

Расчёт параметров двигателя

Коэффициенты

| Параметр | Значение |
|----------------|----------|
| g_c | 0.86 |
| sigma_intake | 0.99 |
| sigma_cc | 0.955 |
| sigma_1 | 0.99 |
| sigma_2 | 0.955 |
| phi_c1 | 0.99 |
| phi_c2 | 0.97 |
| effk_gas | 0.995 |
| effk_comp_full | 0.81 |
| effk_fan_full | 0.92 |
| a | 0.03 |
| effk_hpt_full | 0.91 |
| effk_lpt_full | 0.92 |
| ksi_take | 0.02 |
| g_air_back | 0.014 |
| z | 0.5 |

Скорости и диаметры

| Параметр | Значение |
|----------|----------|
| cB | 220.0 |
| cBX | 175.0 |
| cKND | 180.0 |

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|------|-------|
| cB2 | 204.0 |
| cK | 145.0 |
| cG | 155.0 |
| MHPT | 0.5 |
| MLPT | 0.4 |
| dB | 0.475 |
| dHPC | 0.575 |

Прочие параметры

| Параметр | Значение |
|------------------------|----------|
| DcpDivHvyhHighPressure | 13.0 |
| DcpDivHvyhOther | 3.0 |
| F1 | 0.3 |
| P0 | 101325.0 |
| T0 | 288.0 |
| ro0 | 1.225 |

Предрасчёт

| Параметр | Значение |
|------------|--------------------|
| expected_P | 282958.29000000004 |
| m | 5.3 |
| TGfull | 1701.5428 |
| TKfull | 869.2308255572699 |
| PiK_full | 34.7929 |

Params

| Параметр | Значение |
|----------------|----------------------|
| q_T | 0.024523688093977633 |
| LB2 | 64866.309621120665 |
| TB2* | 352.3672549646261 |
| PiB* | 1.9282089302495302 |
| LK | 611173.8230676597 |
| LKND | 102737.16722541387 |
| PiKND* | 2.5673356452742744 |
| TKND* | 389.79378465834264 |
| PiKVD* | 13.552143080334554 |
| LKVD_adiabatic | 423572.0343390617 |
| effk_HPC* | 0.8330871298753971 |

BX-BX

| Параметр | Значение |
|----------|--------------------|
| TBX* | 288.0 |
| TBX | 272.7560975609756 |
| PBX* | 101325.0 |
| PBX | 83763.2546928748 |
| roBX | 1.0700330181381792 |

B-B

| Параметр | Значение |
|----------|--------------------|
| TB* | 288.0 |
| TB | 263.90841214534595 |

| | |
|-----|--------------------|
| PB* | 100311.75 |
| PB | 73886.38485787228 |
| roB | 0.9755045228994514 |

КНД-КВД

| Параметр | Значение |
|----------|--------------------|
| cpLPC* | 1013.88692316945 |
| kLPC* | 1.394834452033601 |
| PKND* | 257533.9314148417 |
| TKND | 373.81567148832744 |
| PKND | 222136.0315395119 |
| roKND | 2.0705208483396156 |

К-К

| Параметр | Значение |
|----------|--------------------|
| cpHPC* | 1116.6608238333279 |
| kHPC* | 1.3459244931850078 |
| PK* | 3490136.6865750006 |
| LKVD | 508436.6558422459 |
| TK | 858.4733065831889 |
| PK | 3325061.691385665 |
| roK | 13.495563248592573 |

Г-Г

| Параметр | Значение |
|----------|-------------------|
| cpGas* | 1297.970548404956 |

| | |
|--------|--------------------|
| kGas* | 1.2857437120775599 |
| RGas* | 288.4610044635438 |
| PG* | 3333080.5356791257 |
| TG | 1692.2879675118809 |
| PG | 3252279.8704879563 |
| roG | 6.696251364427867 |
| tTGorr | 1693.7268772545688 |
| tcpMix | 1293.913932054457 |
| kMix | 1.286870875323374 |
| RMix | 288.4409223950276 |

ТВД-ТВД

| Параметр | Значение |
|-------------|--------------------|
| LTVD | 499189.8193293009 |
| TTVD* | 1301.97090578478 |
| PiTVD* | 3.653964723771207 |
| PTVD* | 912181.914071436 |
| kMixTVDfull | 1.2999611482860345 |
| RMixTVDfull | 288.4409223950276 |
| TTVD | 1254.9175905997013 |
| PTVD | 777681.1540471358 |
| kMixTVD | 1.302267368308417 |
| RMixTVD | 288.4409223950276 |
| roTVD | 2.148470979880126 |
| cTVD | 343.2860257649649 |

ТНД-ТНД

| Параметр | Значение |
|-------------|--------------------|
| LTND | 438407.68107511394 |
| TTND* | 941.9698565270321 |
| PiTND* | 4.52450913781744 |
| PTND* | 201609.03344124084 |
| kMixTNDfull | 1.3233678893011873 |
| RMixTNDfull | 288.4409223950276 |
| TTND | 918.2161276377108 |
| PTND | 181600.1216033092 |
| kMixTND | 1.325419610746854 |
| RMixTND | 288.4409223950276 |
| roTND | 0.6856687283205227 |
| cTND | 236.99412681297764 |

C1-C1

| Параметр | Значение |
|----------|--------------------|
| TC1* | 941.9698565270321 |
| kMixC1 | 1.3233678893011873 |
| RMixC1 | 288.4409223950276 |
| cc1t | 559.1468048550922 |
| cc1 | 553.5553368065413 |
| sigmaC1 | 0.9866265492634885 |
| GDF1 | 0.5431532288334079 |
| PiC1* | 1.969829194244544 |
| PiCr* | 1.8465859560994111 |
| cc1_docr | 575.0813735011308 |

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|------------|---------------------|
| PC1* | 198912.8249644787 |
| PC1 | 101325.0 |
| kMixC1ave | 1.3555256710683483 |
| cpMixC1ave | 1099.5160437926274 |
| RMixC1ave | 288.3797685747251 |
| TC1 | 791.5770596165025 |
| roC1 | 0.44387289306210764 |

B2-B2

| Параметр | Значение |
|----------|-------------------|
| PB2* | 193422.0121589583 |
| cpB2 | 1010.033761983392 |
| kB2 | 1.39693858722823 |
| TB2 | 332.0678097661426 |
| PB2 | 156970.6149782268 |
| roB2 | 1.647061005629733 |

C2-C2

| Параметр | Значение |
|----------|--------------------|
| TC2* | 352.3672549646261 |
| PC2* | 184718.02161180516 |
| kC2 | 1.3981945342882747 |
| sigmaC2 | 0.9597913931084853 |
| GDF2a | 0.5287979629115052 |
| GDF2b | 0.550950932367587 |
| PiC2* | 1.8993972504797836 |

| | |
|--------|--------------------|
| Pi2Cr* | 1.891081415091138 |
| cpC2 | 1007.7532381452154 |
| TC2 | 297.00442829977993 |
| PC2 | 101325.0 |
| roC2 | 1.1886987090019305 |

Основные параметры двигателя

| Параметр | Значение |
|----------|---------------------|
| P_spec | 373.99320947299145 |
| Gair | 756.5867048728711 |
| Gair1 | 120.0931277575986 |
| Gair2 | 636.4935771152725 |
| Ggas | 122.31769539841056 |
| C_spec | 0.03672062750010771 |
| EngEff | 0.4380784611532321 |
| NB2 | 41286989.44501391 |
| NKND | 12338027.749055399 |
| NKVD | 61059748.26670902 |
| NTVD | 61059748.26670903 |
| NTND | 53625017.19406931 |
| P_diff | 4.579513685992283 |
| Ndiff | 0.0 |