

ROBUSCHI

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ROBOX

SELECTION
International Measuring System (S.I.)

Soft.Ver. :13.0.21
D.B.Ver. :19.3.26002
Date :07.29.2020
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MODEL : ES 145 /5 P

Quantity :

GENERAL DATA

Ref. : Plant :
Customer : Item :
Service : Waste water treatment

FLUID

Fluid : Atmospheric air
Spec. W.ght (kg/m³) : 1.199 Spec. Heat Cp (kJ/kg°C) : 1.010 Spec. Heat Cv (kJ/kg°C) : .723
Altitude (m) : 0 Pressure (mbar) : 1,013 Temperature (°C) : 20
Relative humidity (%) : 50

TECHNICAL DATA

Delivery (m ³ /h)	Q1 : 8,193 FAD	*Delivery (Nm ³ /h)	Q2 : 7,297	*Delivery (kg/h)	Q3 : 9,432
		***Delivery T (Nm ³ /h)	Q2T : 7 382	***Delivery T (kg/h)	Q3T : 9 504
Delivery (m ³ /h)	Q4 :	*Delivery (Nm ³ /h)	Q4 :	*Delivery (kg/h)	Q4 :
Speed (rpm)	n4 :	***Delivery T (Nm ³ /h)	Q4T :	***Delivery T (kg/h)	Q4T :
Dif.pressure (mbar)	DP : 600	Inlet press. (mbar a)	P1 : 1,013	Outlet pres.(mbar a)	P2 : 1,613
Temp.rise(°C)	DT : 61	Inlet temp.(°C)	T1 : 30	Outlet temp.(°C)	T2 : 91
		Spec.W.ght (kg/m ³)	SW : 1.160	H2O injection (lt/min)	ia : .00
Abs.ed Power (kW)	N : 173.2	**Sound Pressure Level (dBA)	: 79	Heat radiation (kW)	Wd : 10.6
Speed (rpm)	n : 1,777	n/nmax (%)	: 89		
Volumetric efficiency (%)	: 88.0	Adiabatic efficiency (%)	: 84.0	Total efficiency (%)	: 66.2

*The Nm³/h and kg/h capacity are referred to the dry part of the conveyed gas/vapour mixture according DIN 1343

**Estimated sound pressure level at 1 m, free field with soundproof piping

***The Nm³/h and kg/h capacity are referred to total conveyed gas/vapour mixture

Performances tolerances following the Robuschi procedure TE1.S.0015 (Q1 = ±5% * nmx/n ; N = ± 5%)

ELECTRIC MOTOR

IEC Motor : 315MD Hz : 50
Power (kW) : 200.0 Poles : 4 V : 380-420 D / 660-690 Y
Speed (rpm) : 1,485 Size :

TRANSMISSION

Coupling type :
V-belt type : XPC Length (mm) : 3,350 Shaft centres (mm) : 1,192
Grooves : 8 Mot.pulley Diam. (mm) : 335 Blower pulley diam. (mm) : 280
(Int.Code C549) (Int.Code 235M) (Int.Code S232)

WARNING

No warning

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FLUID

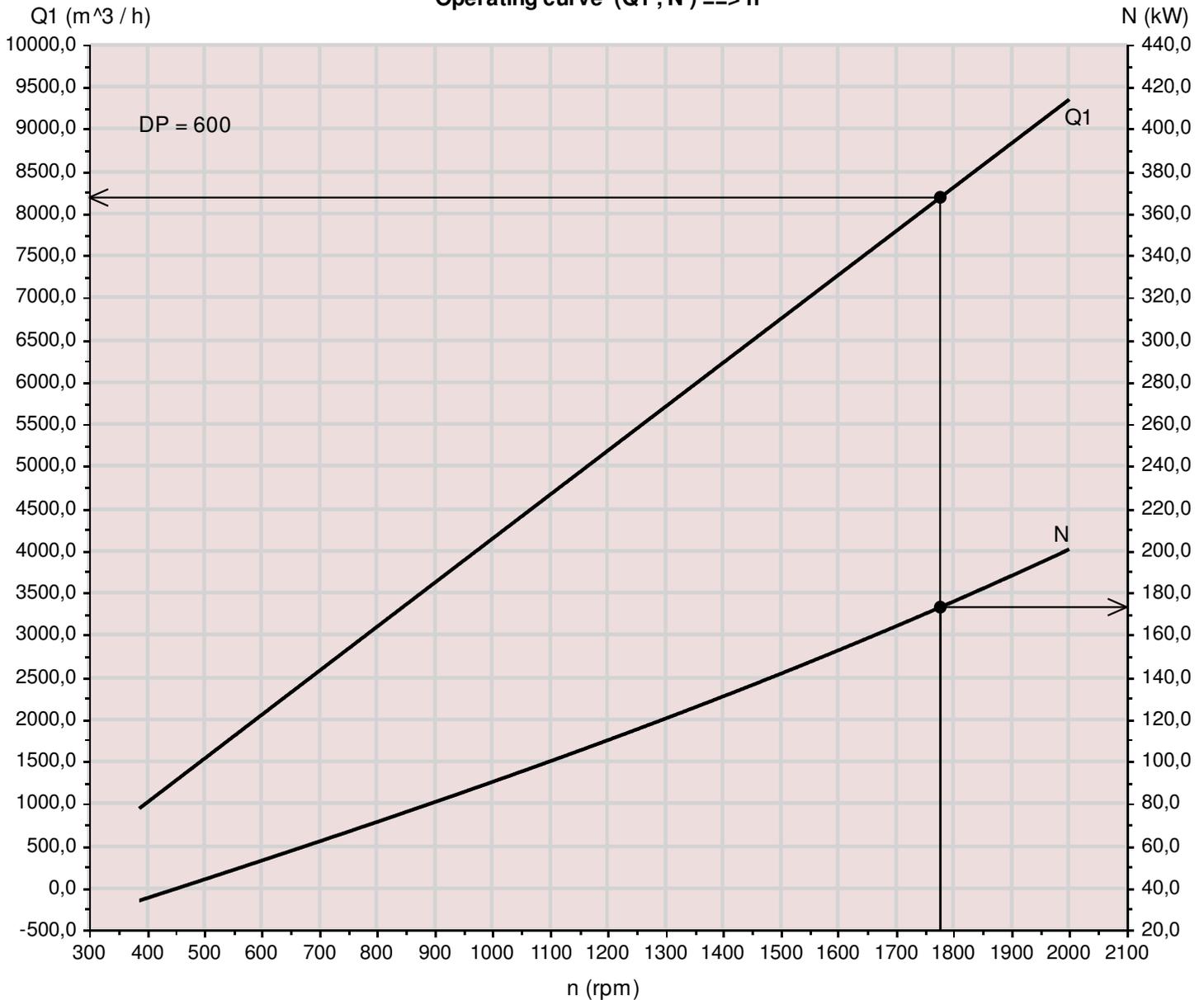
Fluid :	Atmospheric air				
Spec. W.ght (kg/m ³) :	1.199	Spec. Heat Cp (kJ/kg°C) :	1.010	Spec. Heat Cv (kJ/kg°C) :	.723
Altitude (m) :	0	Pressure (mbar) :	1,013	Temperature (°C) :	20
Relative humidity (%) :	50				

OPERATION POINT

Inlet press. (mbar a)	P1 : 1,013	Inlet temp.(°C)	T1 : 30	Spec.W.ght (kg/m ³)	SW : 1.160
Delivery (m ³ /h)	Q1 : 8,193	Dif.pressure (mbar)	DP : 600	Cp / Cv	: 1.4
Abs.ed Power (kW)	N : 173.2	Speed (rpm)	n : 1,777	n/nmax (%)	: 89

Performances tolerances following the Robuschi procedure TE1.S.0015 (Q1 = ±5% * nm_x/n ; N = ± 5%)

Operating curve (Q1 , N) ==> n



MODEL : **ES 145 /5 P**

Quantity :

GENERAL DATA

Ref.	:	Plant	:
Customer	:	Item	:
		Service	: Waste water treatment

FLUID

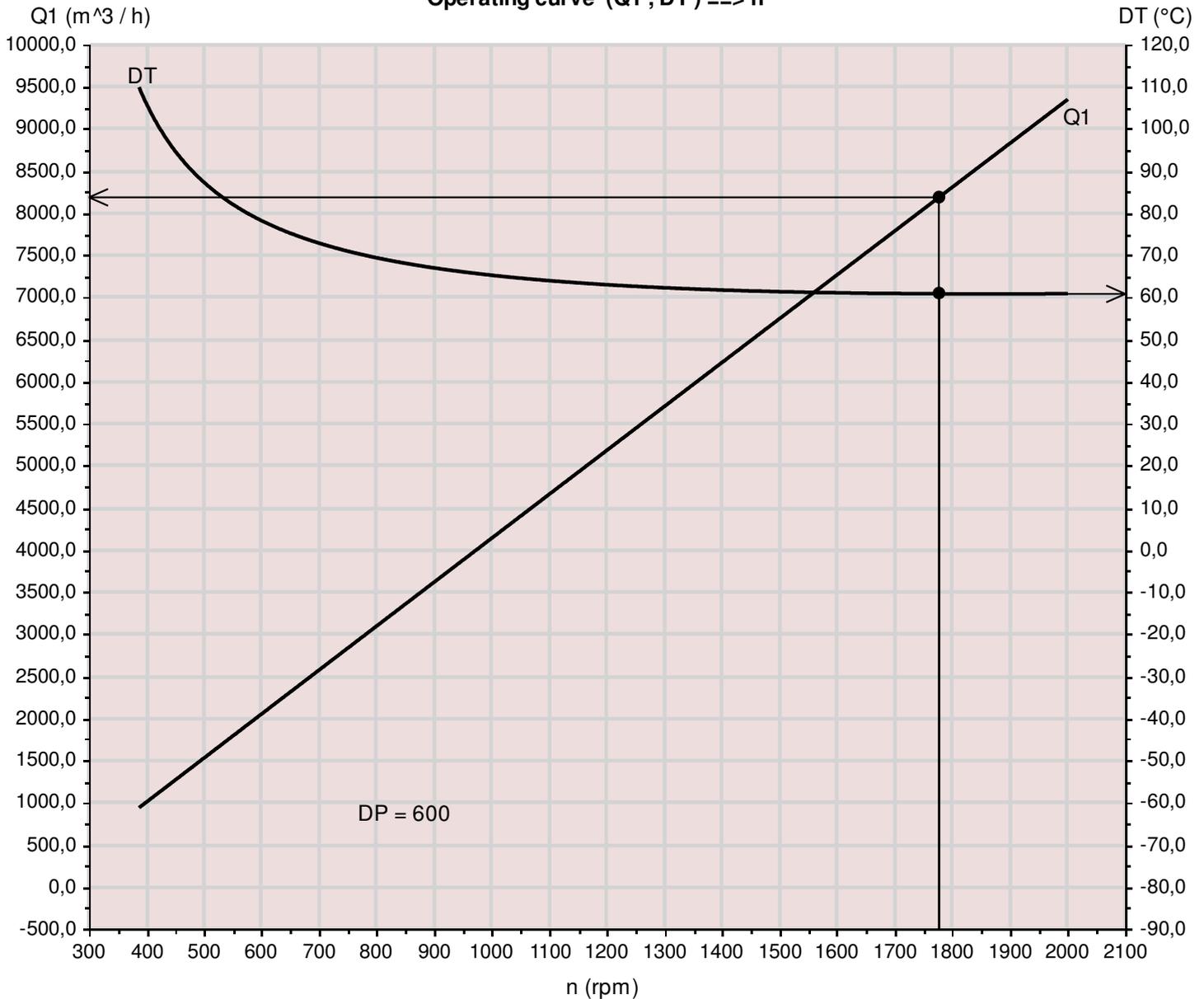
Fluid	:	Atmospheric air				
Spec. W.ght (kg/m ³)	:	1.199	Spec. Heat Cp (kJ/kg°C)	: 1.010	Spec. Heat Cv (kJ/kg°C)	: .723
Altitude (m)	:	0	Pressure (mbar)	: 1,013	Temperature (°C)	: 20
Relative humidity (%)	:	50				

OPERATION POINT

Inlet press. (mbar a)	P1	: 1,013	Inlet temp.(°C)	T1	: 30	Spec.W.ght (kg/m ³)	SW	: 1.160
Delivery (m ³ /h)	Q1	: 8,193	Dif.pressure (mbar)	DP	: 600	Cp / Cv		: 1.4
Temp.rise(°C)	DT	: 61	Speed (rpm)	n	: 1,777	n/nmax (%)		: 89

Performances tolerances following the Robuschi procedure TE1.S.0015 (Q1 = ±5% * nmx/n ; N = ± 5%)

Operating curve (Q1 , DT) ==> n





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STARTING CURVES
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MODEL : ES 145 /5 P

Quantity :

GENERAL DATA

Ref. :	Plant :
Customer :	Item :
	Service : Waste water treatment

TECHNICAL DATA

Blower : ES 145 /5 P	Power (kW) : 173.2	Speed (rpm) : 1,777	J (kgm ²) : 4.500
Motor : 315MD	Power (kW) : 200.0	Speed (rpm) : 1,485	J (kgm ²) : 3.100
Motor Pulley : 8 XPC	Diameter (mm) : 335		J (kgm ²) : .000
Blower Pulley : 8 XPC	Diameter (mm) : 280		J (kgm ²) : .000
Mot. Coupling :	Size :		J (kgm ²) : .000
Gear box :			J (kgm ²) : .000
Blower coupling :	Size :		J (kgm ²) : .000
Torque at motor shaft T (Nm) : 1,147.3	V-belt load (N): 10,274	J tot. (kgm²) : 9.544	

Starting curve with constant pressure
Torque referred to motor shaft

