



1

2

3

Duty Flow = 2206.5 m³/h
 Flow at NTP = 2090.1 m³/h
 Duty Pressure Rise = 3.768 kPa

This example considers the effect of suction pressure on fan performance

Stagnation Pressure = 91.192 kPa a

Stagnation Pressure = 91.192 kPa a



4

5

6

Duty Flow = 2263.5 m³/h
 Flow at NTP = 1929.4 m³/h
 Duty Pressure Rise = 3.585 kPa

Stagnation Pressure = 81.060 kPa a

Stagnation Pressure = 81.060 kPa a



7

8

9

Duty Flow = 2312.8 m³/h
 Flow at NTP = 1752.2 m³/h
 Duty Pressure Rise = 3.349 kPa

Steel Pipe, Duct or Tube

#	Length (*)	Inside Diameter (*)	Flow (m ³ /h)	Flow at STP (m ³ /h)	Total Pressure Loss (kPa)	In Stagnation Pressure (kPa a)	In Velocity (m/s)	Out Stagnation Pressure (kPa a)	Out Velocity (m/s)	Reynolds No	Friction Factor
-6	50 m	154.1 mm	2221.0	1848.2	3.267	84.327	33.08	81.060	34.41	290581	0.017018
-5	1.25 m	154.1 mm	2310.6	1848.2	0.082	81.060	34.41	80.978	34.45	290581	0.017018
-4	50 m	154.1 mm	2127.3	2204.6	3.676	105.001	31.68	101.325	32.83	346617	0.016771
-3	1.25 m	154.1 mm	2261.4	2035.1	0.088	91.192	33.68	91.105	33.71	319970	0.016879
-2	50 m	154.1 mm	2177.8	2035.1	3.498	94.690	32.44	91.192	33.68	319970	0.016879
-1	1.25 m	154.1 mm	2204.6	2204.6	0.092	101.325	32.83	101.233	32.86	346617	0.016771

Known Pressure Boundary

#	Elevation (*)	Pressure (*)	Fluid	Flow (m3/h)	Flow at STP (m3/h)	Stagnation Pressure (kPa a)	Temperature (C)	Density (kg/m3)	Viscosity (cP)	Composition Mass %
1	0 m	1 atm	air	2204.6	2204.6	101.325	15.00	1.23	0.018	"air=100.0%"
3	0 m	1 atm	air	2204.5	2204.6	101.325	14.99	1.23	0.018	"air=100.0%"
4	0 m	0.9 atm	air	2261.4	2035.1	91.192	15.00	1.10	0.018	"air=100.0%"
6	0 m	0.9 atm	air	2261.3	2035.1	91.192	14.99	1.10	0.018	"air=100.0%"
7	0 m	0.8 atm	air	2310.6	1848.2	81.060	15.00	0.98	0.018	"air=100.0%"
9	0 m	0.8 atm	air	2310.5	1848.2	81.060	14.99	0.98	0.018	"air=100.0%"

Centrifugal Compressor, Fan or Blower

#	Duty Flow (m ³ /h)	Flow at STP (m ³ /h)	Duty Pressure Rise (kPa)	Duty Efficiency (%)	Duty Power (Watt)	In Stagnation Pressure (kPa a)	In Static Pressure (kPa a)	Out Stagnation Pressure (kPa a)	Out Static Pressure (kPa a)
2	2206.5	2204.6	3.768	45.01	5096.8	101.233	100.571	105.001	104.364
5	2263.5	2035.1	3.585	46.35	3911.8	91.105	90.478	94.690	94.088
8	2312.8	1848.2	3.349	47.15	2899.9	80.978	80.397	84.327	83.769