



GARDNER DENVER S.r.l. - Divisione ROBUSCHI
Via S.Leonardo, 71/A - 43122 Parma - Italy
Phone +39 0521 274911
info.italy@gardnerdenver.com
www.roboschi.com



SELECTION

International Measuring System (S.I.)

Soft.Ver. : 13.0.18
D.B.Ver. : 17.5.18001
Date : 10.08.2018
Page 1/ 9



MODEL : ES 45 /2 P

Quantity : 1

GENERAL DATA

Ref.	: Included noise hood	Plant	: Haugesund
Customer	: Steinsvik	Item	: -
		Service	: Pressure pneumatic conveying

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				

TECHNICAL DATA

Delivery (m ³ /h)	Q1 : 642 FAD	*Delivery (Nm ³ /h)	Q2 : 572	*Delivery (kg/h)	Q3 : 739
		***Delivery T (Nm ³ /h)	Q2T : 579	***Delivery T (kg/h)	Q3T : 745
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 : 1,000	Inlet press. (mbar a)	P1 : 1,013	Outlet pres.(mbar a)	P2 : 2,013
Temp.rise(°C)	DT : 108	Inlet temp.(°C)	T1 : 30	Outlet temp.(°C)	T2 : 138
		Spec.W.ght (kg/m ³)	SW : 1.160	H2O injection (lt/min)	ia : .00
Abs.ed Power (kW)	N : 24.2	**Sound Pressure Level (dBA)	: 75	Heat radiation (kW)	Wd : 1.6
Speed (rpm)	n : 4,730	n/nmax (%)	: 95		
Volumetric efficiency (%)	: 80.8	Adiabatic efficiency (%)	: 76.8	Total efficiency (%)	: 56.7

*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

FAD measured as per ISO1217, performances tolerances as per Robuschi procedure TE1.S.0015 (Q1 =±5%*nm³/h; N=±5%)

ELECTRIC MOTOR

IEC Motor	: 200LA	Hz	: 50		
Power (kW)	: 30.0	Poles	: 2	V	: 380-420 D / 660-690 Y
Speed (rpm)	: 2,945	Size	:		

TRANSMISSION

Coupling type	:				
V-belt type	: XPA	Length (mm)	: 1,582	Shaft centres (mm)	: 518
Grooves	: 3	Mot.pulley Diam. (mm)	: 212	Blower pulley diam. (mm)	: 132
(Int.Code C481)		(Int.Code 097M)		(Int.Code S089)	

WARNING

No warning

ROBUSCHI

GARDNER DENVER S.r.l. - Divisione ROBUSCHI
Via S.Leonardo, 71/A - 43122 Parma - Italy
Phone +39 0521 274911
info.italy@gardnerdenver.com
www.roboschi.com

ROBOX

OPERATING CURVES
International Measuring System (S.I.)

Soft.Ver. : 13.0.18
D.B.Ver. : 17.5.18001
Date : 10.08.2018
Page 2 / 9



MODEL : ES 45 /2 P

Quantity : 1

GENERAL DATA

Ref.	: Included noise hood	Plant	: Haugesund
Customer	: Steinsvik	Item	: -
		Service	: Pressure pneumatic conveying

FLUID

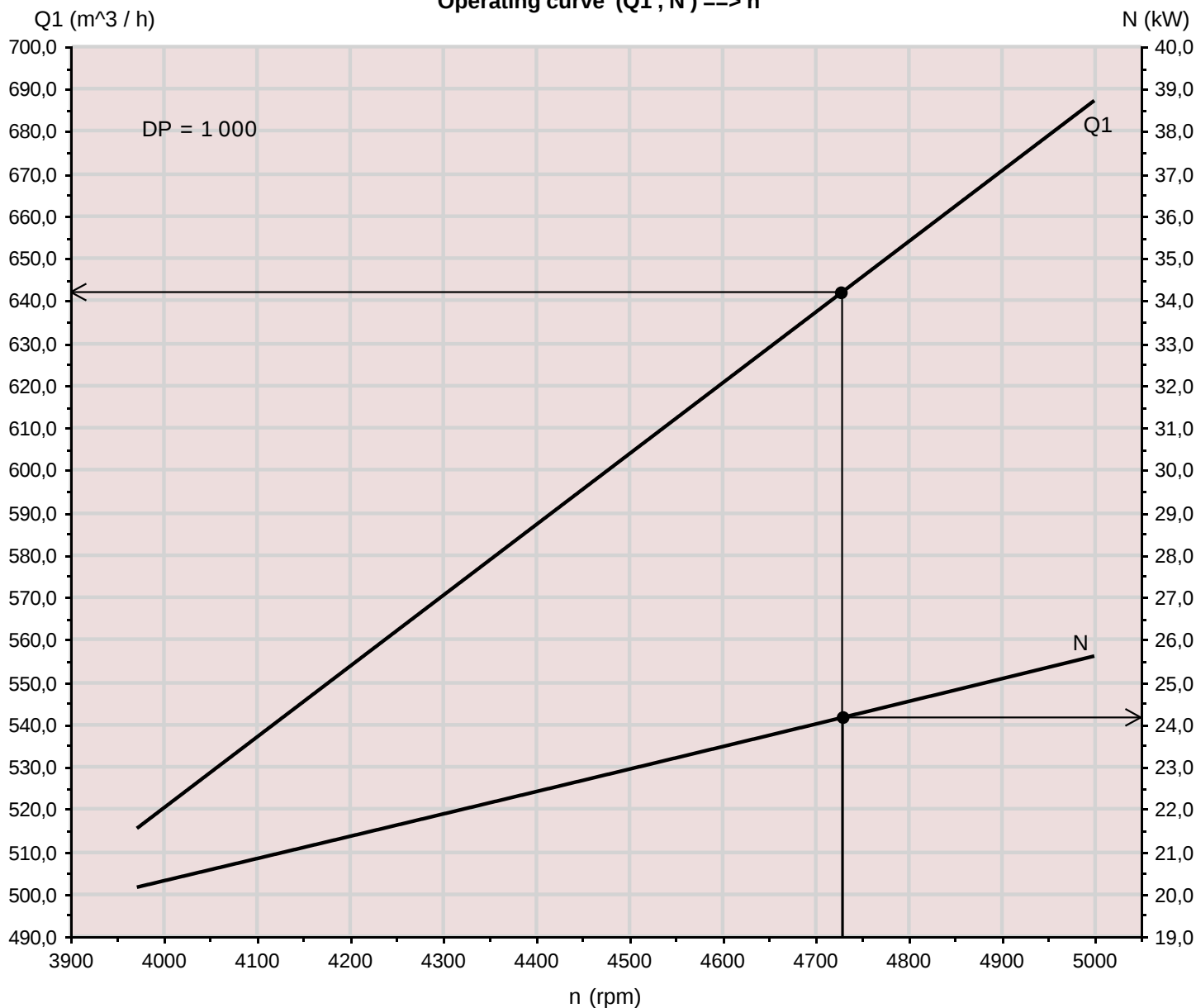
Fluid	: Atmospheric air				
Spec. W.ght (kg/m ³)	: 1.199	Spec. Heat Cp (kJ/kg°C)	: 1.010	Spec. Heat Cv (kJ/kg°C)	: .723
Altitude (m)	: 0	Pressure (mbar)	: 1,013	Temperature (°C)	: 20
Relative humidity (%)	: 50				

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 : 642	Dif.pressure (mbar)	DP : 1,000	Cp / Cv	: 1.4
Abs.ed Power (kW)	N : 24.2	Speed (rpm)	n : 4,730	n/nmax (%)	: 95

FAD measured as per ISO1217, performances tolerances as per Robuschi procedure TE1.S.0015 (Q1 =±5%*nm_x/n; N=±5%)

Operating curve (Q1 , N) ==> n



MODEL : ES 45 /2 P

Quantity : 1

GENERAL DATA

Ref.	: Included noise hood	Plant	: Haugesund
Customer	: Steinsvik	Item	: -
		Service	: Pressure pneumatic conveying

FLUID

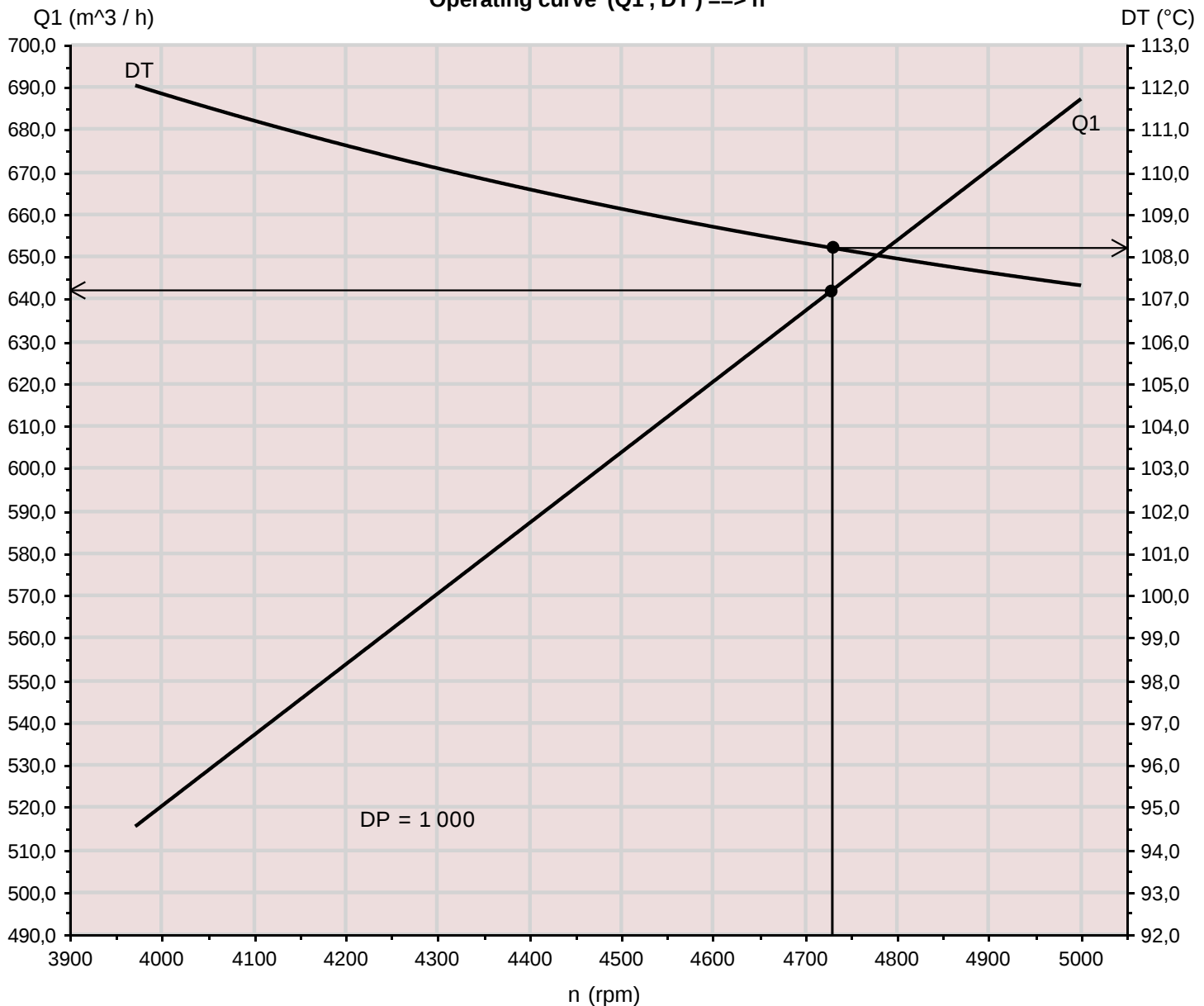
Fluid	: Atmospheric air				
Spec. W.ght (kg/m ³)	: 1.199	Spec. Heat Cp (kJ/kg°C)	: 1.010	Spec. Heat Cv (kJ/kg°C)	: .723
Altitude (m)	: 0	Pressure (mbar)	: 1,013	Temperature (°C)	: 20
Relative humidity (%)	: 50				

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 : 642	Dif.pressure (mbar)	DP : 1,000	Cp / Cv	: 1.4
Temp.rise(°C)	DT : 108	Speed (rpm)	n : 4,730	n/nmax (%)	: 95

FAD measured as per ISO1217, performances tolerances as per Robuschi procedure TE1.S.0015 (Q1 =±5%*nmx/n; N=±5%)

Operating curve (Q1 , DT) ==> n



MODEL : ES 45 /2 P

Quantity : 1

GENERAL DATA

Ref.	: Included noise hood	Plant	: Haugesund
Customer	: Steinsvik	Item	: -
		Service	: Pressure pneumatic conveying

FLUID

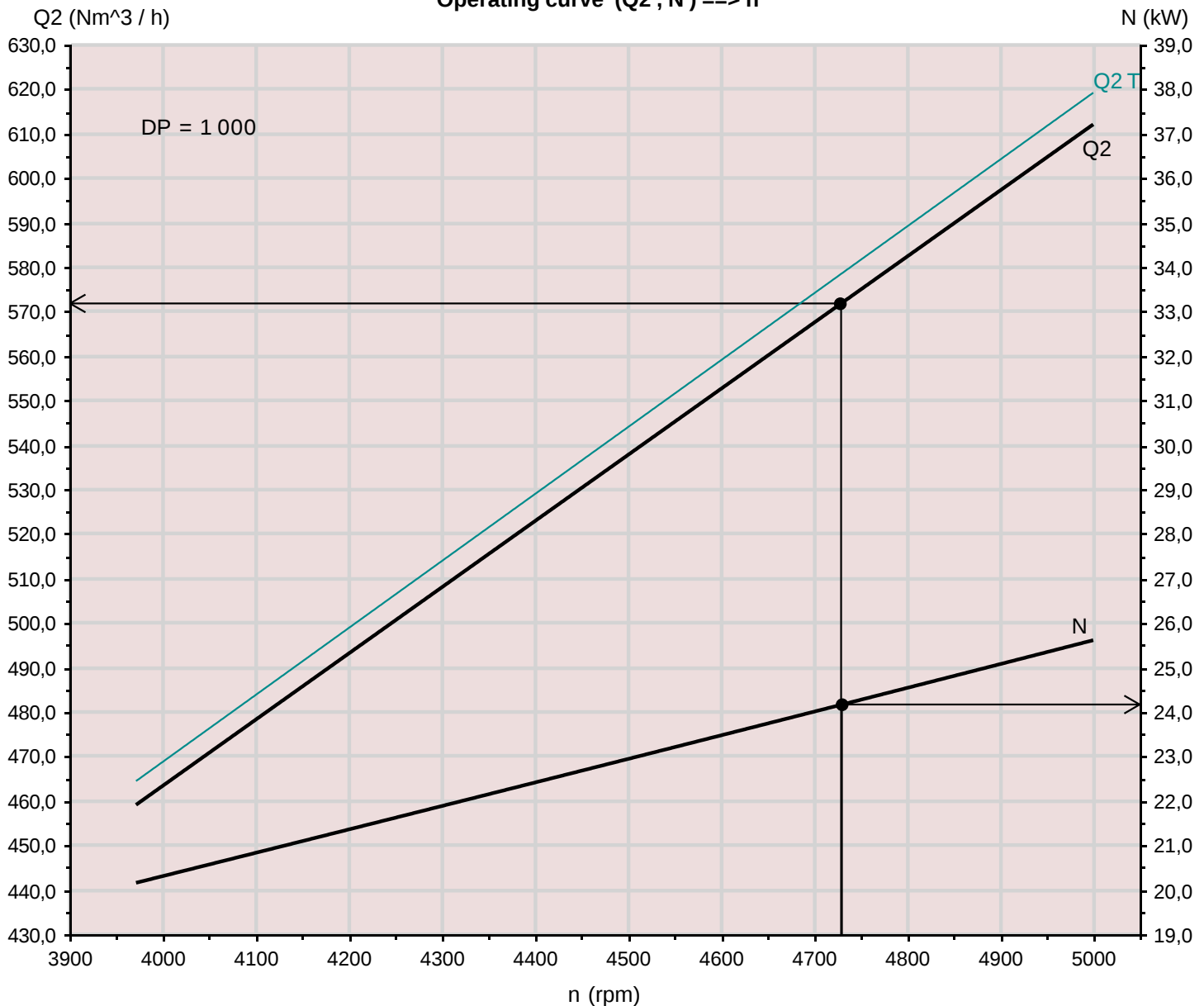
Fluid	: Atmospheric air				
Spec. W.ght (kg/m ³)	: 1.199	Spec. Heat Cp (kJ/kg°C)	: 1.010	Spec. Heat Cv (kJ/kg°C)	: .723
Altitude (m)	: 0	Pressure (mbar)	: 1,013	Temperature (°C)	: 20
Relative humidity (%)	: 50				

OPERATION POINT

Inlet press. (mbar a)	P1 : 1,013	Inlet temp.(°C)	T1 : 30	Spec.W.ght (kg/m ³)	SW : 1.160
Delivery (Nm ³ /h)	Q2 : 572	Dif.pressure (mbar)	DP : 1,000	Cp / Cv	: 1.4
Abs.ed Power (kW)	N : 24.2	Speed (rpm)	n : 4,730	n/nmax (%)	: 95

FAD measured as per ISO1217, performances tolerances as per Robuschi procedure TE1.S.0015 (Q1 =±5%*nm_x/n; N=±5%)

Operating curve (Q2 , N) ==> n



MODEL : ES 45 /2 P

Quantity : 1

GENERAL DATA

Ref.	: Included noise hood	Plant	: Haugesund
Customer	: Steinsvik	Item	: -
		Service	: Pressure pneumatic conveying

FLUID

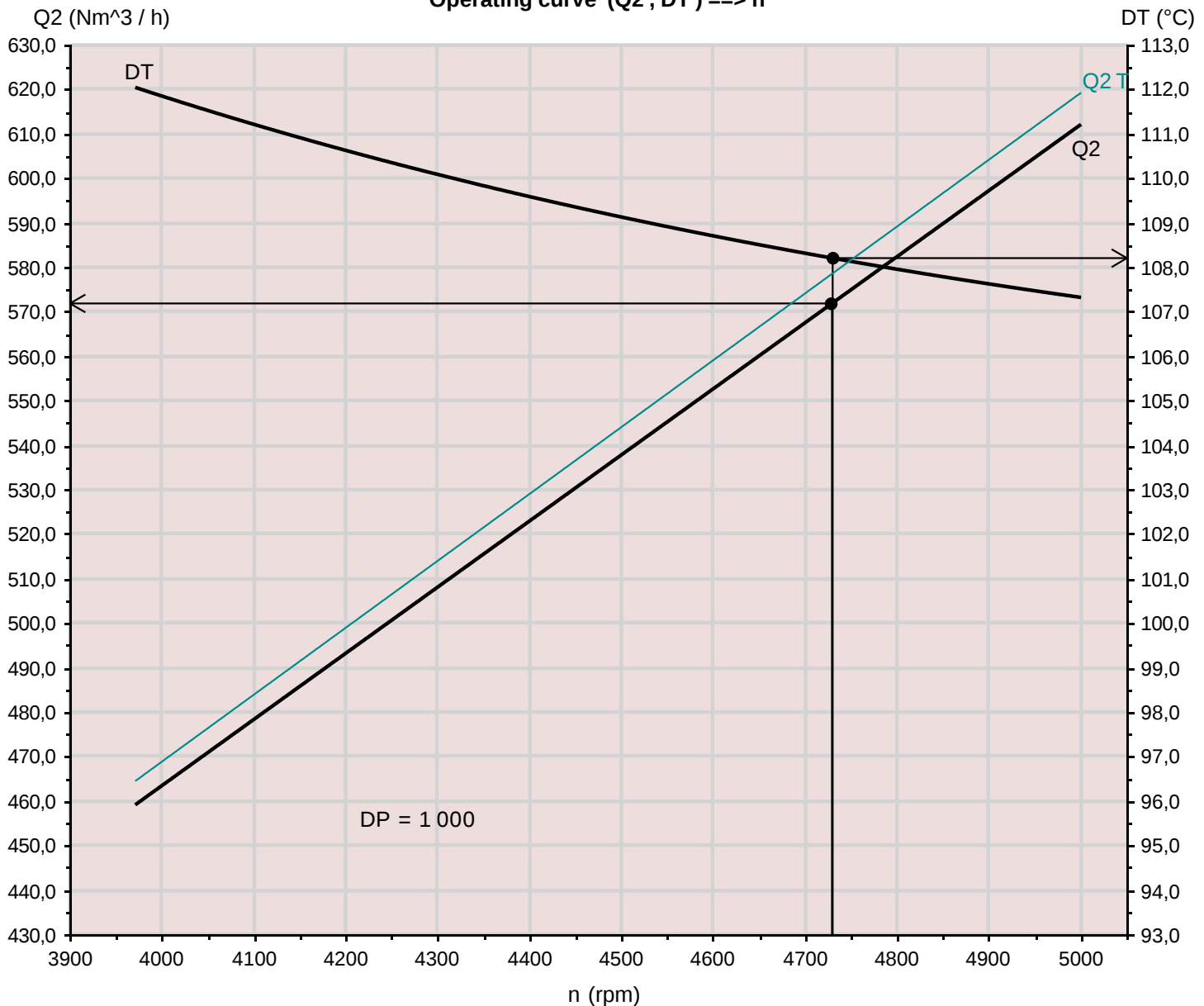
Fluid	: Atmospheric air				
Spec. W.ght (kg/m ³)	: 1.199	Spec. Heat Cp (kJ/kg°C)	: 1.010	Spec. Heat Cv (kJ/kg°C)	: .723
Altitude (m)	: 0	Pressure (mbar)	: 1,013	Temperature (°C)	: 20
Relative humidity (%)	: 50				

OPERATION POINT

Inlet press. (mbar a)	P1 : 1,013	Inlet temp.(°C)	T1 : 30	Spec.W.ght (kg/m ³)	SW : 1.160
Delivery (Nm ³ /h)	Q2 : 572	Dif.pressure (mbar)	DP : 1,000	Cp / Cv	: 1.4
Temp.rise(°C)	DT : 108	Speed (rpm)	n : 4,730	n/nmax (%)	: 95

FAD measured as per ISO1217, performances tolerances as per Robuschi procedure TE1.S.0015 (Q1 =±5%*nm_x/n; N=±5%)

Operating curve (Q2 , DT) ==> n



MODEL : ES 45 /2 P

Quantity : 1

GENERAL DATA

Ref.	: Included noise hood	Plant	: Haugesund
Customer	: Steinsvik	Item	: -
		Service	: Pressure pneumatic conveying

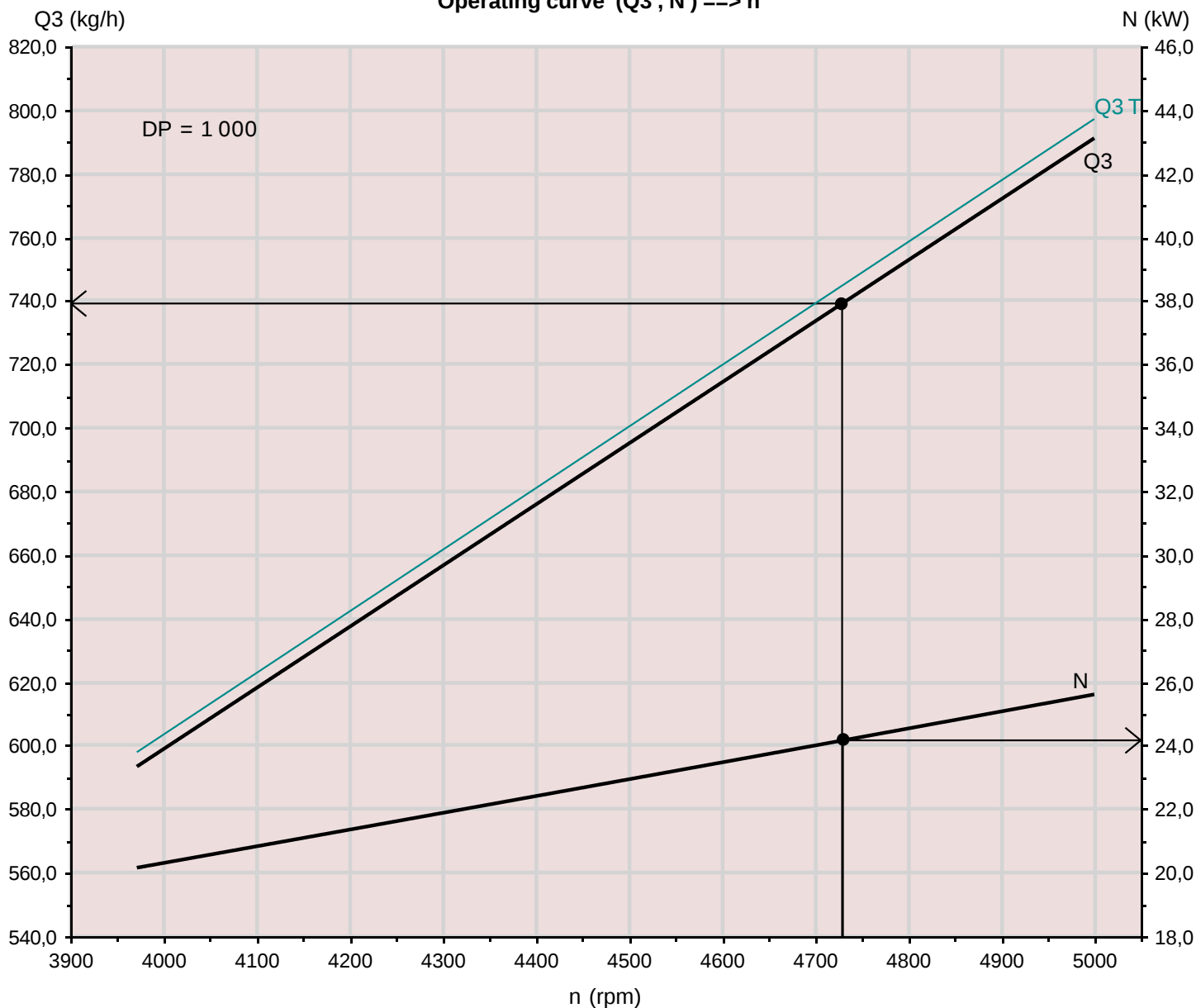
FLUID

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 (kg/h)	Q3 : 739	Dif.pressure (mbar)	DP : 1,000	Cp / Cv	: 1.4
Abs.ed Power (kW)	N : 24.2	Speed (rpm)	n : 4,730	n/nmax (%)	: 95

FAD measured as per ISO1217, performances tolerances as per Robuschi procedure TE1.S.0015 (Q1 =±5%*nm_x/n; N=±5%)

Operating curve (Q3 , N) ==> n

ROBUSCHI

GARDNER DENVER S.r.l. - Divisione ROBUSCHI
Via S.Leonardo, 71/A - 43122 Parma - Italy
Phone +39 0521 274911
info.italy@gardnerdenver.com
www.robuschi.com

ROBOX

OPERATING CURVES
International Measuring System (S.I.)

Soft.Ver. : 13.0.18
D.B.Ver. : 17.5.18001
Date : 10.08.2018
Page 7 / 9



MODEL : ES 45 /2 P

Quantity : 1

GENERAL DATA

Ref.	: Included noise hood	Plant	: Haugesund
Customer	: Steinsvik	Item	: -
		Service	: Pressure pneumatic conveying

FLUID

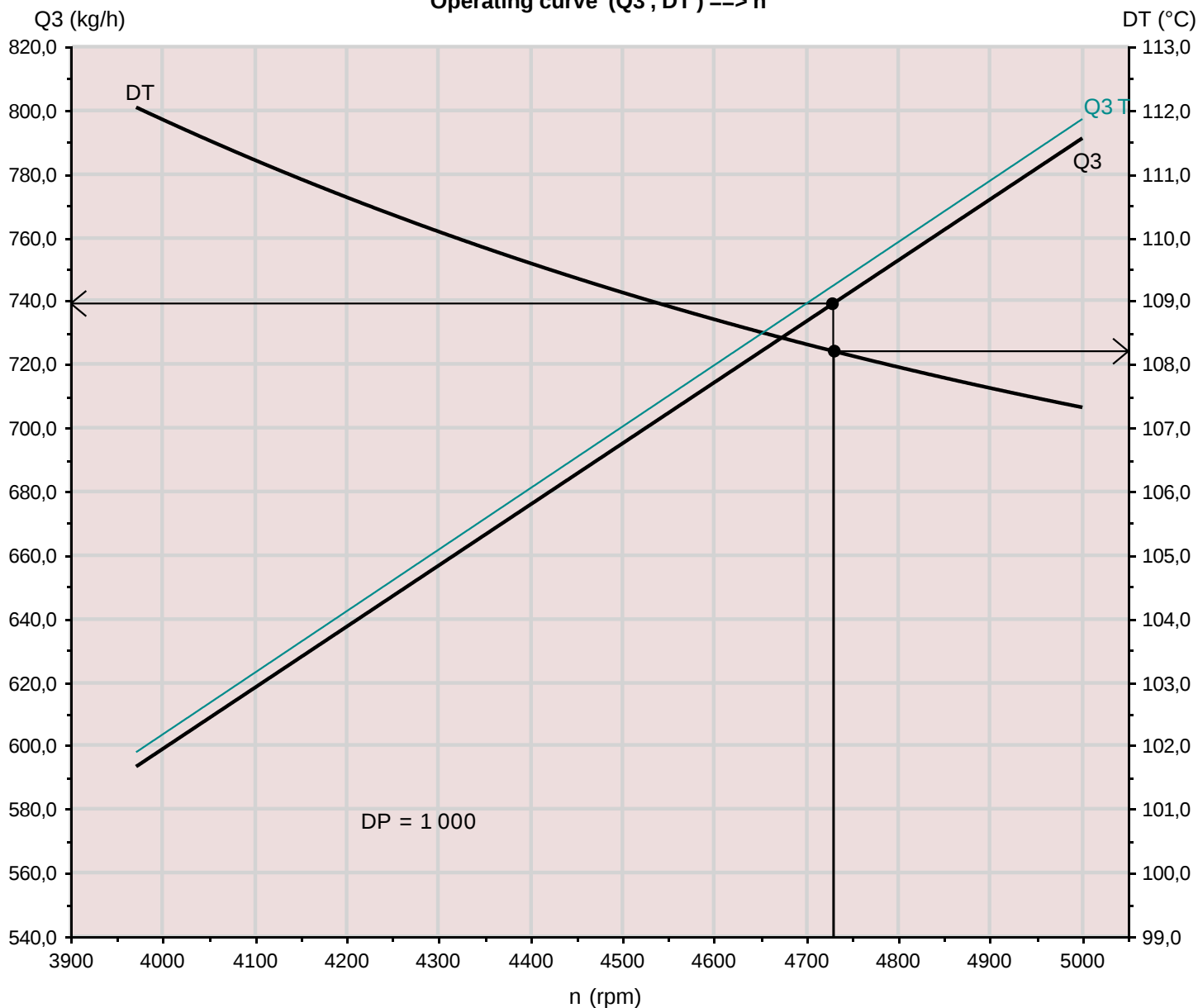
Fluid	: Atmospheric air				
Spec. W.ght (kg/m ³)	: 1.199	Spec. Heat Cp (kJ/kg°C)	: 1.010	Spec. Heat Cv (kJ/kg°C)	: .723
Altitude (m)	: 0	Pressure (mbar)	: 1,013	Temperature (°C)	: 20
Relative humidity (%)	: 50				

OPERATION POINT

Inlet press. (mbar a)	P1 : 1,013	Inlet temp.(°C)	T1 : 30	Spec.W.ght (kg/m ³)	SW : 1.160
Delivery (kg/h)	Q3 : 739	Dif.pressure (mbar)	DP : 1,000	Cp / Cv	: 1.4
Temp.rise(°C)	DT : 108	Speed (rpm)	n : 4,730	n/nmax (%)	: 95

FAD measured as per ISO1217, performances tolerances as per Robuschi procedure TE1.S.0015 (Q1 =±5%*nm_x/n; N=±5%)

Operating curve (Q3 , DT) ==> n



MODEL : ES 45 /2 P

Quantity : 1

GENERAL DATA

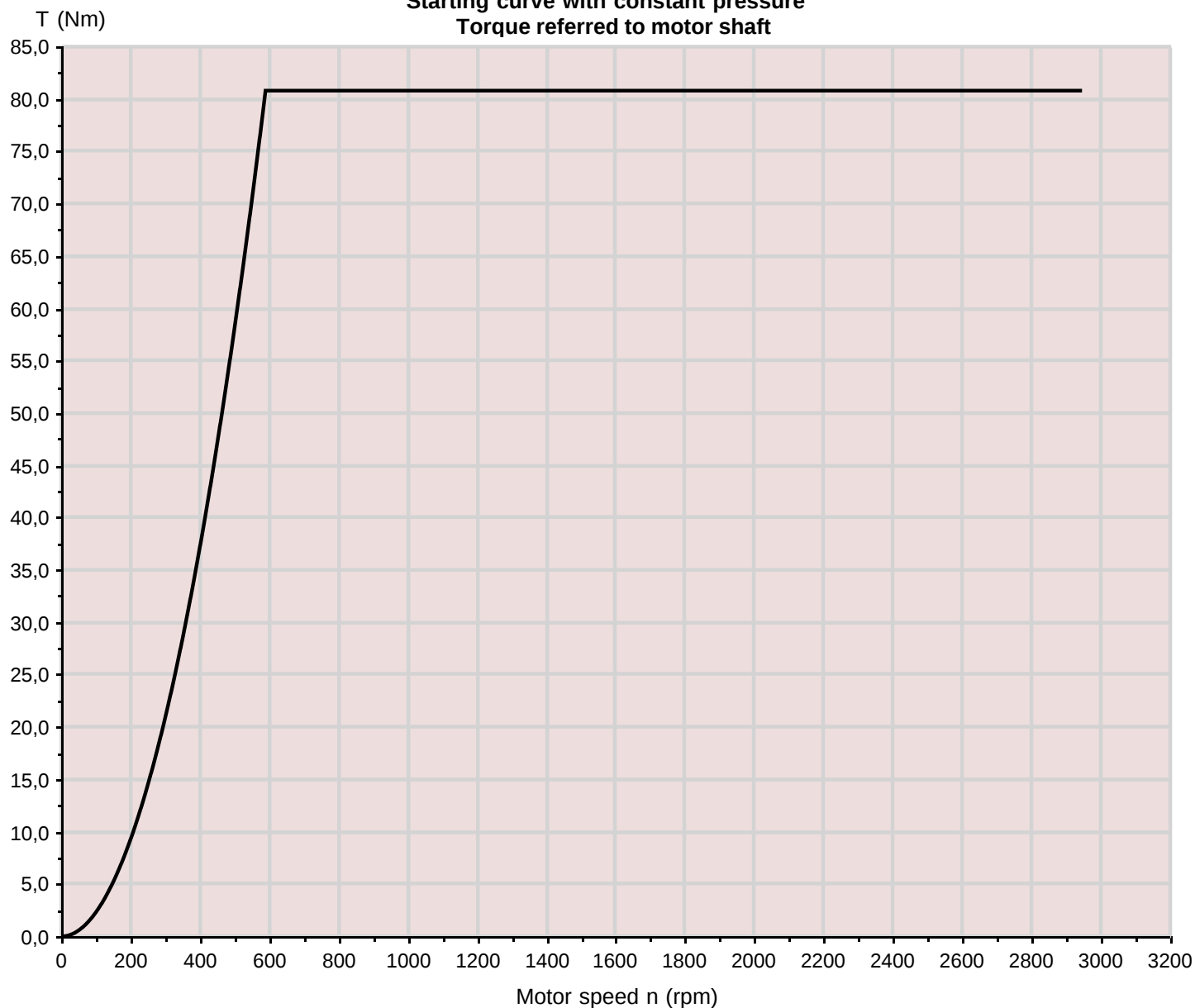
Ref.	: Included noise hood	Plant	: Haugesund
Customer	: Steinsvik	Item	: -
		Service	: Pressure pneumatic conveying

TECHNICAL DATA

Blower	: ES 45 /2 P	Power (kW)	: 24.2	Speed (rpm)	: 4,730	J (kgm ²)	: .033
Motor	: 200LA	Power (kW)	: 30.0	Speed (rpm)	: 2,945	J (kgm ²)	: .165
Motor Pulley	: 3 XPA	Diameter (mm)	: 212			J (kgm ²)	: .000
Blower Pulley	: 3 XPA	Diameter (mm)	: 132			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)	: 80.8	V-belt load (N): 1,143	J tot. (kgm ²)	: .250
------------------------------	--------	------------------------	----------------------------	--------

Starting curve with constant pressure
Torque referred to motor shaft





GARDNER DENVER S.r.l. - Divisione ROBUSCHI
Via S.Leonardo, 71/A - 43122 Parma - Italy
Phone +39 0521 274911
info.italy@gardnerdenver.com
www.roboschi.com



STARTING CURVES

International Measuring System (S.I.)

Soft.Ver. : 13.0.18
D.B.Ver. : 17.5.18001
Date : 10.08.2018
Page 9/ 9



MODEL : ES 45 /2 P

Quantity : 1

GENERAL DATA

Ref.	: Included noise hood	Plant	: Haugesund
Customer	: Steinsvik	Item	: -
		Service	: Pressure pneumatic conveying

TECHNICAL DATA

Blower	: ES 45 /2 P	Power (kW)	: 24.2	Speed (rpm)	: 4,730	J (kgm ²)	: .033
Motor	: 200LA	Power (kW)	: 30.0	Speed (rpm)	: 2,945	J (kgm ²)	: .165
Motor Pulley	: 3 XPA	Diameter (mm)	: 212			J (kgm ²)	: .000
Blower Pulley	: 3 XPA	Diameter (mm)	: 132			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)	: 80.8	V-belt load (N): 1,143		J tot. (kgm²)	: .250		

Starting curve with variable pressure
Torque referred to motor shaft

