



### *Compute pressure drops in a network*

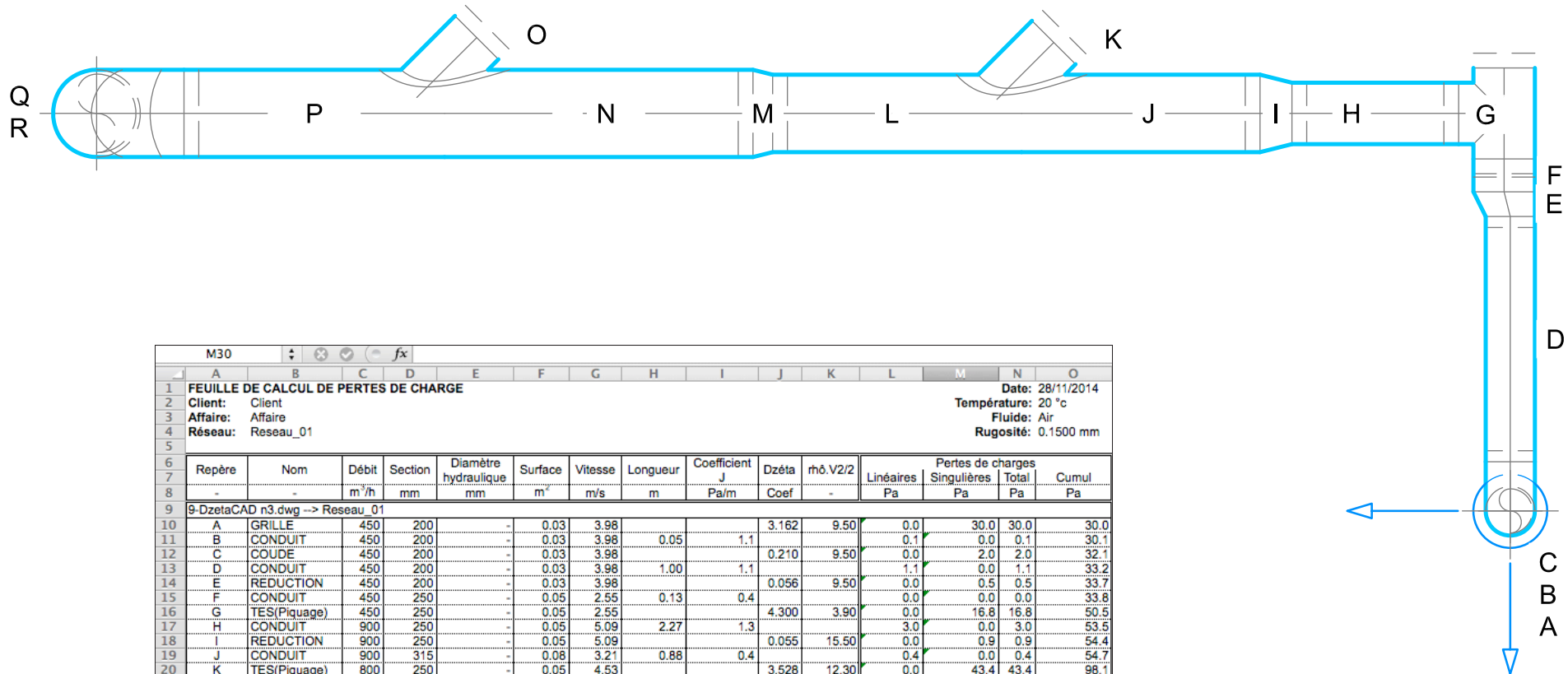
- Objects drafted with AUTOGAINE and/or AUTOTUBE already contain ample information embedded at the time of their creation.
- A specific tool lets you add missing information that might be needed for computations (length of vertical ducts, flow, direction of flow).
- Select specific segments of the route for pressure drops computation.
- Automatically locate each part and create a ready to print layout of a chosen network route.
- Excel spread sheet listing singular and linear pressure drops.
- Tables and computation procedures taken from reference studies in the trade. (Ref.: MEMENTO of pressure drops by I.E IDEL'CIK, PORCHER air conditioning courses).

### *Compute friction factors using the COLEBROOK formula, taking into account the following factors:*

- Roughness coefficients of materials.
- Duct shapes.
- Altimetry and humidity for air computation.
- Fluids temperature.

### *Computation of DZETA coefficient*

- Tables and computation procedures taken from reference studies in the trade. (Ref.: MEMENTO of pressure drops by I.E IDEL'CIK, PORCHER air conditioning courses).
- Informs the user on the chosen computation method.
- Takes into account the direction of flow in each part.
- Instant reading on the DZETA coefficient and pressure drop of fittings, directly into the drawing.
- Allows to force the DZETA coefficient for special parts.



M30														
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1 FEUILLE DE CALCUL DE PERTES DE CHARGE												Date: 28/11/2014		
2 Client: Client												Température: 20 °c		
3 Affaire: Affaire												Fluide: Air		
4 Réseau: Reseau_01												Rugosité: 0.1500 mm		
5														
Repère	Nom	Débit	Section	Diamètre hydraulique	Surface	Vitesse	Longueur	Coefficient J	Dzéta	ρh.V2/2	Linéaires	Pertes de charges	Total	Cumul
-	-	m³/h	mm	mm	m²	m/s	m	Pa/m	Coef	-	Pa	Singulières	Pa	Pa
9 9-DzetaCAD n3.dwg -> Reseau_01														
10	A	GRILLE	450	200	-	0.03	3.98		3.162	9.50	0.0	30.0	30.0	30.0
11	B	CONDUIT	450	200	-	0.03	3.98	0.05	1.1	0.1	0.0	0.0	0.1	30.1
12	C	COUDE	450	200	-	0.03	3.98		0.210	9.50	0.0	2.0	2.0	32.1
13	D	CONDUIT	450	200	-	0.03	3.98	1.00	1.1	0.0	1.1	0.0	1.1	33.2
14	E	REDUCTION	450	200	-	0.03	3.98		0.056	9.50	0.0	0.5	0.5	33.7
15	F	CONDUIT	450	250	-	0.05	2.55	0.13	0.4	0.0	0.0	0.0	0.0	33.8
16	G	TES(Piquage)	450	250	-	0.05	2.55		4.300	3.90	0.0	16.8	16.8	50.5
17	H	CONDUIT	900	250	-	0.05	5.09	2.27	1.3	0.0	3.0	0.0	3.0	53.5
18	I	REDUCTION	900	250	-	0.05	5.09		0.055	15.50	0.0	0.9	0.9	54.4
19	J	CONDUIT	900	315	-	0.08	3.21	0.88	0.4	0.0	0.4	0.0	0.4	54.7
20	K	TES(Piquage)	800	250	-	0.05	4.53		3.528	12.30	0.0	43.4	43.4	98.1
21	L	CONDUIT	1700	315	-	0.08	6.06	2.05	1.4	0.0	2.8	0.0	2.8	100.9
22	M	REDUCTION	1700	315	-	0.08	6.06		0.042	22.00	0.0	0.9	0.9	101.9
23	N	CONDUIT	1700	355	-	0.10	4.77	1.17	0.8	0.0	0.9	0.0	0.9	102.8
24	O	TES(Piquage)	800	250	-	0.05	4.53		4.119	12.30	0.0	50.7	50.7	153.4
25	P	CONDUIT	2500	355	-	0.10	7.02	1.98	1.6	0.0	3.1	0.0	3.1	156.5
26	Q	COUDE	2500	355	-	0.10	7.02		0.619	29.50	0.0	18.3	18.3	174.8
27	R	CONDUIT	2500	355	-	0.10	7.02	0.50	1.6	0.0	0.8	0.0	0.8	175.6