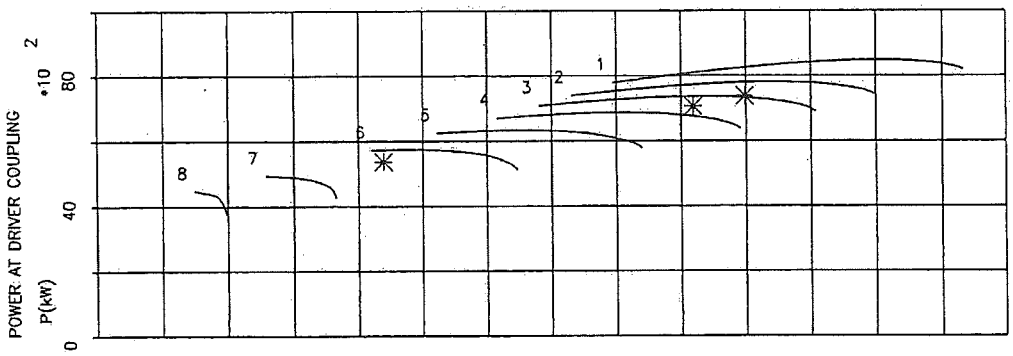
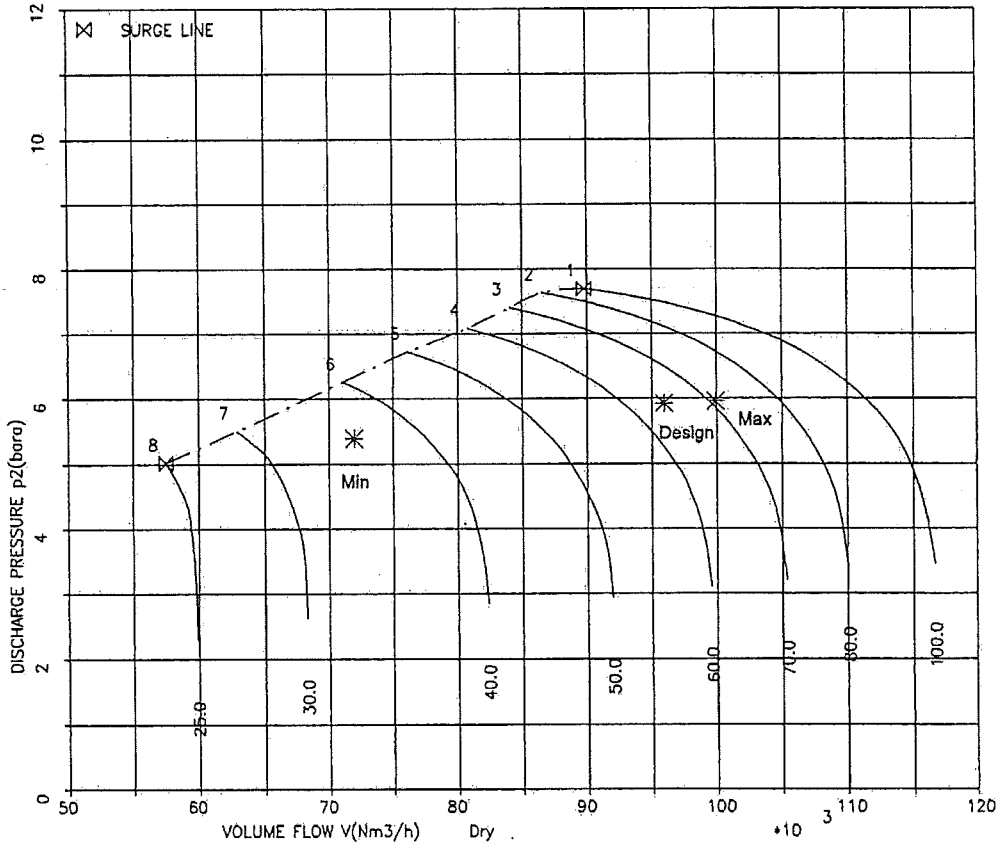
12. Strojové údaje

Kosice RIK 80-1+1+1+1 cold

REFERENCE CURVE No		1	CURVE	p1 (bara)	T1 (°C)	R.H.	MW Dry	TW1 (°C)	N/No	ANGLE (°)
	(1/min)	7297	1	0.985	12.0	0.650	28.963	16.0	1.00	100.0
			2	0.985	12.0	0.650	28.963	16.0	1.00	80.0
			3	0.985	12.0	0.650	28.963	16.0	1.00	70.0
			4	0.985	12.0	0.650	28.963	16.0	1.00	60.0
			5	0.985	12.0	0.650	28.963	16.0	1.00	50.0
			6	0.985	12.0	0.650	28.963	16.0	1.00	40.0
			7	0.985	12.0	0.650	28.963	16.0	1.00	30.0
			8	0.985	12.0	0.650	28.963	16.0	1.00	25.0

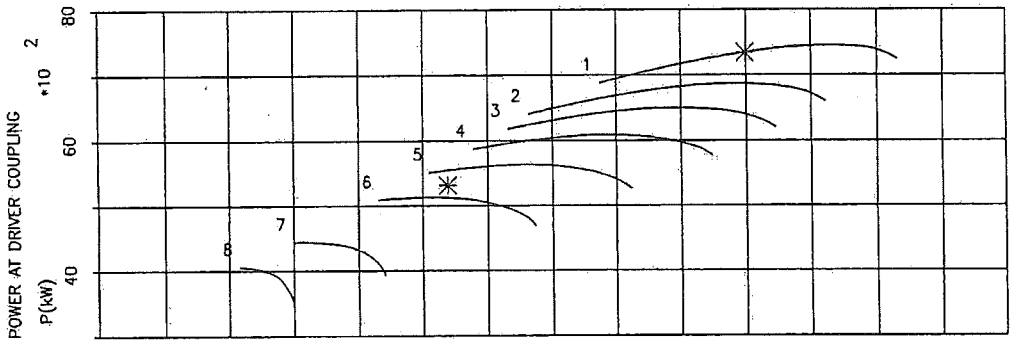


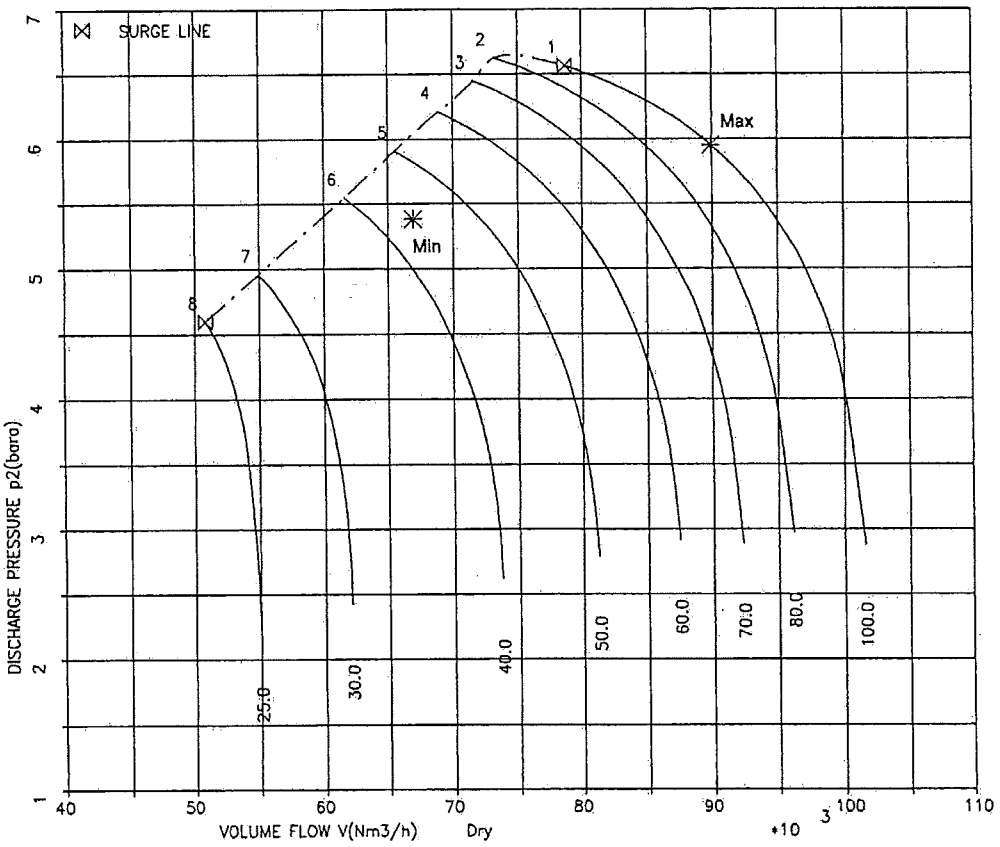


MAN TURBO	Dept. SC71	Name B. Frey	Date 09-JUN-04	Page 1 of 3	
Classification ☐ MAN only ☒ Project ☒ Client ☐ Contract ☐ free Distribution	Kosice		MAN No 7704059	Client No.	
	Title Performance Curves			Document No 4-7704059-1	Rev

Kosice RIK 80-1+1+1+1 hot

REFERENCE CURVE No		1	CURVE	p1 (bara)	T1 (°C)	R.H.	MW Dry	TW1 (°C)	N/No	ANGLE (°)
	(1/min)	7297	1	0.985	35.0	0.670	28.962	37.0	1.00	100.0
			2	0.985	35.0	0.670	28.962	37.0	1.00	80.0
			3	0.985	35.0	0.670	28.962	37.0	1.00	70.0
			4	0.985	35.0	0.670	28.962	37.0	1.00	60.0
			5	0.985	35.0	0.670	28.962	37.0	1.00	50.0
			6	0.985	35.0	0.670	28.962	37.0	1.00	40.0
			7	0.985	35.0	0.670	28.962	37.0	1.00	30.0
			8	0.985	35.0	0.670	28.962	37.0	1.00	25.0

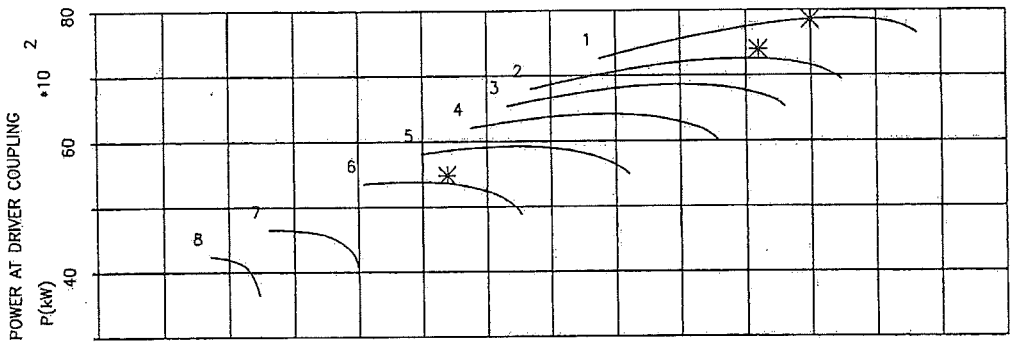


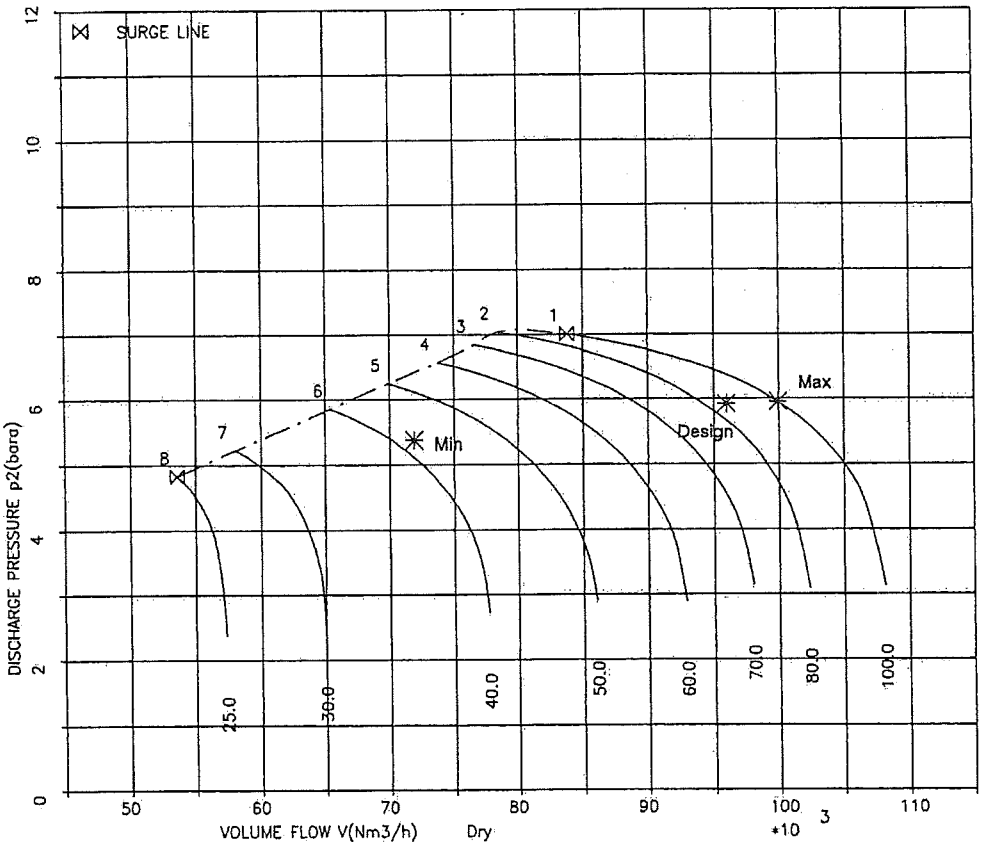


MAN TURBO	Dept. SC71	Name B. Frey	Date 09-JUN-04	Page 3 of 3
Classification ☐ MAN only ☒ Project ☒ Client ☐ Contract ☐ free Distribution	Kosice		MAN No 7704059	Client No
	Title Performance Curves			Document No 4-7704059-1 / Rev

Kosice RIK 80-1+1+1+1 warm

REFERENCE CURVE No		1	CURVE	p1 (bara)	T1 (°C)	R.H.	MW Dry	TW1 (°C)	N/No	ANGLE (°)
	(1/min)	7297	1	0.985	25.0	0.650	28.963	29.0	1.00	100.0
			2	0.985	25.0	0.650	28.963	29.0	1.00	80.0
			3	0.985	25.0	0.650	28.963	29.0	1.00	70.0
			4	0.985	25.0	0.650	28.963	29.0	1.00	60.0
			5	0.985	25.0	0.650	28.963	29.0	1.00	50.0
			6	0.985	25.0	0.650	28.963	29.0	1.00	40.0
			7	0.985	25.0	0.650	28.963	29.0	1.00	30.0
			8	0.985	25.0	0.650	28.963	29.0	1.00	25.0





MAN TURBO	Dept. SC71	Name B. Frey	Date 09-JUN-04	Page 2 of 3
Classification ☐ MAN only ☒ Project ☒ Client ☐ Contract ☐ free Distribution	Kosice		MAN No 7704059	Client No
	Title Performance Curves			Document No 4-7704059-1 Rev

MAN	**KENNFELDER** **PERFORMANCE CURVES** **Type RG31-4**	KENNWORT / CODE **KOSBOOST** AUFTRAG-NR / ORDER-NO **312 410** PSP - Element 0

AIR LIQUIDE™

ECHELLE *SCALE*	N° D'AFFAIRE *JOB NUMBER*	FMT *FMT*	GROUPE *GROUP*	N° *NBR*
/	KOSICE 50-3023-01	A4	612	

REVISION REVISION	00	01	02	03	04	05	REVIDIERTE ZEILE REVISED LINE
DATUM DATE	04-12-21						
NAME NAME	Kretzschmar						BLATT SHEET
GEPRÜFT CHECKED	Sommer						1 von/off 10
ABTEILUNG DEPARTMENT	TELEFON PHONE NO.	TELEFAX FAX NO.	FORMAT SIZE	DOKUMENTEN-NR. / DOCUMENT NO:			REVISION REVISION
TC3	+49-30-4301-2431	+49-30-4301-2119	A4	10000219309			00

X:\01_Auftraege\Neubau\Mehrweller\KOSBOOST\Berechnung\0200-Thermodynamik\0210-KENN5\0212-Kunde\Deckblatt.doc

Centrifugal compressor
Type RG31-4
Predicted Performance Curves

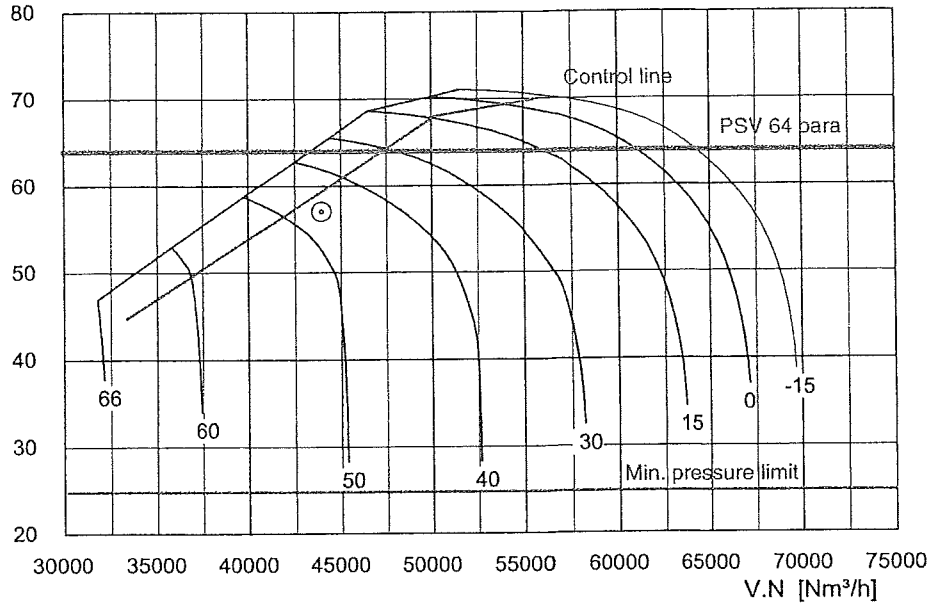
Client:	AL AGS GmbH
Item:	BAC
Job:	KOSBOOST
Quote:	312410

Adjustable inlet guide vanes, stage(s) 1, Guide vane angles are for information only!

Case: ⊙ 1

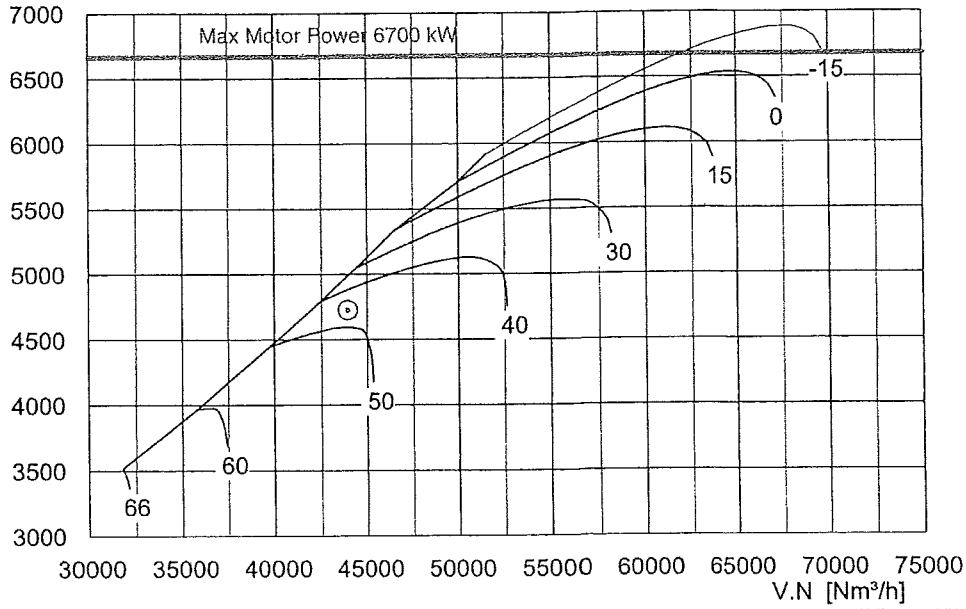
Gas	DRY AIR	Suction Pressure [bara]	5.60
Molar Mass [kg/kmol]	28.96	Suction Temp. [°C]	20
Is. Vol-exponent	1.4087	Intercooling Temp. [°C]	23
Compress. Factor	.99797		

Discharge Pressure [bara]



Case A1
Vn = 43950
Pd = 57.1

Power at Coupling [kW]



Case A1
Vn = 43950
Pk = 4726

Prepared Kretzschmar	Dept.:	Time:	Date:	Remarks:	Page
Checked:	TC31	15:23	15.11.04	A1	2 / 10

KENN5 - Version 5.4.2.4.6 (#0): x:\01_auftraege\neubau\mehrwelle\kosboost\berechnung\0200-thermodynamik\0210-kenn5\0213-intern\\casea1_sab.ken

Centrifugal compressor
Type RG31-4
Predicted Performance Curves

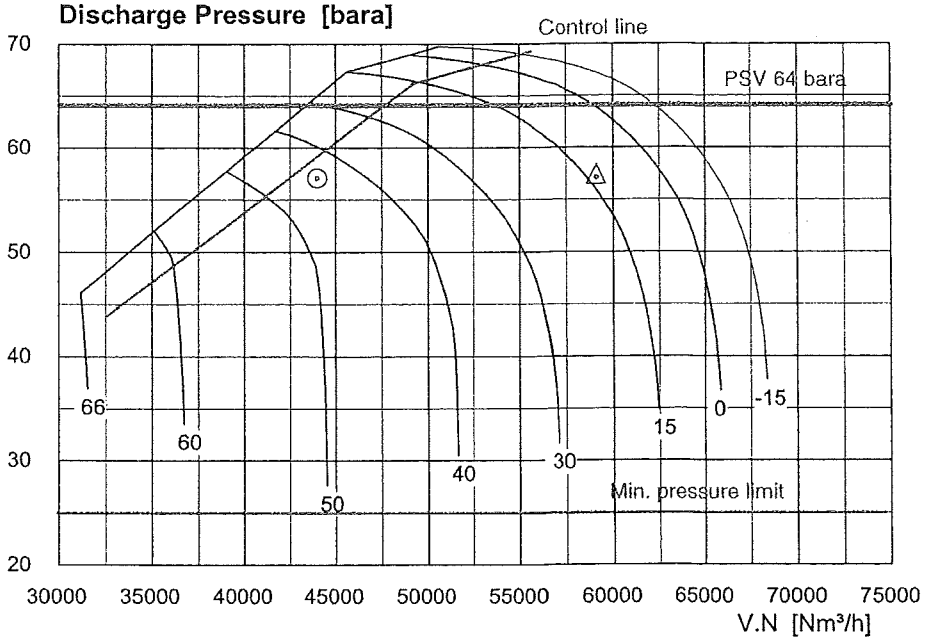
Client: AL AGS GmbH
Item: BAC
Job: KOSBOOST
Quote: 312410

Adjustable inlet guide vanes, stage(s) 1, Guide vane angles are for information only!

Case
⊙ 1
△ 2

Gas	DRY AIR	Suction Pressure [bara]	5.50
Molar Mass [kg/kmol]	28.96	Suction Temp. [°C]	20
Is. Vol-exponent	1.4085	Intercooling Temp. [°C]	23
Compress. Factor	.99801		

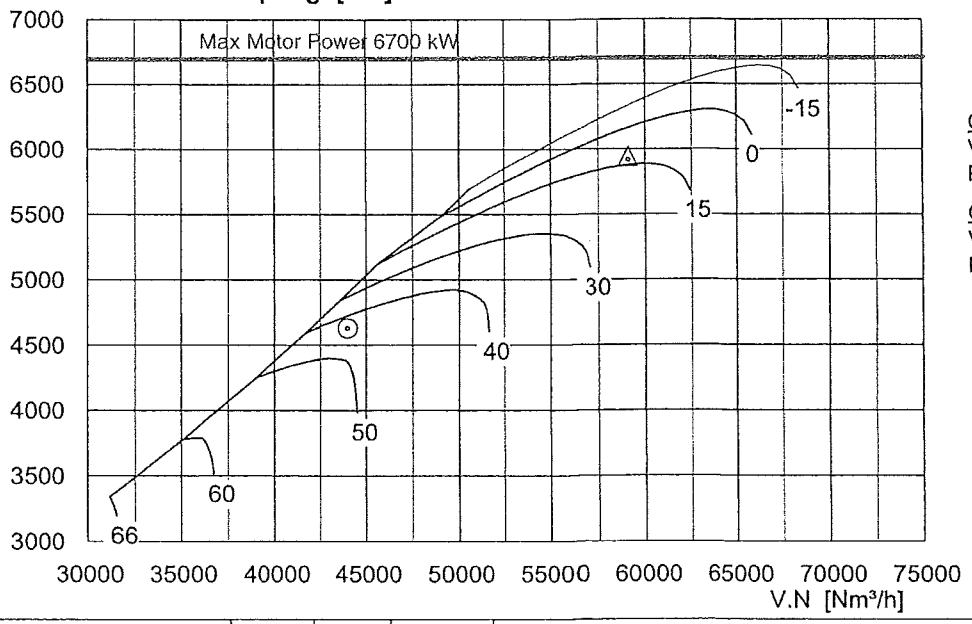
Discharge Pressure [bara]



Case A2
Vn = 44000
Pd = 57.1

Case A4
Vn = 59100
Pd = 57.1

Power at Coupling [kW]



Case A2
Vn = 44000
Pk = 4648

Case A4
Vn = 59100
Pk = 5928

Prepared Kretzschmar	Dept.:	Time:	Date:	Remarks:	Page
Checked:	TC31	15:26	15.11.04	A2 / A4	3 / 10

Centrifugal compressor
Type RG31-4
Predicted Performance Curves

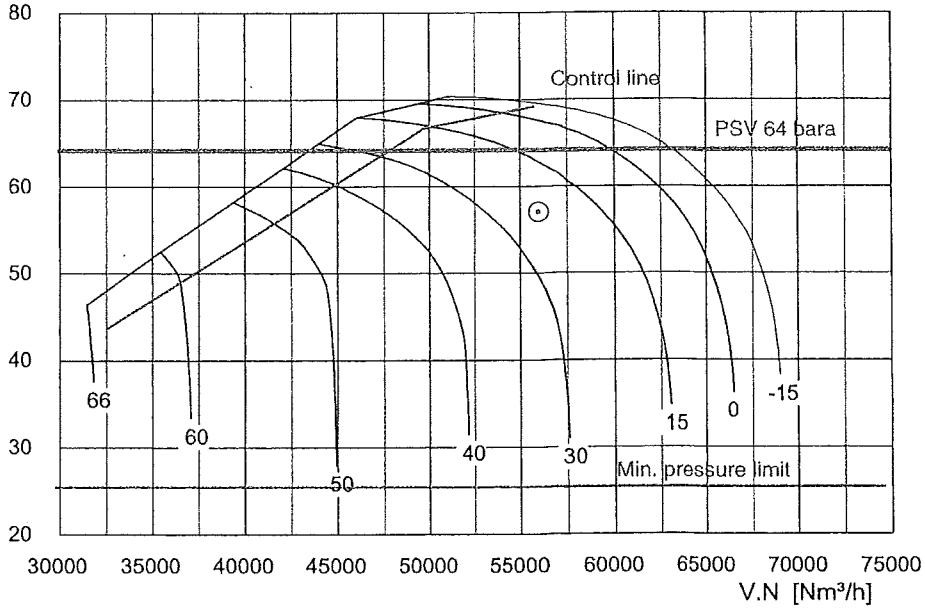
Client:	AL AGS GmbH
Item:	BAC
Job:	KOSBOOST
Quote:	312410

Adjustable inlet guide vanes, stage(s) 1, Guide vane angles are for information only!

Case: ⊙ 1

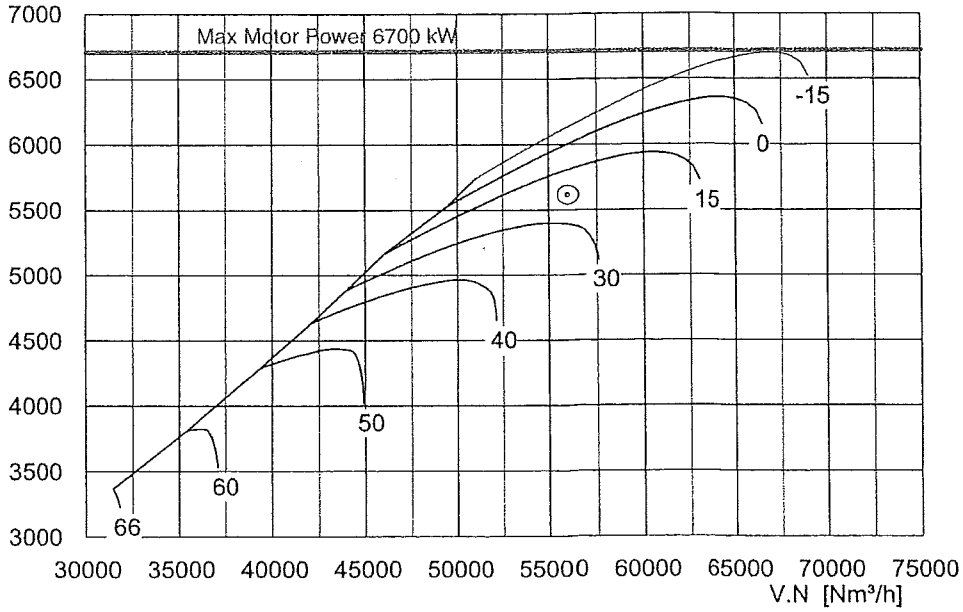
Gas	DRY AIR	Suction Pressure [bara]	5.55
Molar Mass [kg/kmol]	28.96	Suction Temp. [°C]	20
Is. Vol-exponent	1.4086	Intercooling Temp. [°C]	23
Compress. Factor	.99799		

Discharge Pressure [bara]



Case A3
Vn = 56000
Pd = 57.1

Power at Coupling [kW]



Case A3
Vn = 56000
Pk = 5638

Prepared Kretzschmar Checked:	Dept.: TC31	Time: 15:28	Date: 15.11.04	Remarks: A3	Page 4 / 10

KENN5 - Version 5.5.3.6 (#0): x:\01_auftraege\neubau\mehrwellen\kosboost\berechnung\0200-thermodynamik\0210-kenn5\0213-intern\casea3_sab.ken

Centrifugal compressor
Type RG31-4
Predicted Performance Curves

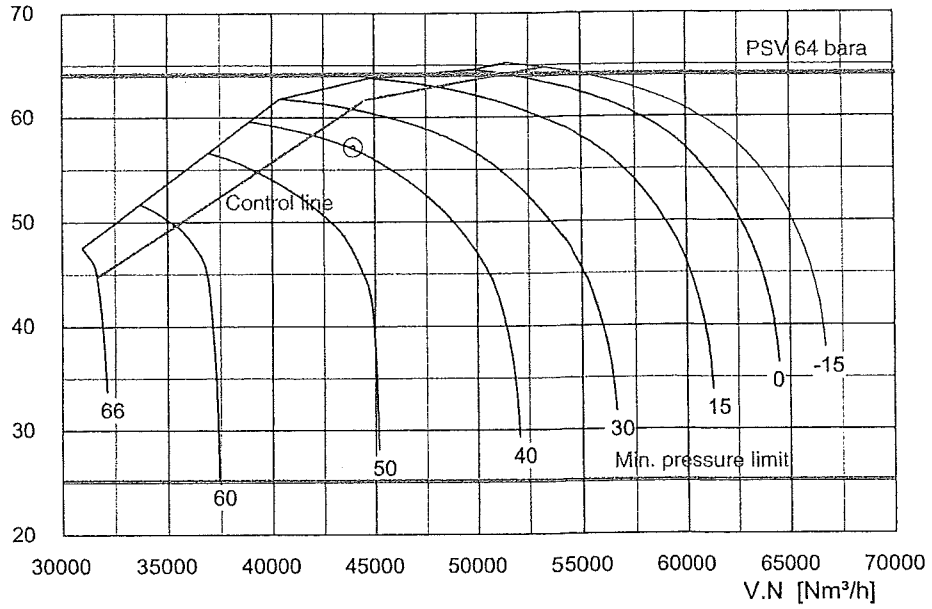
Client:	AL AGS GmbH
Item:	BAC
Job:	KOSBOOST
Quote:	312410

Adjustable inlet guide vanes, stage(s) 1, Guide vane angles are for information only!

Case: ⊙ 1

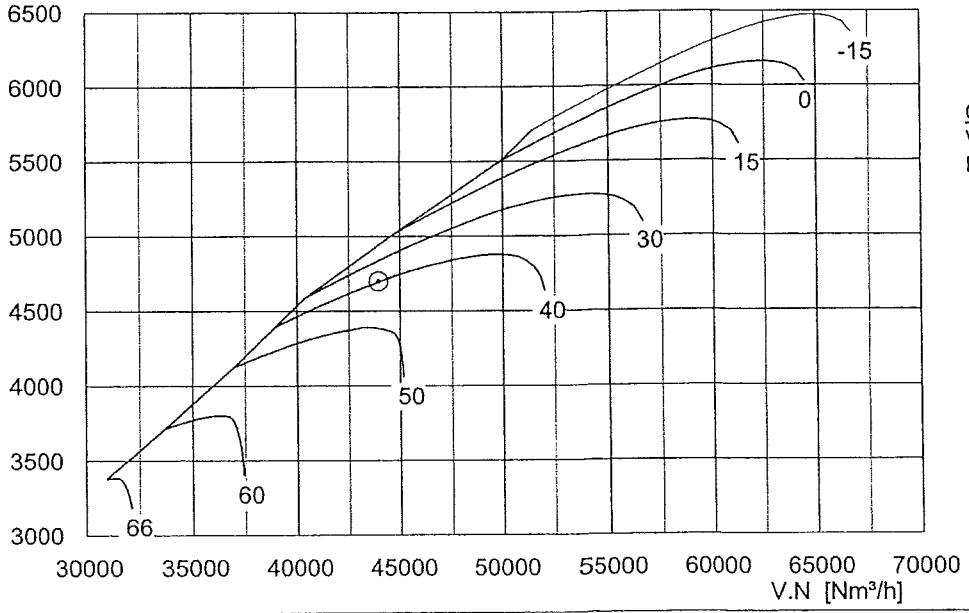
Gas	DRY AIR	Suction Pressure [bara]	5.60
Molar Mass [kg/kmol]	28.96	Suction Temp. [°C]	20
Is. Vol-exponent	1.4087	Intercooling Temp. [°C]	36
Compress. Factor	.99797		

Discharge Pressure [bara]



Case B1
Vn = 43950
Pd = 57.1

Power at Coupling [kW]



Case B1
Vn = 43950
Pk = 4718

Prepared Kretzschmar	Dept.:	Time:	Date:	Remarks:	Page
Checked:	TC31	15:51	15.11.04	B1	5 / 10

Centrifugal compressor
Type RG31-4
Predicted Performance Curves

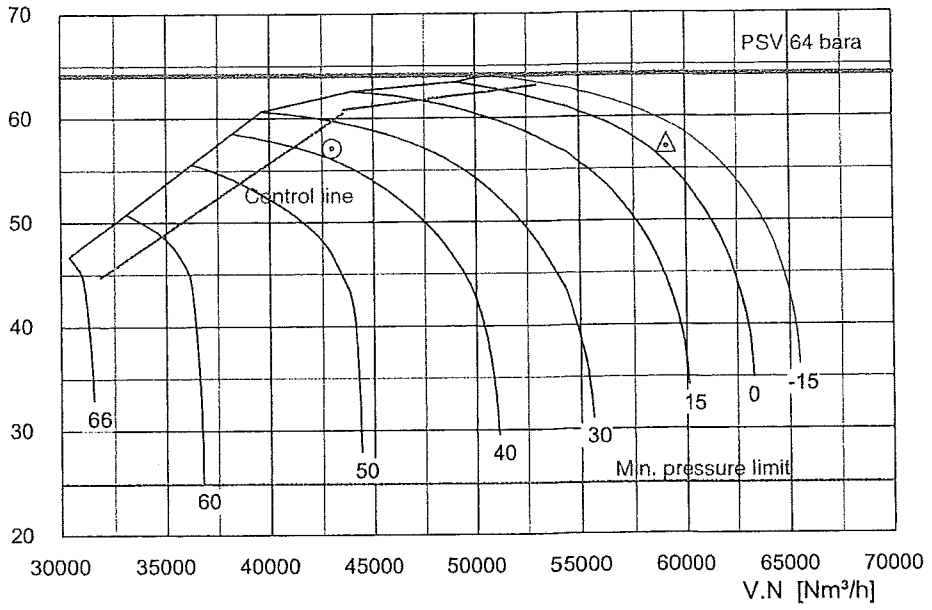
Client: AL AGS GmbH
Item: BAC
Job: KOSBOOST
Quote: 312410

Adjustable inlet guide vanes, stage(s) 1, Guide vane angles are for information only!

Case
⊙ 1
△ 2

Gas	DRY AIR	Suction Pressure [bara]	5.50
Molar Mass [kg/kmol]	28.96	Suction Temp. [°C]	20
Is. Vol-exponent	1.4085	Intercooling Temp. [°C]	36
Compress. Factor	.99801		

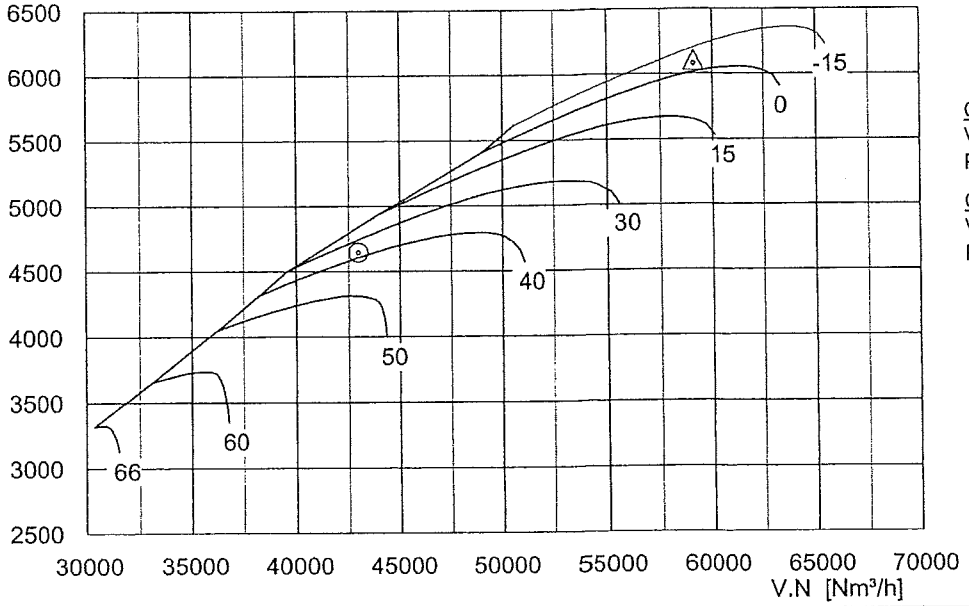
Discharge Pressure [bara]



Case B2
Vn = 43000
Pd = 57.1

Case B4
Vn = 59100
Pd = 57.1

Power at Coupling [kW]



Case B2
Vn = 43000
Pk = 4663

Case B4
Vn = 59100
Pk = 6097

Prepared Kretzschmar	Dept.:	Time:	Date:	Remarks:	Page
Checked:	TC31	15:54	15.11.04	B2 / B4	6 / 10

Centrifugal compressor
Type RG31-4
Predicted Performance Curves

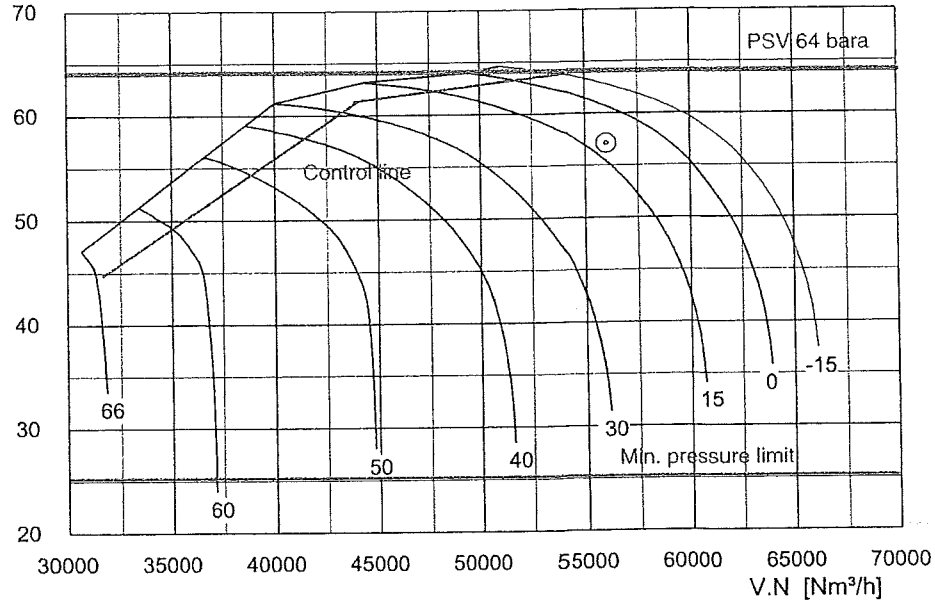
Client:	AL AGS GmbH
Item:	BAC
Job:	KOSBOOST
Quote:	312410

Adjustable inlet guide vanes, stage(s) 1, Guide vane angles are for information only!

Case ⊙ 1

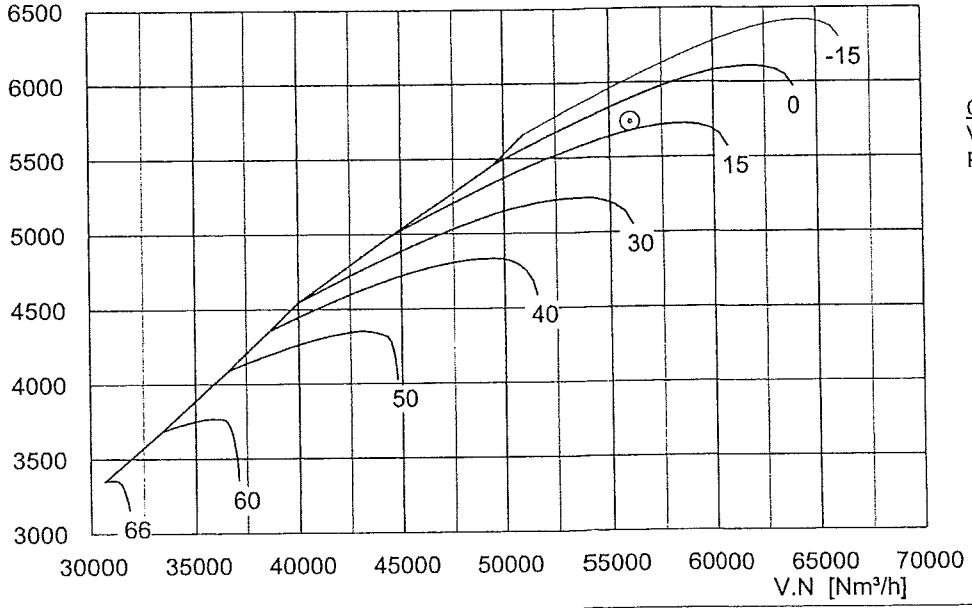
Gas	DRY AIR	Suction Pressure [bara]	5.55
Molar Mass [kg/kmol]	28.96	Suction Temp. [°C]	20
Is. Vol-exponent	1.4086	Intercooling Temp. [°C]	36
Compress. Factor	.99799		

Discharge Pressure [bara]



Case B3
Vn = 56000
Pd = 57.1

Power at Coupling [kW]



Case B3
Vn = 56000
Pk = 5753

Prepared Kretzschmar	Dept.:	Time:	Date:	Remarks:	Page
Checked:	TC31	15:54	15.11.04	B3	7 / 10

Centrifugal compressor
Type RG31-4
Predicted Performance Curves

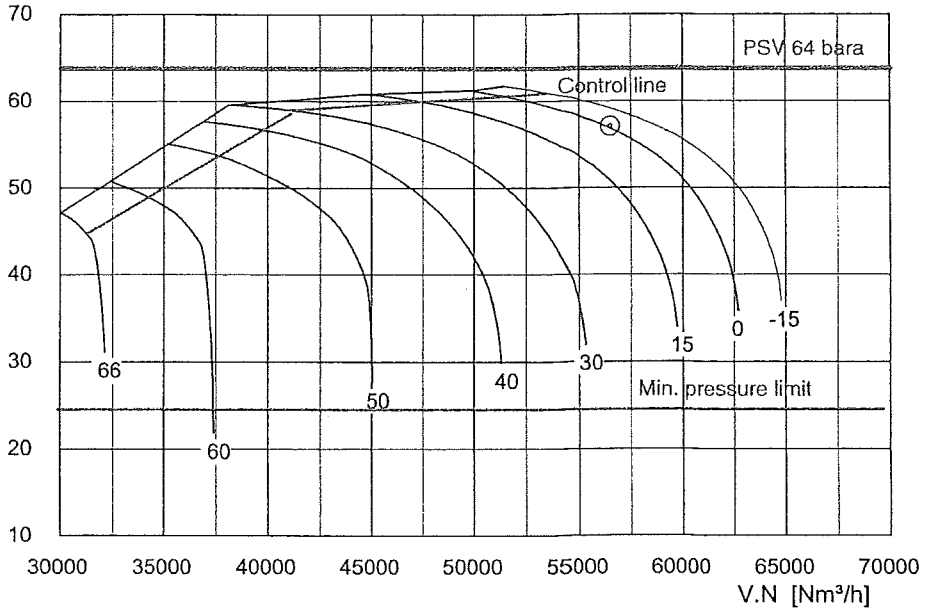
Client:	AL AGS GmbH
Item:	BAC
Job:	KOSBOOST
Quote:	312410

Adjustable inlet guide vanes, stage(s) 1, Guide vane angles are for information only!

Case: ⊙ 1

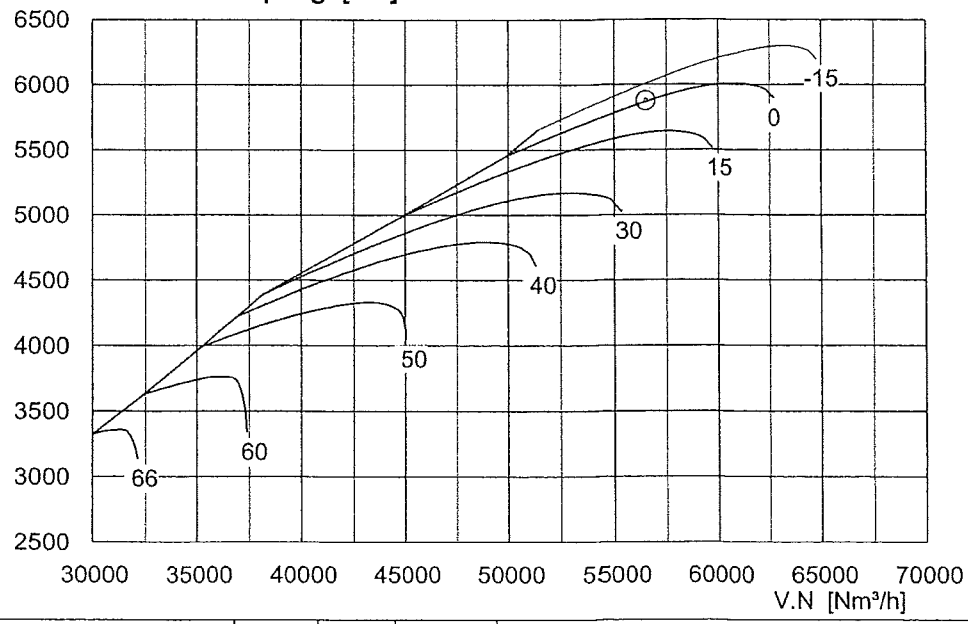
Gas	DRY AIR	Suction Pressure [bara]	5.60
Molar Mass [kg/kmol]	28.96	Suction Temp. [°C]	20
Is. Vol-exponent	1.4087	Intercooling Temp. [°C]	44
Compress. Factor	.99797		

Discharge Pressure [bara]



Case C1
Vn = 56500
Pd = 57.1

Power at Coupling [kW]



Case C1
Vn = 56500
Pk = 5898

Prepared Kretzschmar	Dept.:	Time:	Date:	Remarks:	Page
Checked:	TC31	15:55	15.11.04	C1	8 / 10

Centrifugal compressor
Type RG31-4
Predicted Performance Curves

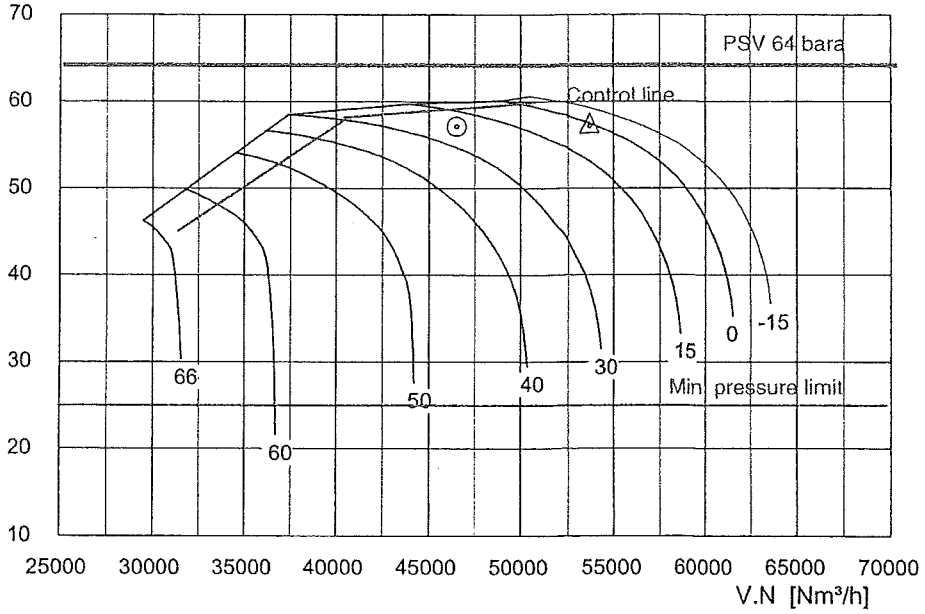
Client:	AL AGS GmbH
Item:	BAC
Job:	KOSBOOST
Quote:	312410

Adjustable inlet guide vanes, stage(s) 1, Guide vane angles are for information only!

Case: ⊙ 1, △ 2

Gas	DRY AIR	Suction Pressure [bara]	5.50
Molar Mass [kg/kmol]	28.96	Suction Temp. [°C]	20
Is. Vol-exponent	1.4085	Intercooling Temp. [°C]	44
Compress. Factor	.99801		

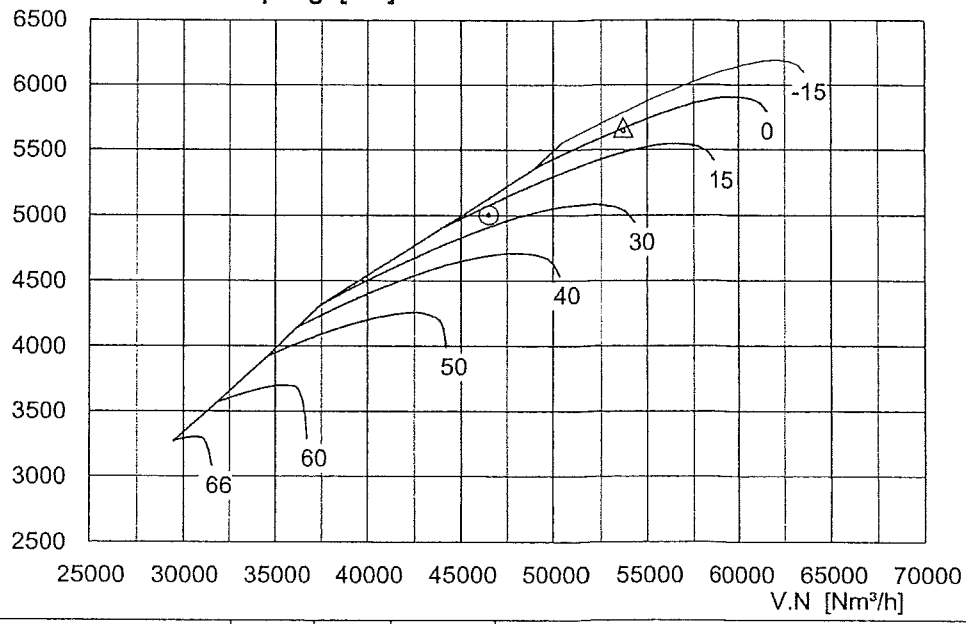
Discharge Pressure [bara]



Case C2
Vn = 46500
Pd = 57.1

Case C4
Vn = 53700
Pd = 57.1

Power at Coupling [kW]



Case C2
Vn = 46500
Pk = 5021

Case C4
Vn = 53700
Pk = 5669

Prepared Kretzschmar	Dept.:	Time:	Date:	Remarks:	Page
Checked:	TC31	15:56	15.11.04	C2 / C4	9 / 10

Centrifugal compressor
Type RG31-4
Predicted Performance Curves

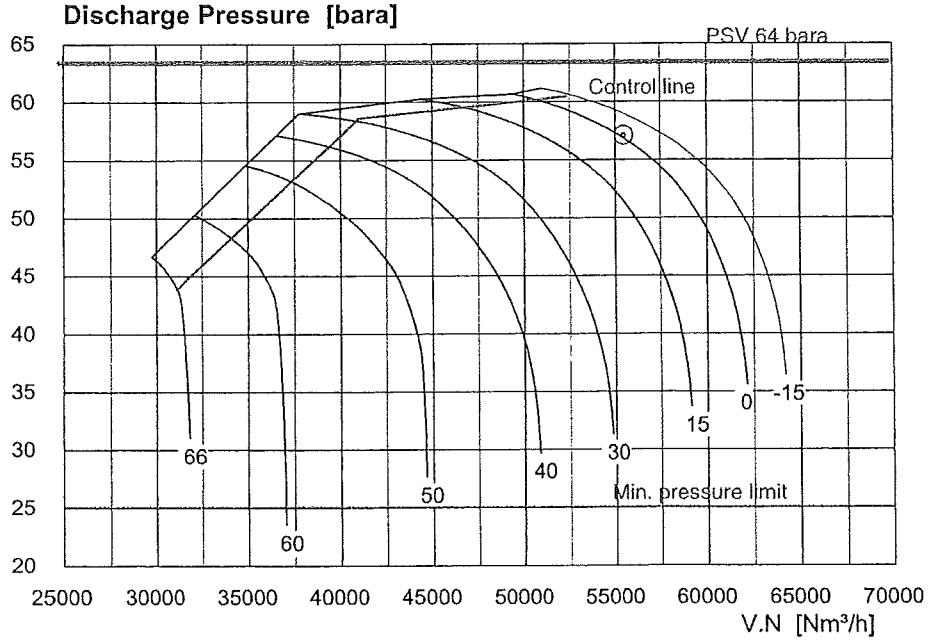
Client:	AL AGS GmbH
Item:	BAC
Job:	KOSBOOST
Quote:	312410

Adjustable inlet guide vanes, stage(s) 1, Guide vane angles are for information only!

Case: ⊙ 1

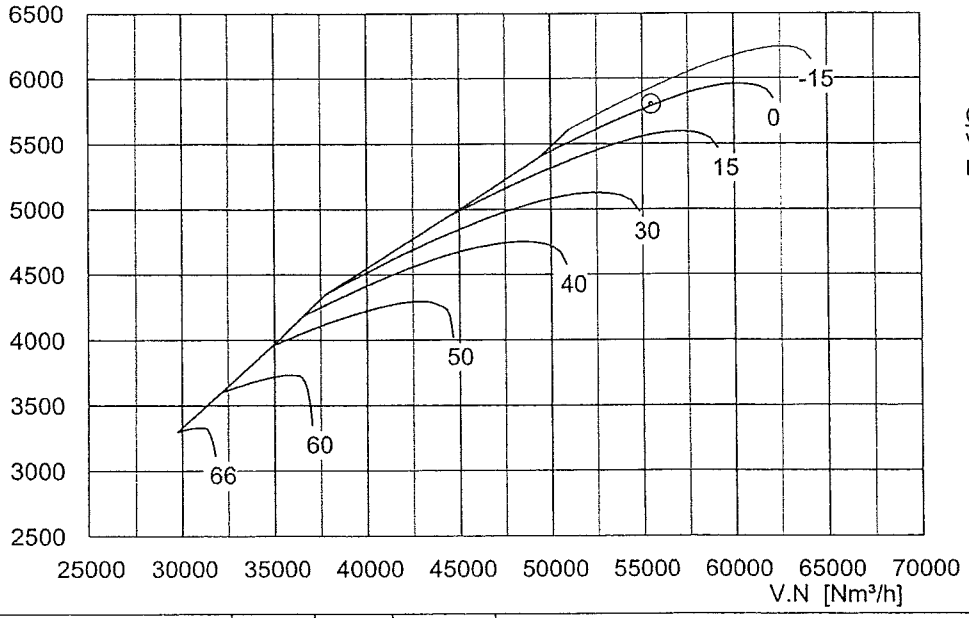
Gas	DRY AIR	Suction Pressure [bara]	5.55
Molar Mass [kg/kmol]	28.96	Suction Temp. [°C]	20
Is. Vol-exponent	1.4086	Intercooling Temp. [°C]	44
Compress. Factor	.99799		

Discharge Pressure [bara]



Case C3
Vn = 55500
Pd = 57.1

Power at Coupling [kW]

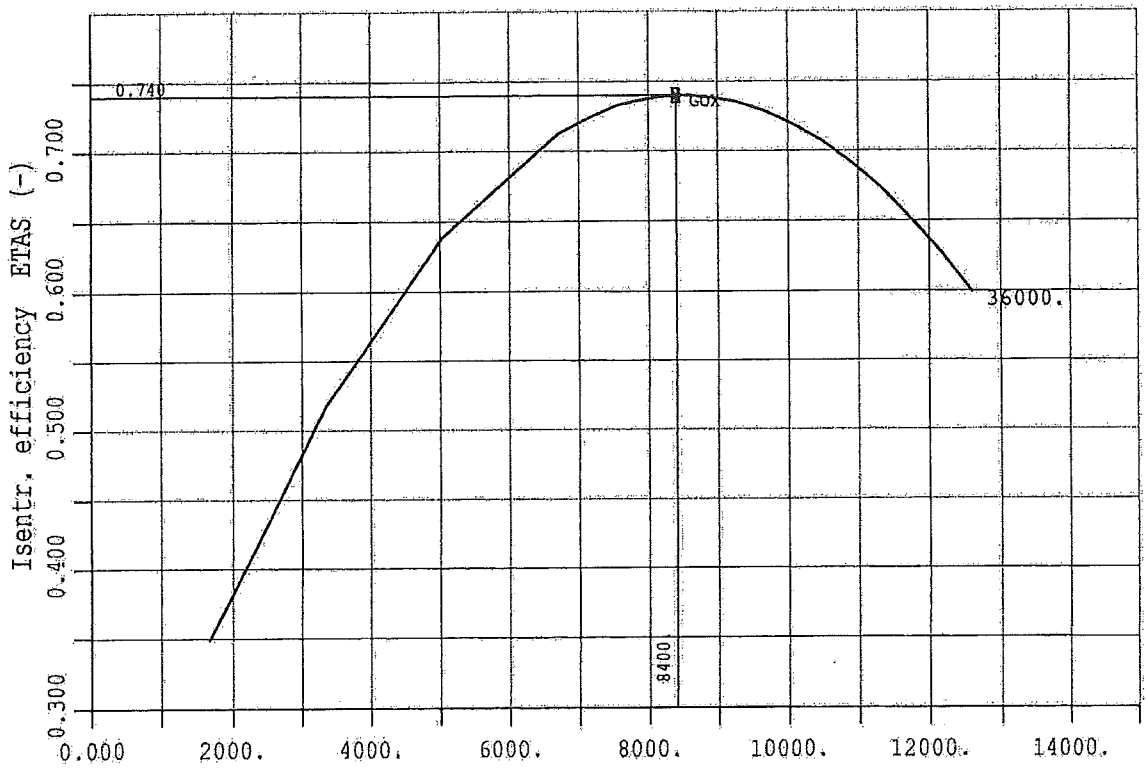


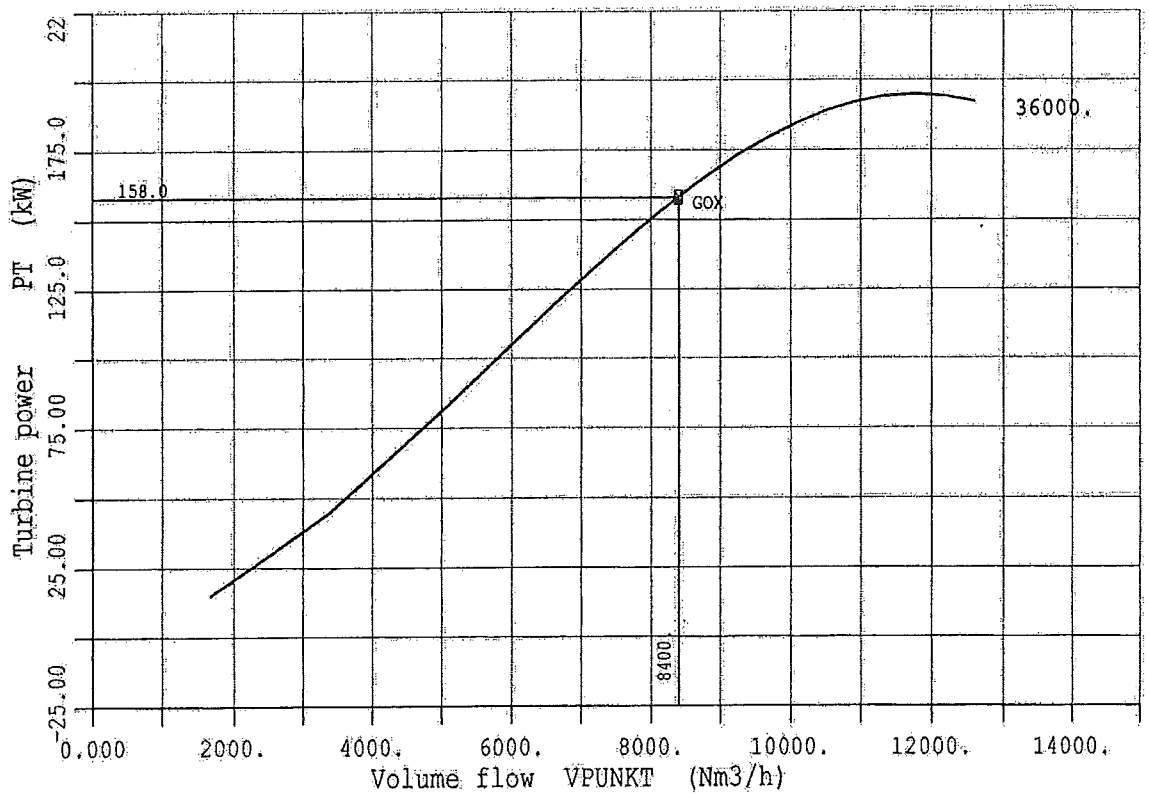
Case C3
Vn = 55500
Pk = 5826

Prepared Kretzschmar	Dept.:	Time:	Date:	Remarks:	Page
Checked:	TC31	16:14	15.11.04	C3	10 / 10

Atlas Copco Energas

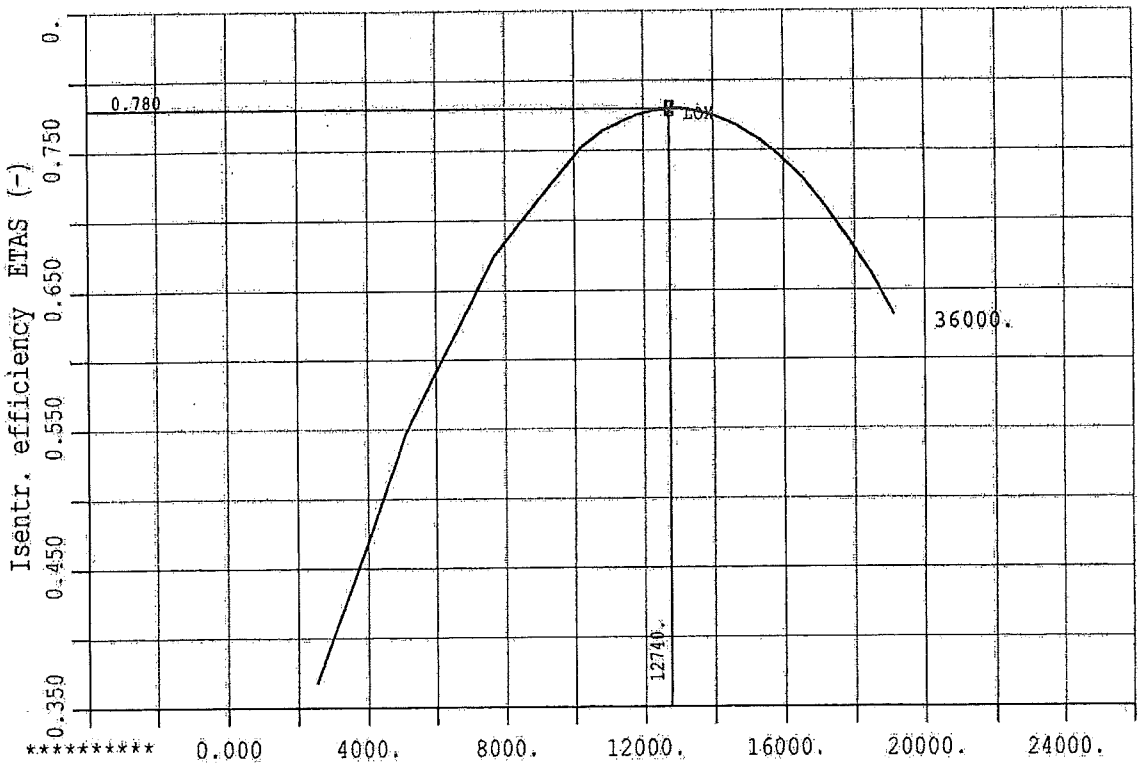
Molweight M = 28.960 kg/kmol
Inlet pressure PIN = 56.850 bar a
Inlet temperature TIN = 182.000 deg K
Outlet pressure POUT = 5.500 bar a
Messer Griesheim / ETG 125 MS / GOX

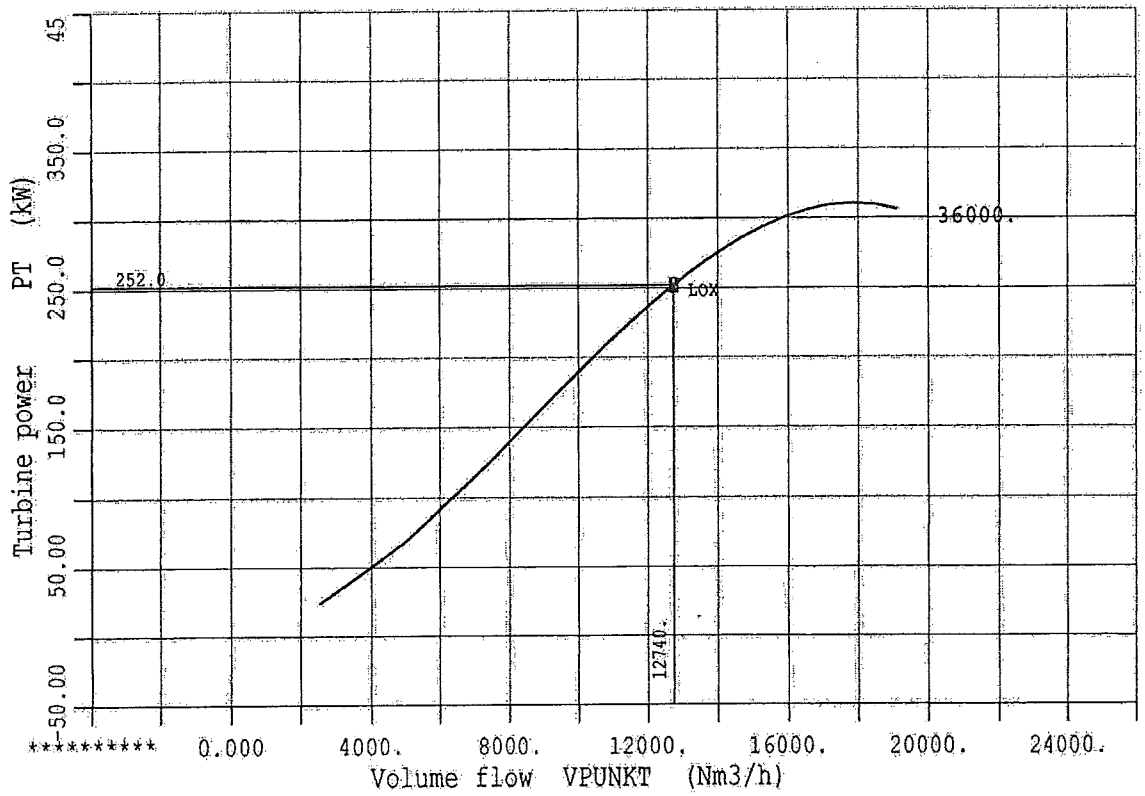




Atlas Copco Energas

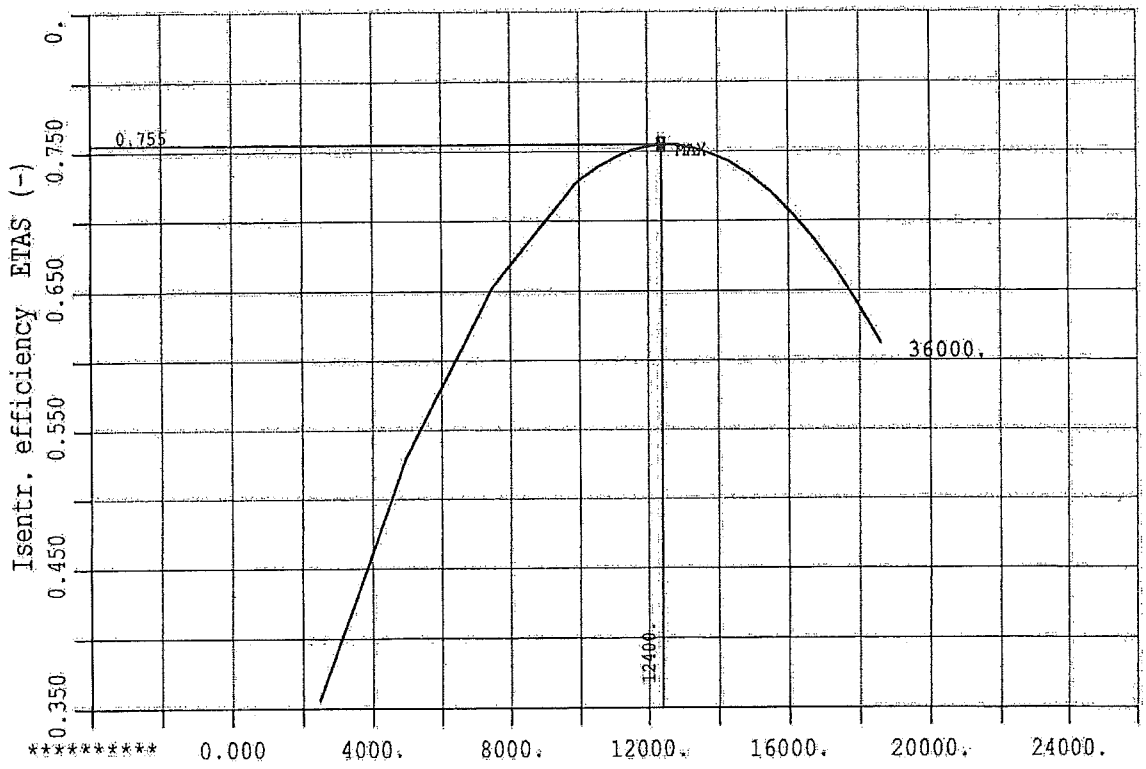
Molweight M = 28.960 kg/kmol
Inlet pressure PIN = 56.650 bar a
Inlet temperature TIN = 182.000 deg K
Outlet pressure POUT = 5.560 bar a
Messer Griesheim / ETG 125 MS / LOX

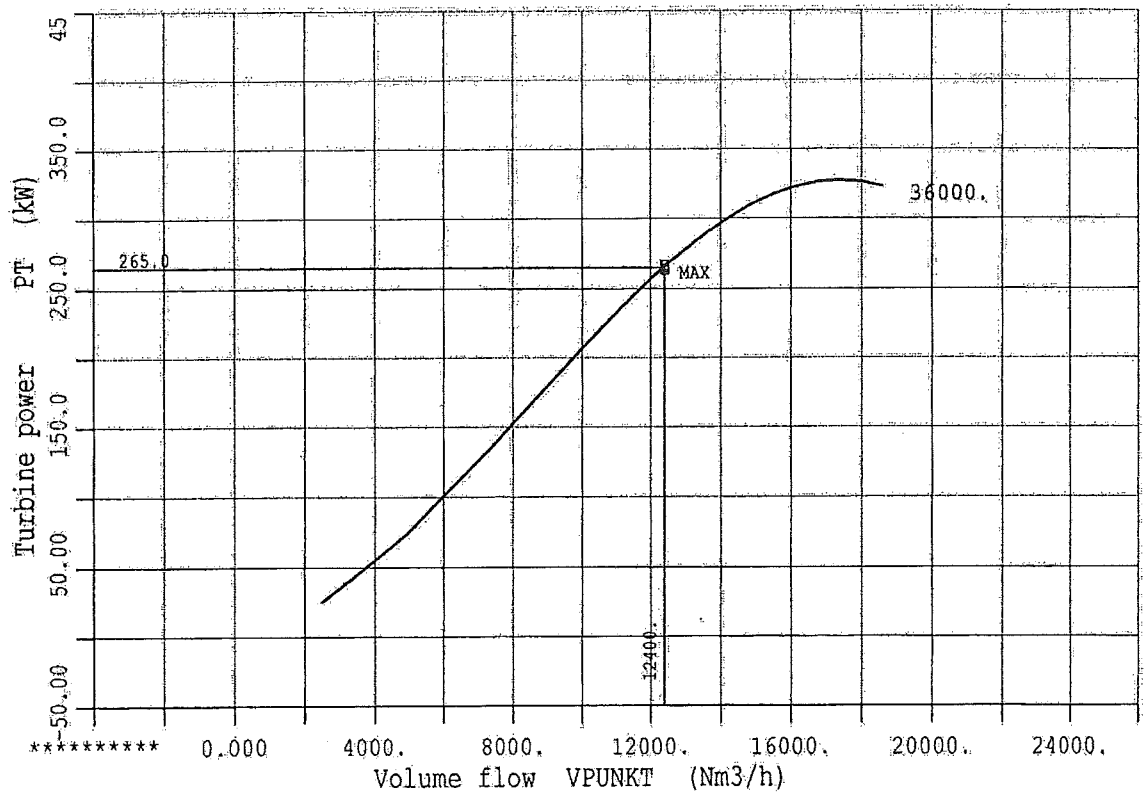




Atlas Copco Energas

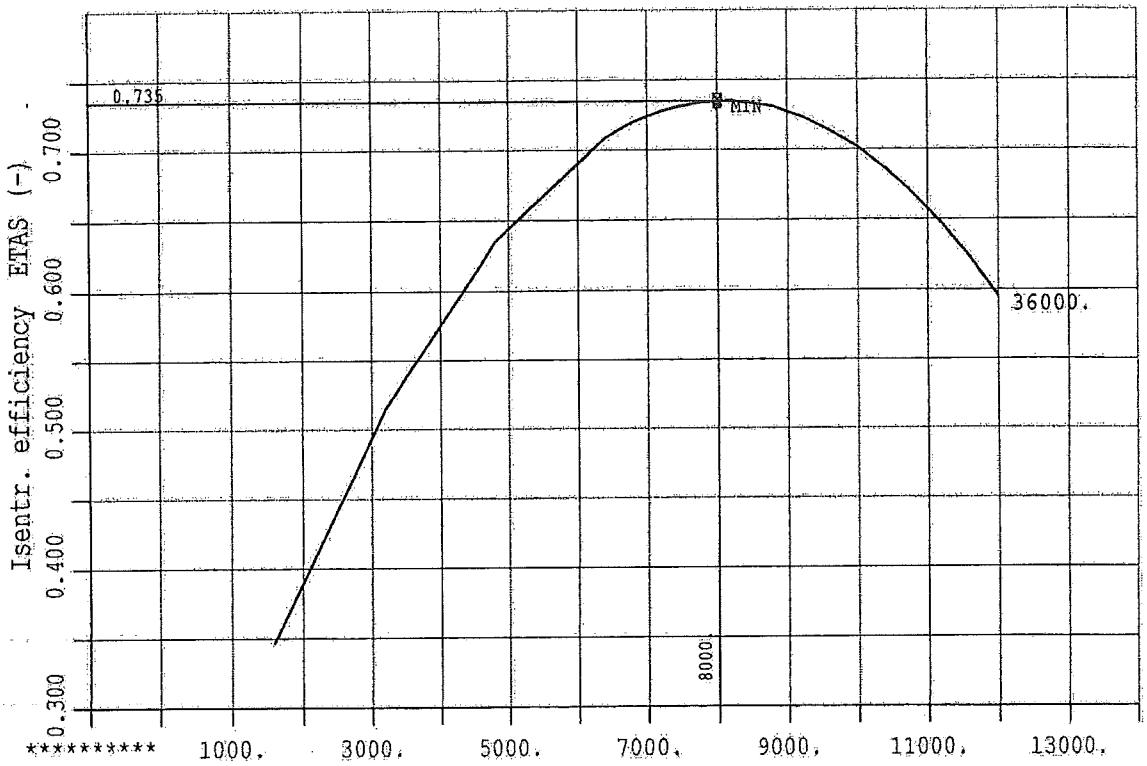
Molweight M = 28.960 kg/kmol
Inlet pressure PIN = 54.710 bar a
Inlet temperature TIN = 192.000 deg K
Outlet pressure POUT = 5.160 bar a
Messer Griesheim / ETG 125 MS / MAX

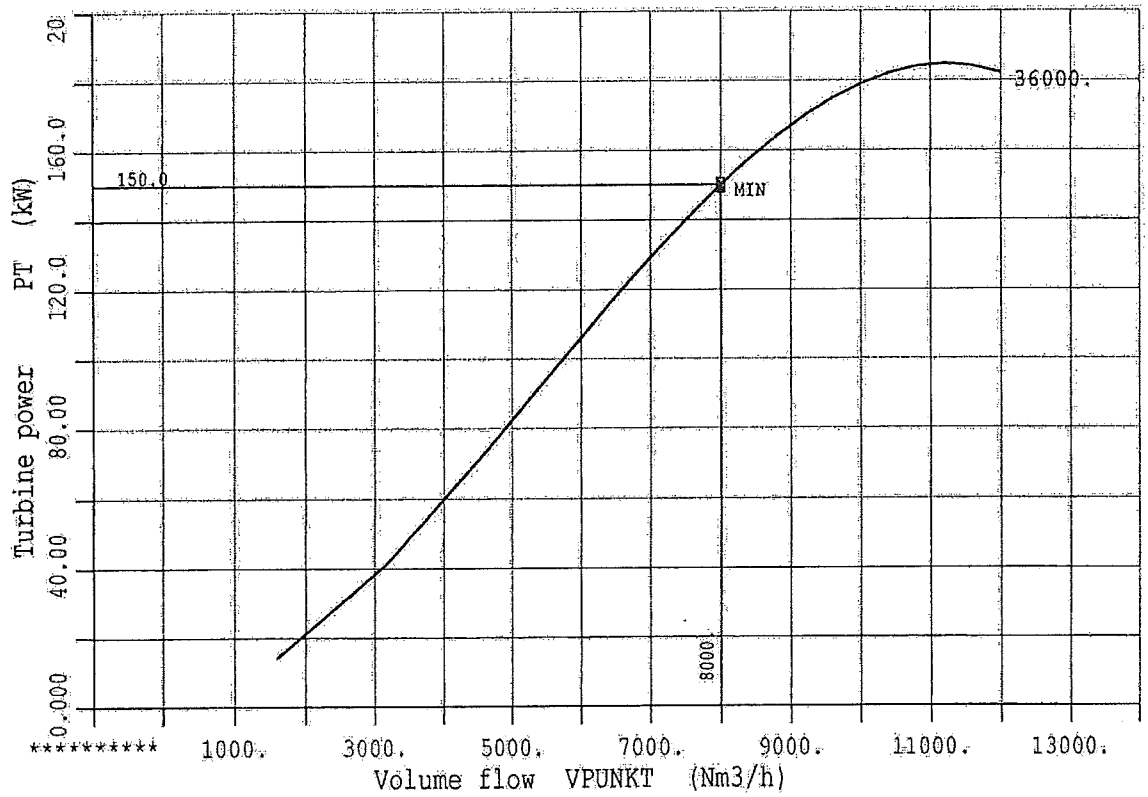




Atlas Copco Energas

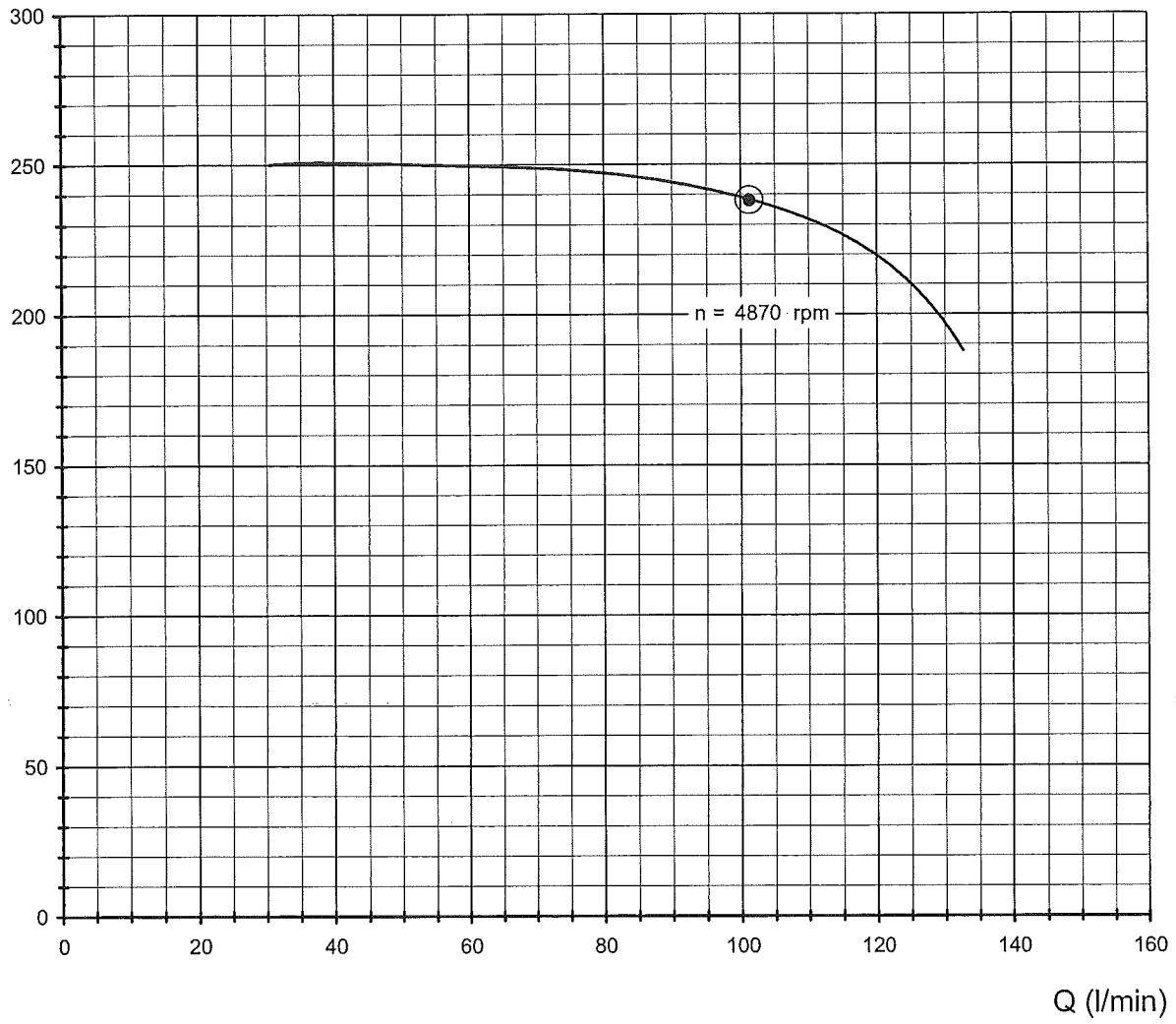
Molweight M = 28.960 kg/kmol
Inlet pressure PIN = 54.900 bar a
Inlet temperature TIN = 180.000 deg K
Outlet pressure POUT = 5.100 bar a
Messer Griesheim / ETG 125 MS / MIN

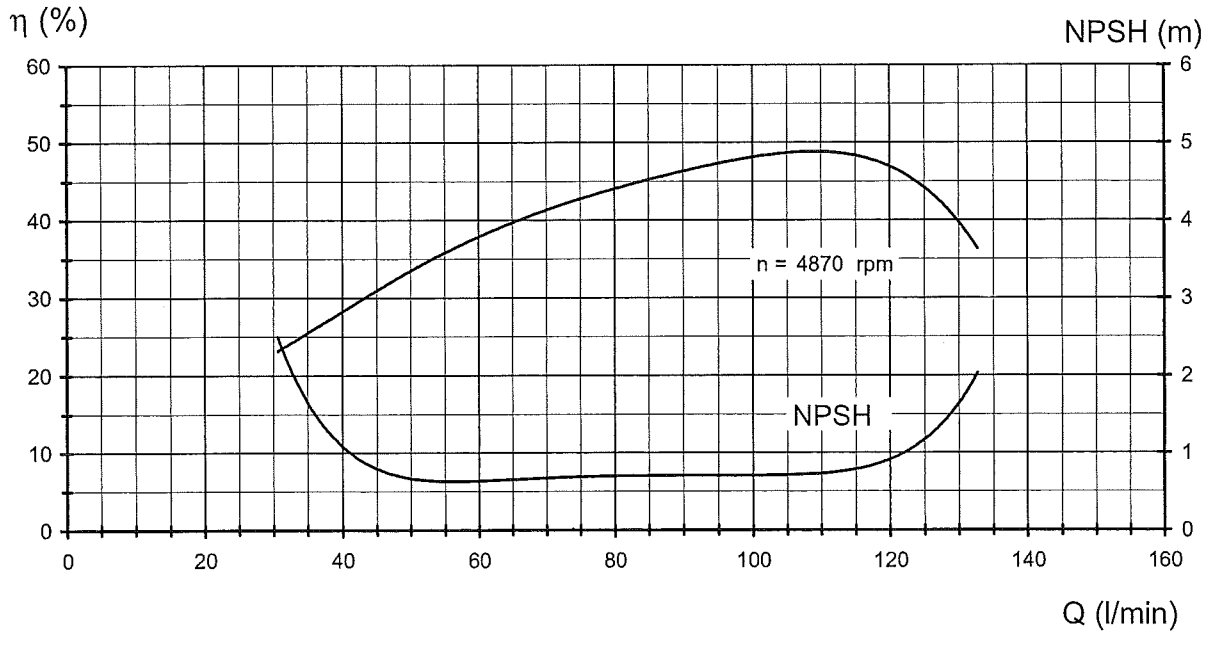




sefco	CL4 - 13	229-04/5

Impeller ∅ 130 / 3.8 mm with Inducer, Blade-ring
Diffuser 90

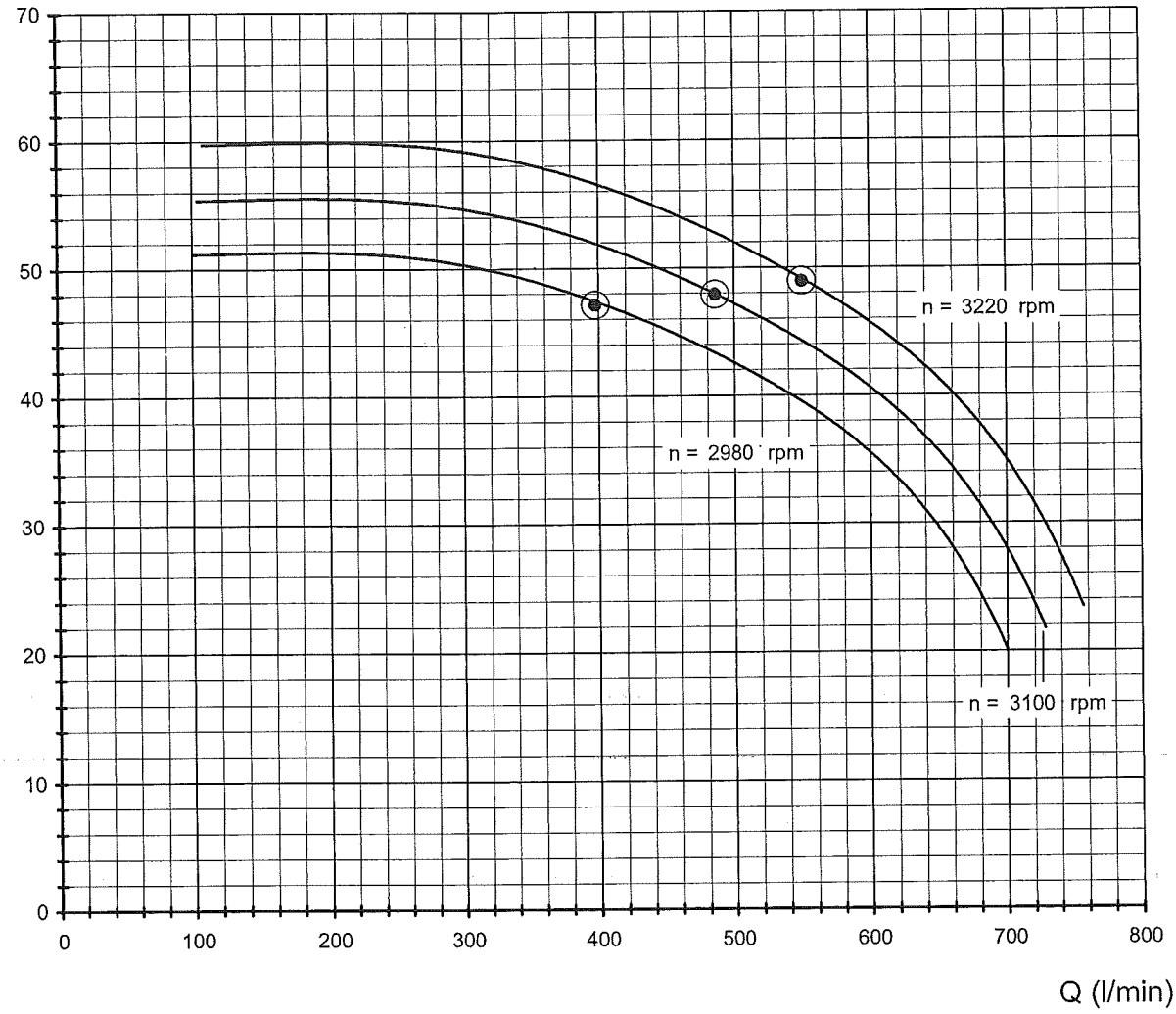


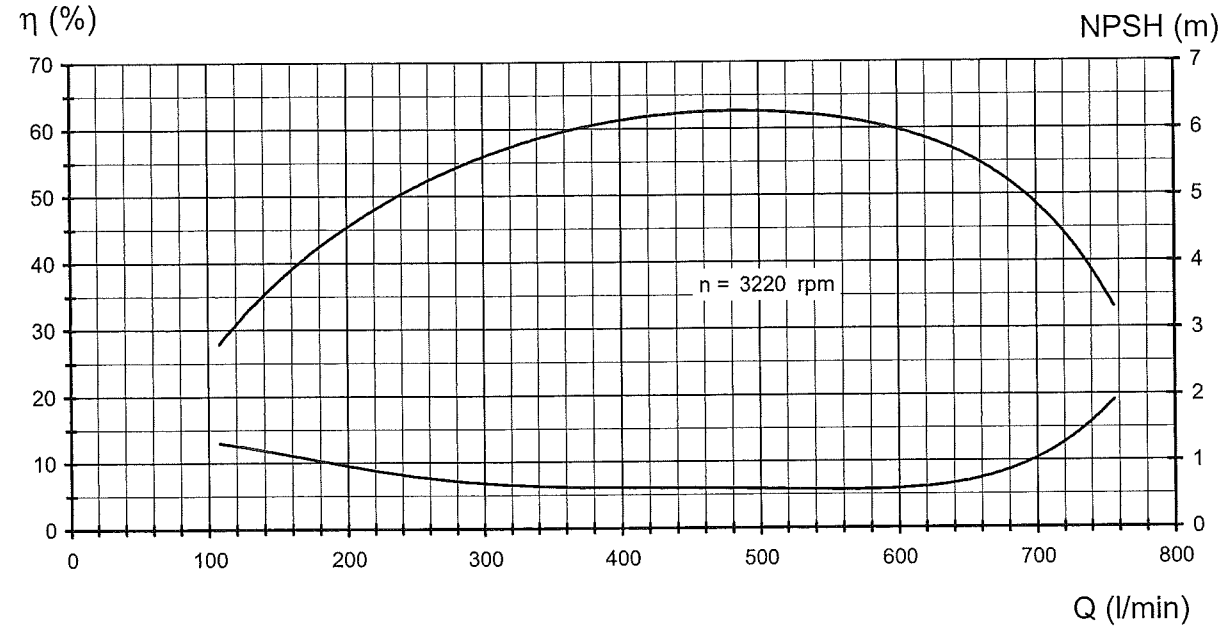


Gezeichnet Dessiné C.M.
Geprüft Contrôlé
20.08.2004

sefco	CL - 19	229-04/1

Impeller ∅ 190 / 6.5 mm with Inducer, Blade-ring
Diffuser 600



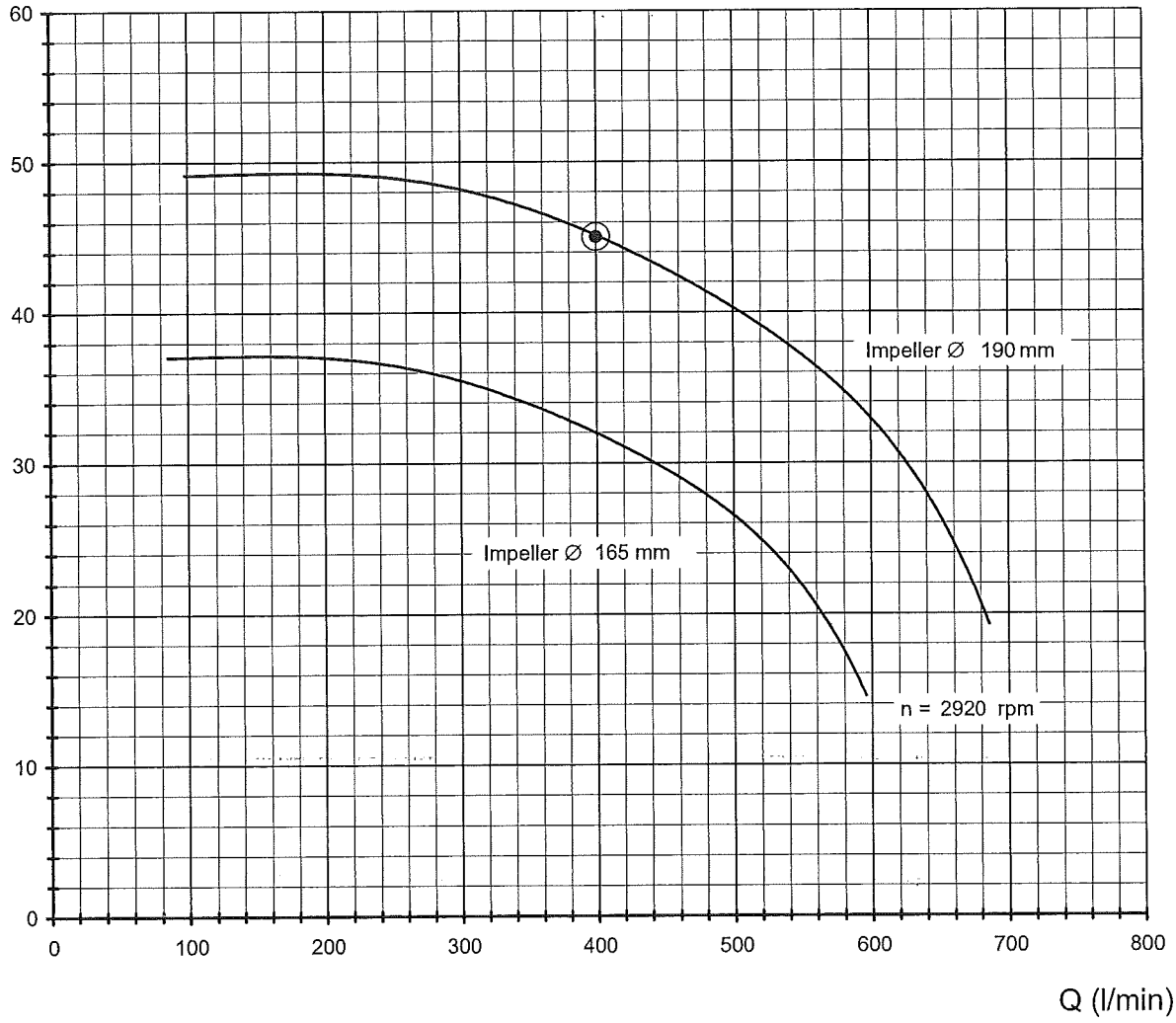


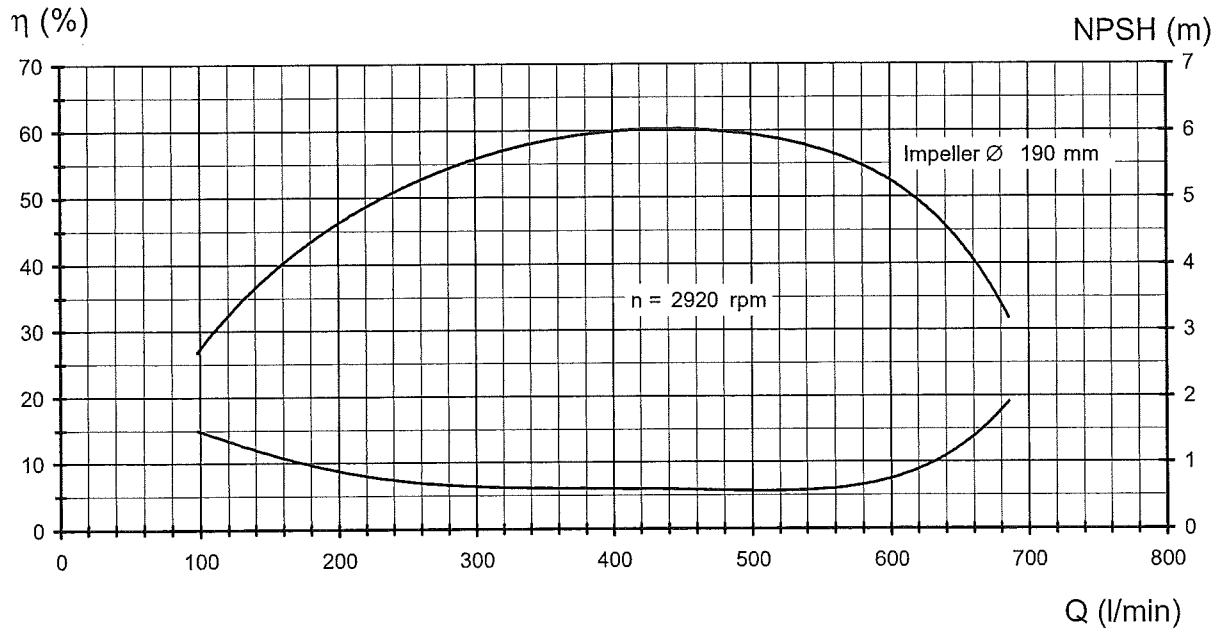
Gezeichnet Dessiné	Geprüft Controllé

Gezeichnet Dessiné	Geprüft Controllé
CM	
20.08.2004	

sefco	C - 19	229-04/3

Impeller ∅ 190 and 165 / 6.5 mm with Inducer, Blade-ring
Diffuser 600

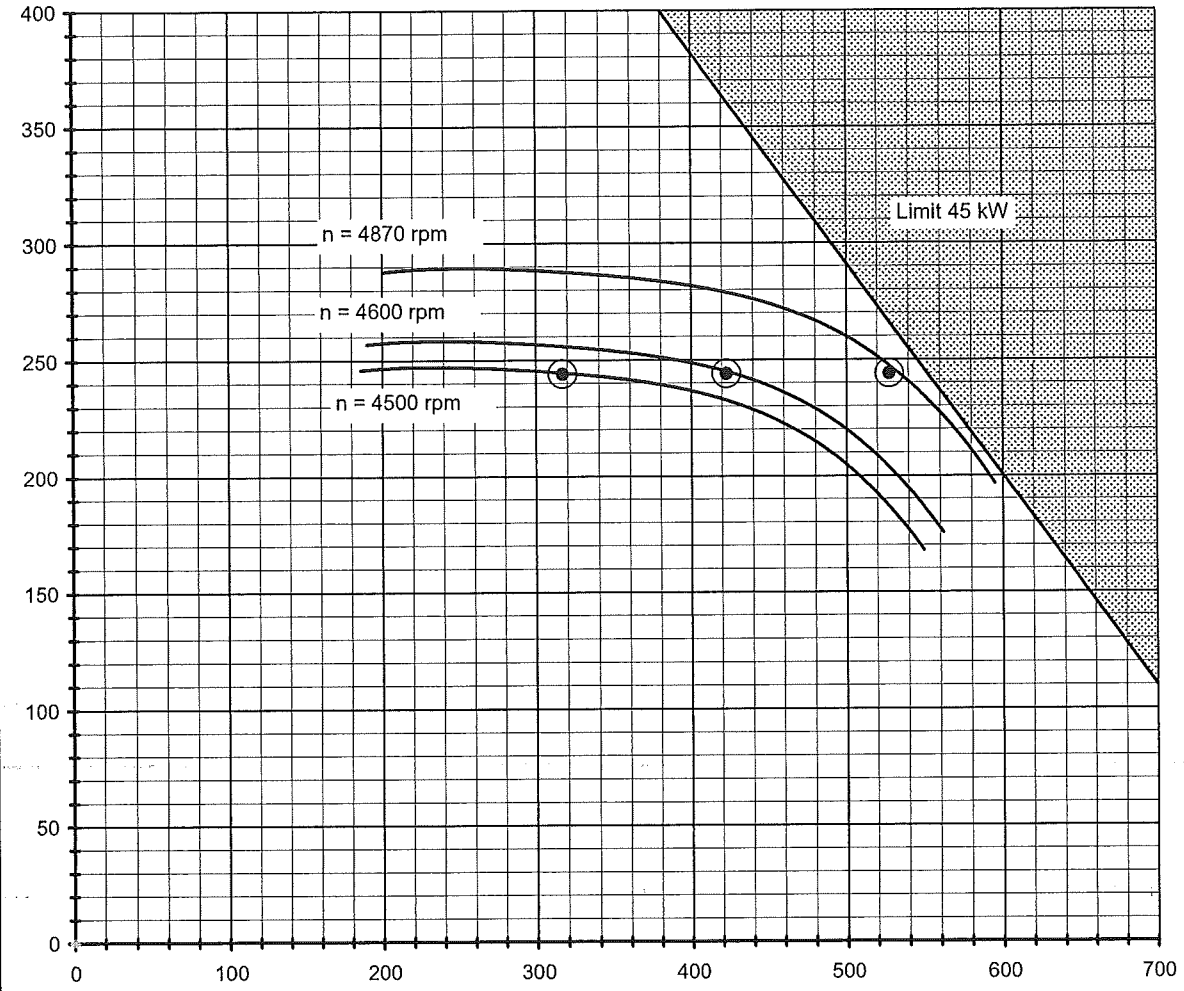


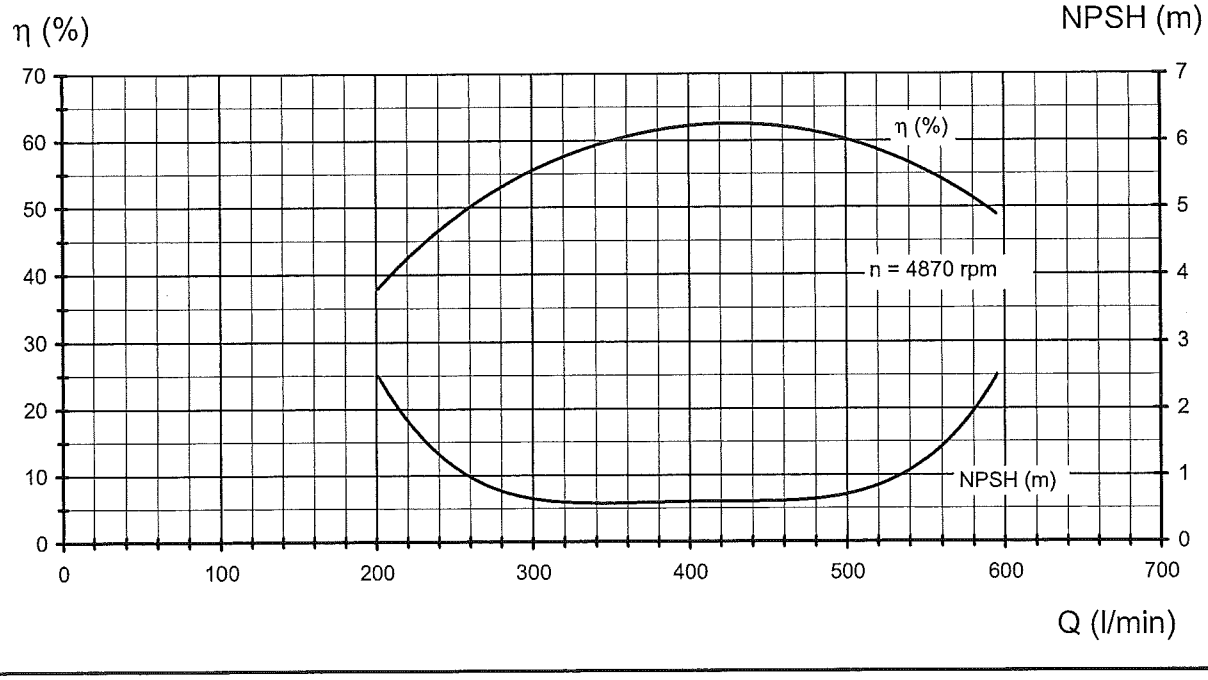


Gezeichnet / Dessiné: CM
Geprüft / Controllé:
20.08.2004

sefco	CL2 - 19	229-04/4A

Impeller ∅ 190 / 4.5 mm, with Inducer, Blade-ring
Diffusor 300+

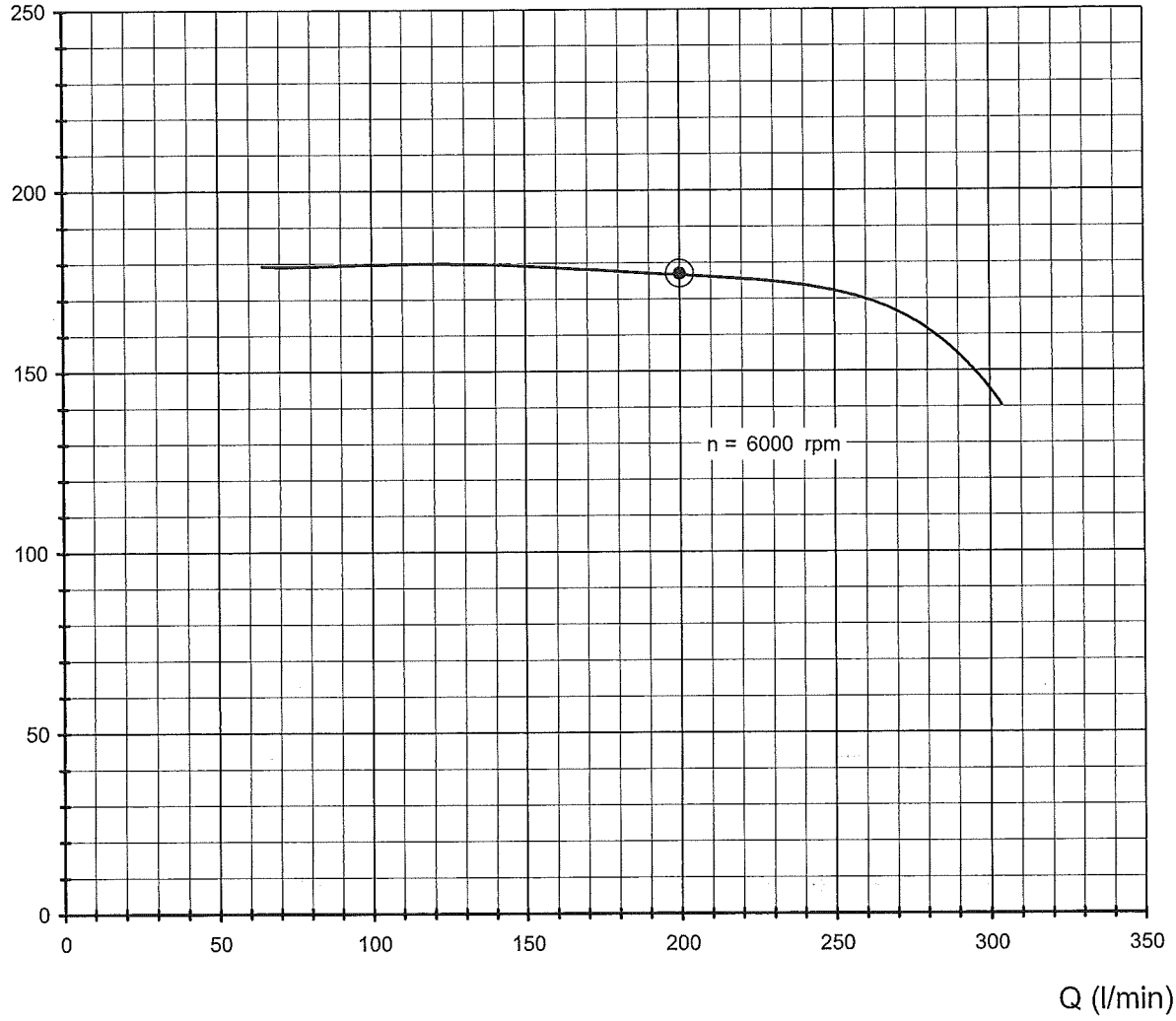


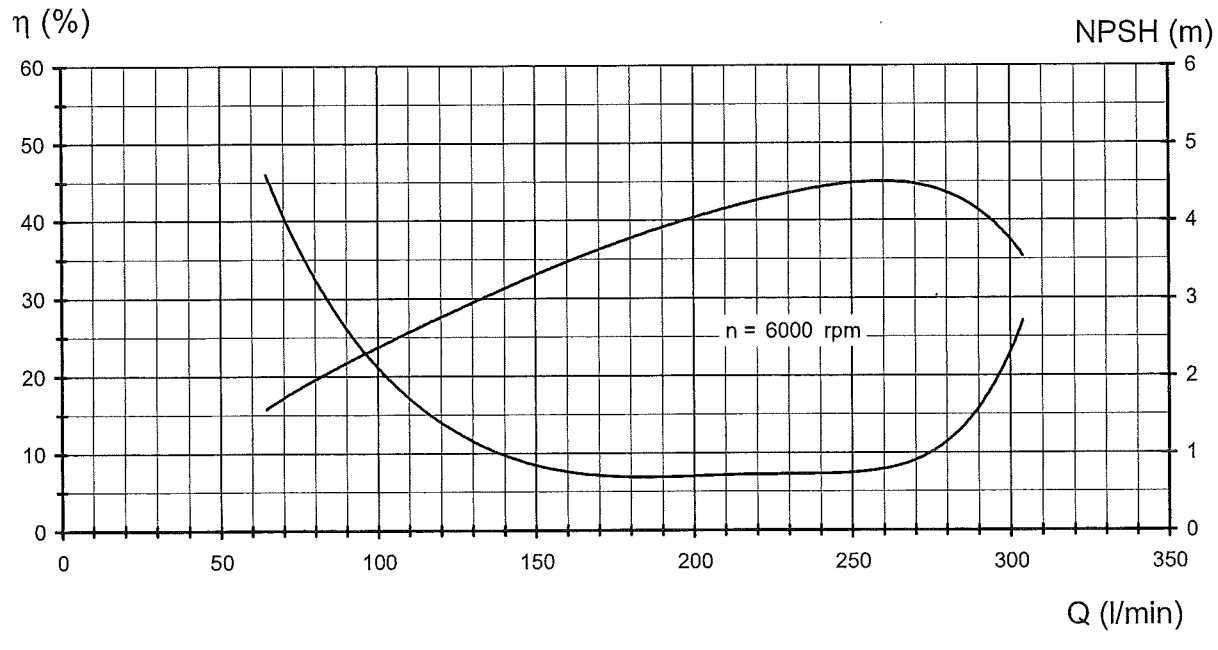


Gezeichnet Dessiné NS
Geprüft Controllé
29.09.2004

sefco	C - 19	229-04/2

Impeller ∅ 176 / 4.5 mm with Inducer, Blade-ring
Diffuser 150

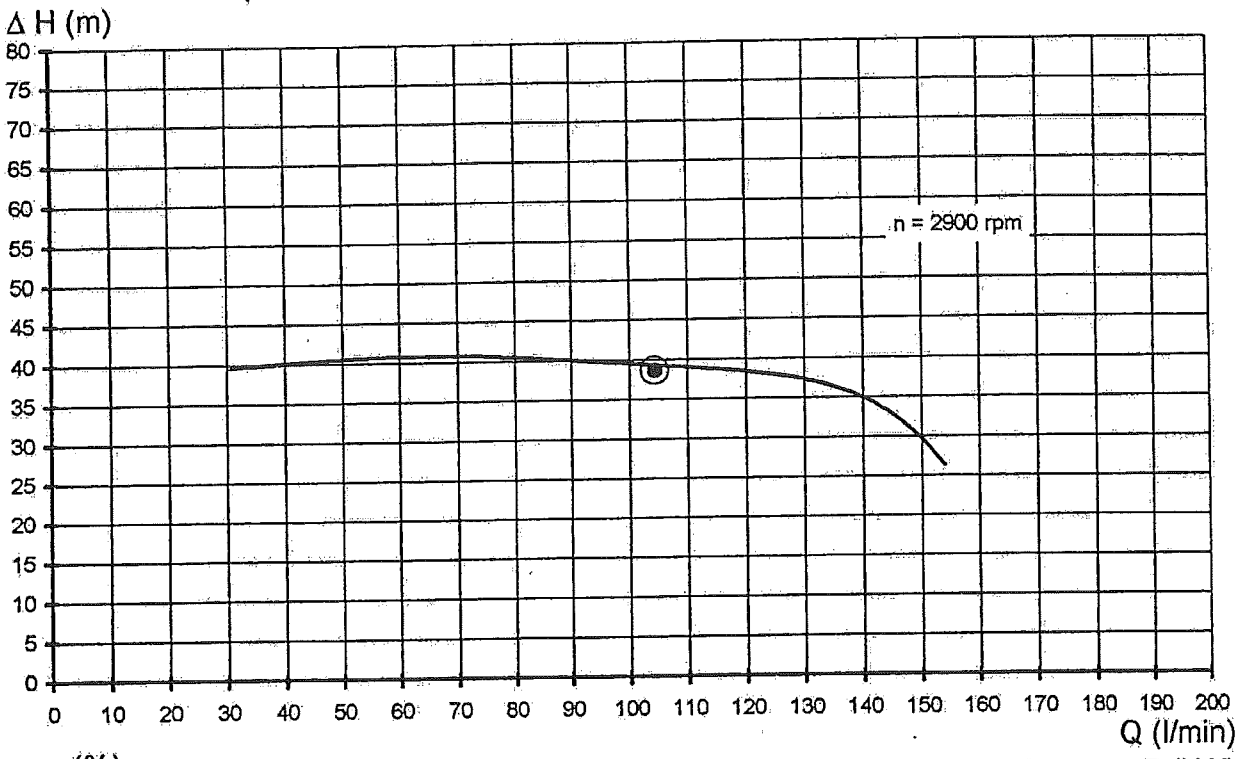


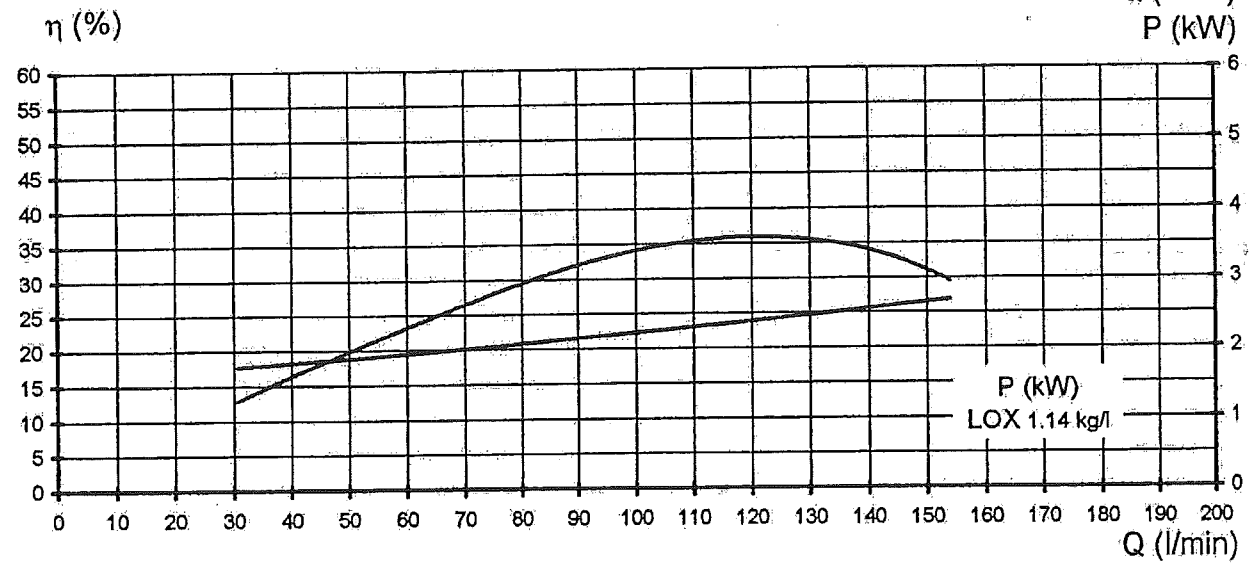


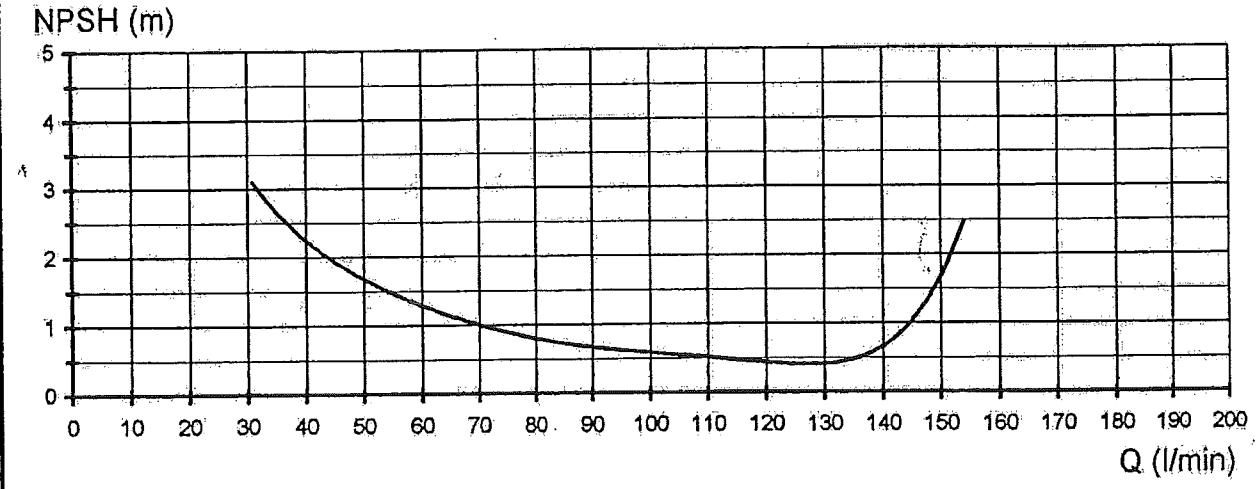
Gezeichnet Dessiné CM 20.08.2004
Geprüft Controllé

sefco	CL - 19	P63001	180-04/2

Impeller ∅ 173 / 4.5 mm with Inducer , Blade-ring , Diffuser 150







Gezeichnet / Dessiné	Geprüft / Contrôlé		
NS		25.06.2004	1
		29.06.2004	