

```
bladeCountRotor =
```

```
100
```

```
bladeCountStator =
```

```
59
```

```
This stage currently extracts 28446897 [W]
```

```
Total Enthalpy [J / kg]:
```

h01	h02	h03
1.7814e+06	1.7814e+06	1.3750e+06

```
Static Enthalpy [J / kg]:
```

h1	h2	h3
1.7356e+06	1.3943e+06	1.3077e+06

```
Total Pressure Values [Pa]:
```

p01	p02	p03
2.0500e+06	2.0396e+06	6.4063e+05

```
Static Pressure Values [Pa]:
```

p1	p2	p3
1.8456e+06	7.5977e+05	5.2326e+05

```
Total Temp Values [K]:
```

t01	t02	t03
1700.0	1700.0	1312.2

```
Static Temp Values [K]:
```

t1	t2	t3
1656.3	1330.6	1247.9

```
Entropy Change Values, static [K]:
```

1-> 2	2 -> 3
1.323	29.763

```
Entropy Change Values, total [K]:
```

1-> 2	2 -> 3
1.323	29.763

```
Total Enthalpy, Relative Rotor [J / kg]:
```

h01r	h02r	h03r
NaN	1.5135e+06	1.5100e+06

```
Total Temp Values, Relative Rotor[K]:
```

t01r	t02r	t03r
NaN	1444.3225	1441.0

```
Total Pressure Values, Relative Rotor [Pa]:
```

p01r	p02r	p03r
NaN	1.0574e+06	9.3428e+05

```
Mach, Relative Rotor:
```

M1r	M2	M3
NaN	0.7198	0.9683

```
Entropy Change Values, static [K]:
```

1-> 2	2 -> 3
NaN	29.763

```
Entropy Change Values, total Rotor, Relative[K]:
```

```

1-> 2          2 -> 3
NaN           29.763
Blade Characteristics
Mid Stator Mid Rotor
0.0340 0.0458
0.0410 0.0459
-34.5325 0.7157
-33.9477 4.1737
-33.3725 8.0349
Radii for each point:
Cond.1 S LE S TE Cond.2 R LE R TE Cond3
0.3843 0.3843 0.3843 0.3843 0.3843 0.3840 0.3840
0.3728 0.3700 0.3654 0.3632 0.3618 0.3579 0.3570
0.3613 0.3556 0.3464 0.3421 0.3394 0.3317 0.3301

Area of Annulus for each points:
Cond.1 S LE S TE Cond.2 R LE R TE Cond3
0.0540 0.0668 0.0870 0.0963 0.1019 0.1177 0.1209

Corresponding 'x' coordinate of each mid point
0 0.0185 0.0526 0.0711 0.0838 0.1296 0.1422

StatorInletVelTriangle =

0 0 0
0 0 0
0 0 0
302.7183 302.7183 302.7183
0 0 0
302.7183 302.7183 302.7183
0 0 0
0 0 0
0 0 0

StatorExitRotorInletVelTriangle =

69.0650 67.8955 66.7451
52.7604 47.3006 40.9751
429.8990 456.4039 482.9087
331.1027 331.1027 331.1027
865.4853 815.2238 770.4796
926.6573 879.8971 838.6106
331.1027 331.1027 331.1027
435.5863 358.8199 287.5709
547.1420 488.2425 438.5499

RotorExitVelTriangle =

```

12.9797	12.0294	11.2070
54.1918	55.6480	57.0449
414.7689	448.6424	482.5158
358.9139	358.9139	358.9139
82.7279	76.4817	71.1126
368.3247	366.9722	365.8909
358.9139	358.9139	358.9139
497.4967	525.1241	553.6284
613.4510	636.0617	659.7906

Degree of Reaction at Hub:

9.620%

Flow Coeff:

0.800

Work Coeff:

2.019

Mis Span Zweifel Coeff:

0.800

Stator Blade Count:

59.000

Rotor Blade Count:

100.000

First Table with design choices:

12000.0000

0.8000

0.8000

109.3765

108.3996

0.9830

0.9742

12.0294

1.0500

0.8700

0.8000

1.2000

Second Table with Major Design Characteristics

28.4469

9.6199

2.0190

1.2972

102.9486

59.0000

100.0000

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