Propulsive efficiency
η_{pol}	Polytropic efficiency
η_{rot}	Rotor efficiency
η_{stat}	Stator efficiency
η_{th}	Thermodynamic efficiency
π_{c}	Compressor pressure ratio (based on p)
π_c^o	Compressor pressure ratio (based on p^{o})
π_τ	Turbine pressure ratio (based on p)
π_t^o	Turbine pressure ratio (based on p^{o})
μ	Dynamic viscosity of fluid
μ	Slip factor or power-lowering factor
ν	Blade root-to-tip diameter ratio
σ	Solidity
σ	Stress
σ_{b}	Bending stress
σ_{c}	Stress due to centrifugal force
σ_{t}	Torsional stress
Θ	Temperature ratio
θ	Crank angle
θ	Included angle
ρ	Mass density
τ_{c}	Temperature ratio for compressor
τ_{t}	Temperature ratio for turbine
τ_{w}	Wall shear stress
ψ	Work coefficient
Ω	Cross-sectional area
Ω	Combustion volume ratio
ω	Azimuthal speed
ζ	Cold jet-to-hot jet speed ratio
ζ	Profile loss coefficient

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