



# ASPC Project



<b>END CUSTOMER</b>	: Arya Sasol Polymer Company
<b>CONTRACTOR</b>	: DYPNF Co., Ltd.
<b>VENDOR NAME</b>	: Airpack Netherlands BV
<b>EQUIPMENT DESCRIPTION</b>	: Screw Compressor & Roots Blower
<b>PURCHASE ORDER NUMBER</b>	: PO-PC2312-08

Customer Document : 3944-VD-0171-DYP-RE-400-DSH-0019  
Number

Airpack Document Number : 23383-11B

Document Title : Compressor data sheets

Review Code and Status		Contractor Initials/Signature	Date signed
<input type="checkbox"/>	<b>Code 1</b> <b>REJECTED</b> - Vendor to revise and Resubmit. Work cannot proceed		
<input type="checkbox"/>	<b>Code 2</b> Comments As Noted - Work May proceed, subject to compliance with and incorporation of comments		
<input type="checkbox"/>	<b>Code 3</b> No Comments - Work may proceed.		
<input type="checkbox"/>	<b>Code 4</b> Information only - Review not required.		

01	Issued for Approval	15-05-2025	SC	KP	JJ
00	Issued for Approval	18-03-2025	SC	KP	JJ
Rev. No.	Description	Date	Prepared by	Checked by	Approved by



## 300 KT polyethylene plant project (ASPC)



DATE: 15-5-2025

DOC NO.: 23383-11B COMPRESSOR DATA SHEET

REV. 01

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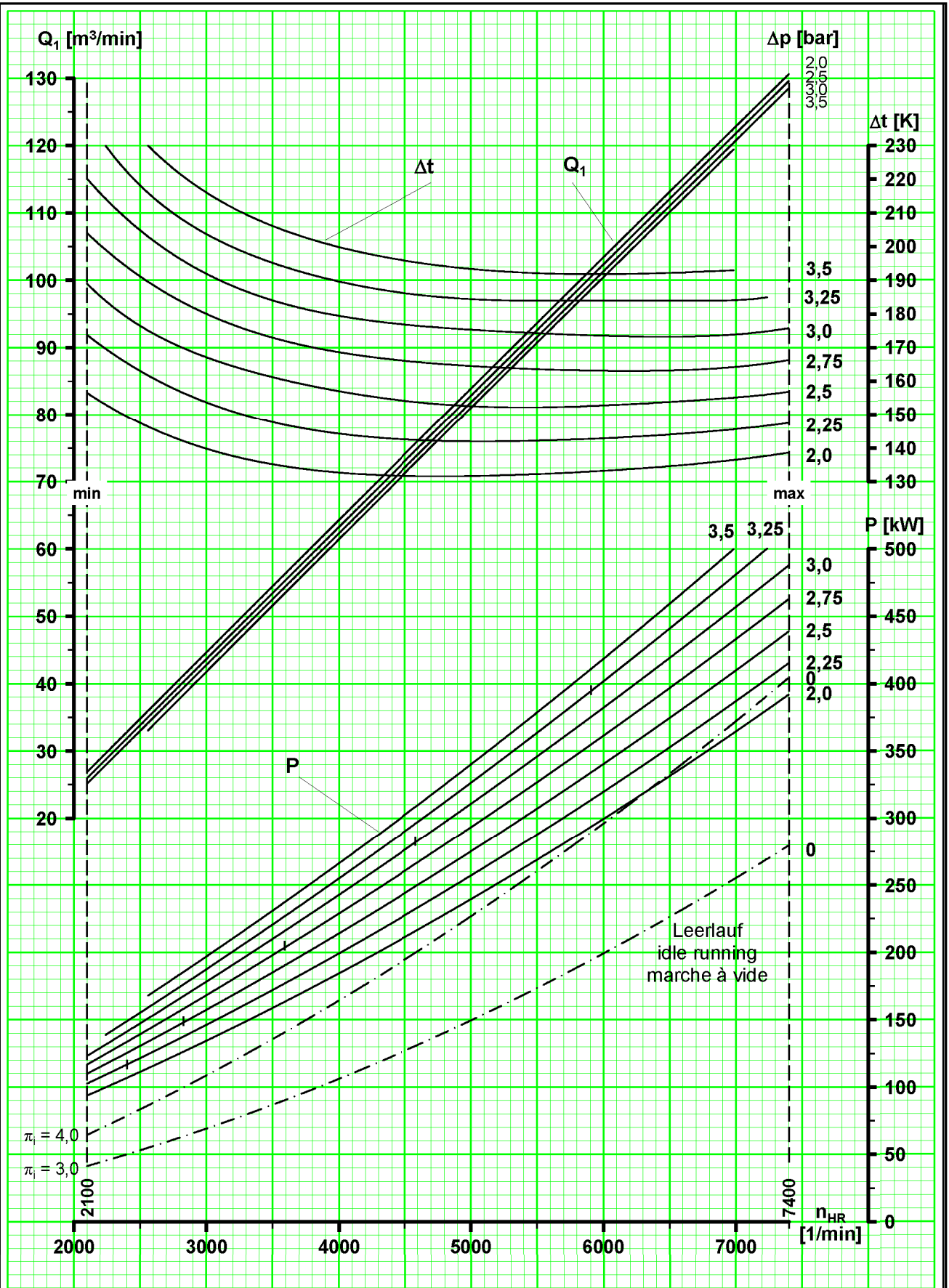
1	VENDOR (COMPRESSOR)	Airpack Netherlands B.V.			REFERENCE :	23383-COM				
2	TYPE / MODEL	Aerzen VM100			SERIAL NO. :	T-2025-00804/00805				
3	SERVICE	Nitrogen compressor			OPERATION :	Continuous				
4	QUANTITY	2 (1+1)								
5	<b>INLET CONDITIONS</b>				<b>PACKAGE SCOPE OF SUPPLY</b>					
6	GAS HANDLED	Nitrogen			COMPRESSOR TYPE :	Oil free screw				
7	<b>INLET CONDITIONS</b>				DRIVER TYPE :	MV motor				
8	PRESSURE	bar(g)	0,05		COUPLING / GUARD :	Flexible / Non-sparking				
9	TEMPERATURE	°C	48		RCU AND SAFETY SWITCHES FOR MOTORS:	N/A				
10	REL. HUMIDITY	%	0		INTAKE FILTER / SILENCER:	By others / included				
11	OPERATING DENSITY	kg/m3	1,1		INTERCOOLING:	N/A				
12	MOLECULAR MASS	g/mol	28		AFTERCOOLER:	N/A				
13	Cp/Cv		1,4		LUBE-OIL COOLER:	Air-cooled				
14	Z		1		LUBE-OIL FILTER:	Included				
16	VISCOSITY	PaS	1.92*10 <sup>-5</sup>		AUTO CONDENSATE TRAP:	N/A				
17	<b>DISCHARGE CONDITIONS</b>				AIR DRYER:	N/A				
18	PRESSURE	bar(g)	1,89		NITROGEN GENERATOR:	N/A				
19	FLOW RATE	Nm³/h	6416		BLOW-OFF SILENCER:	N/A				
20	TEMPERATURE	°C	189		CONTROL PANEL:	LPS and Junction box				
21	CONNECTION	ANSI 10" 150# RF			VIBRATION MONITOR:	N/A				
22	<b>COMP. PERFORMANCE</b>				INTERCONNECTING PIPEWORK & VALVES :	N/A				
23	SPEED	rpm	6994		ACOUSTIC ENCLOSURE:	Included				
24	ABSORBED POWER	kW	356		FOUNDATION BOLTS:	Included				
25	TYPE	Oil free screw			RECEIVER VESSELS:	N/A				
26	DESIGN TEMP/PRESS	°C/bar(g)	-10-280 / 5		LIGHTING:	N/A				
27	COMPRESSION RATIO		2,73		BASEPLATE:	Included				
28	VOL. EFFICIENCY	%	TBD		FIRST OIL FILLING	Included				
	NOISE @ 1M	dBA	80							
29	<b>DRIVER PERFORMANCE</b>				<b>UTILITY SUPPLIES</b>					
30	OPERATING SPEED	rpm	2988		ELECTRICAL SUPPLY :					
31	RATING	kW	450		V	6000	PH	3	Hz	50
32	MANUFACTURER	WEG			V	400	PH	3	Hz	50
33	NO. OF POLES	2			V	230	PH	1	Hz	50
34	DRIVE	DIRECT			COOLING MEDIUM :					
35		NOTE 1			TEMPERATURE:					
36					PRESSURE:					
37	<b>SITE CONDITIONS</b>				<b>WEIGHTS AND DIMENSIONS</b>					
38	ELEVATION	m	<1000		COMPRESSOR	kg	3716			
39	AMB. TEMPERATURE	°C	5-48		DRIVER	kg	4100			
40	AMB. PRESSURE	bar(g)	0		MISCELLANEOUS	kg	TBD			
41	REL. HUMIDITY	%	65-100		TOTAL	kg	+/-12000			
42	AREA CLASSIFICATION	Zone 2 group IIB, T3								
43	NOISE LIMITATION	dBA	85		SIZE	mm	L X W X H	TBD		
44										
45										
46	<b>CASING</b>				<b>BEARING HOUSING</b>					
47					TYPE <b>ANTI-FRICTION</b>					
48	MATERIAL	EN-GJL-250			BALL / ROLLER <b>ROLLER</b>					
49	COOLING	AIR-COOLED								
50	DRIVE DIRECTION	CW			<b>LUBRICATION</b>					
51					LUBE SYSTEM :		FORCED, GEAR PUMP			
52					LUBE OIL PUMP DRIVE :		kW DRIVEN BY GEARBOX			
53	<b>ROTORS</b>				SYSTEM OIL CAPACITY		L	TBD		
54	NO. OF LOBES MALE	4			LUBE OIL COOLER		AIR-COOLED			
55	NO. OF LOBES FEMALE	6			LUBE OIL FILTER		INCLUDED			
56	MATERIAL	C45N			THERMOSTATIC VALVE		YES			
57										
58	<b>TIMING GEARS</b>				<b>STANDARDS AND SPECIFICATIONS</b>					
59	MATERIAL	16 Mn Cr5			Compressor: Mfr. Std.					
60	TYPE	HELICAL, TEETH HARDENED								
61	<b>SEALING</b>				<b>INSTRUMENTATION</b>					
62	SHAFT SEALING TYPE	LABYRINTH			FUNCTION			TYPE(S)		
63	CONVEYING CHAMBER SEAL TYPE	PISTON RING LABYRINTH			COMPRESSOR INLET PRESSURE			GAUGE & TRANSMITTER		
65	<b>SKID / COMPRESSOR CONNECTIONS (ANSI)</b>				COMPRESSOR DISCHARGE TEMPERATURE			TRANSMITTER		
66	NOZZLE	SIZE	RATING	FACING	POSITION	COMPRESSOR DISCHARGE PRESSURE			GAUGE & TRANSMITTER	
67	NITROGEN INLET	12"	150#	RF	TOP	COMPRESSOR OIL TEMPERATURE			TRANSMITTER	
68	NITROGEN DISCHARGE	10"	150#	RF	TOP	COMPRESSOR OIL PRESSURE			GAUGE & TRANSMITTER	
69	PSV OUTLET	6"	150#	RF	TOP	COMPRESSOR ENCLOSURE TEMPERATURE			TRANSMITTER	
70					COMPRESSOR OIL LEVEL			SIGHT GLASS		
70					MAIN MOTOR TEMPERATURE (BEARINGS AND WINDINGS)			RTD		
71	NOTES : 1: FOR MORE INFORMATION ABOUT THE DRIVER REFER TO 3944-VD-0171-DYP-RE-400-LST-0004									
72										

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**Aerzener Maschinenfabrik GmbH**

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**AERZEN**



$Q_1$  : Ansaugvolumenstrom (Luft)  
bei  $p_1 = 1,0$  bar und  $t_1 = 20^\circ C$

$n_{HR}$  : Hauptrotordrehzahl

$n_V$  : Antriebswellendrehzahl

$P$  : Leistungsbedarf an der Kupplung

$\Delta t$  : Temperaturerhöhung

$\Delta p$  : Druckerhöhung

$\pi_1$  : Eingebautes Druckverhältnis

intake volume flow (air)  
at  $p_1 = 1.0$  bar and  $t_1 = 20^\circ C$

main rotor speed

drive shaft speed

power required at the coupling

temperature rise

pressure difference

built-in compression ratio

débit aspiré (air)  
pour  $p_1 = 1,0$  bar et  $t_1 = 20^\circ C$

vitesse du rotor principal

vitesse de l'arbre d'entraînement

puissance absorbée à l'accouplement

élévation de température

pression différentielle

rapport de compression interne

Leistungsdiagramm - Überdruck - für Schraubenverdichterstufe  
performance diagram - overpressure - for screw compressor stage  
courbes de fonctionnement - fonctionnement en pression - pour étage de compresseur à vis

**VM 100**

$n_V / n_{HR} = i$

TRD/Evers  
11/2017

V2-882  
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## Startup Curve



Project
[REDACTED]

Annotations

Client

Order Number
[REDACTED]

		Operating Mode $\Delta p=1840$ mbar		<input checked="" type="checkbox"/> Idle Mode $p1 = p2=1063$ mbar (a) <span style="float: right;">?</span>	
Main rotor speed	$n_{HR}$	6994	1/min	6994	1/min
Motor Speed	$n_{Mot}$	2988	1/min	2988	1/min
Power consumption at coupling	$P_K$	356	kW	40	kW
Torque at Motor Shaft	$M_L$	1138	Nm	128	Nm
Moment of Inertia at Motor Shaft	$J_{red} = mr^2$	9,99	kgm <sup>2</sup>		
		Operating Mode		Idle Mode	

The nominal rating of the driving machine must be selected at least 10% higher than the power of the compressor shaft.

Application Example. All information is subject to change.



## Startup Curve

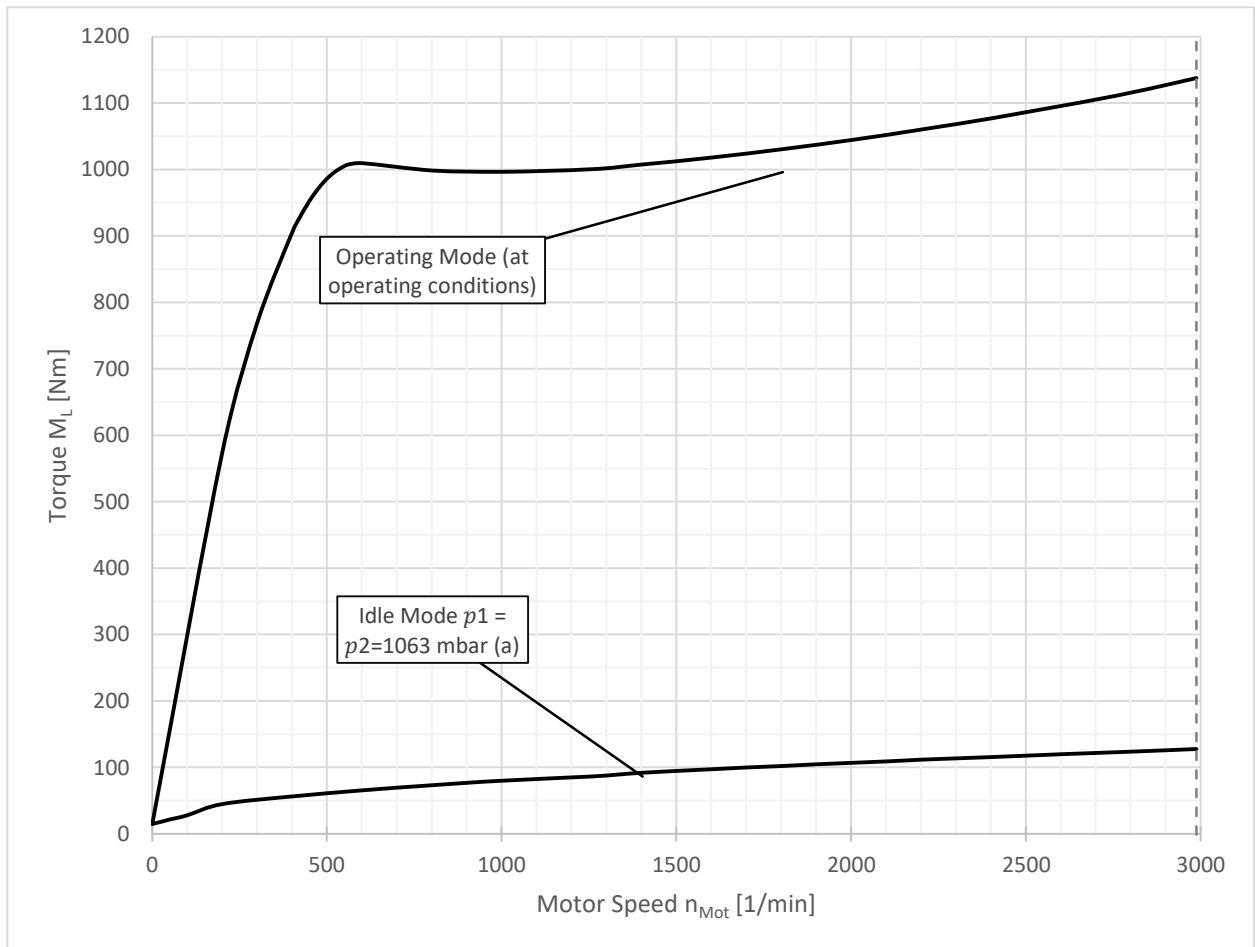


Project
[REDACTED]

Annotations

Client

Order Number
[REDACTED]



Startup Curve Screw Compressor VM 100



## Startup Curve



Project	
[REDACTED]	
Annotations	
Client	Order Number
	[REDACTED]

Application Example. All information is subject to change.



## 300 KT polyethylene plant project (ASPC)



DATE: 15-5-2025

DOC NO.: 23383-11B COMPRESSOR DATA SHEET

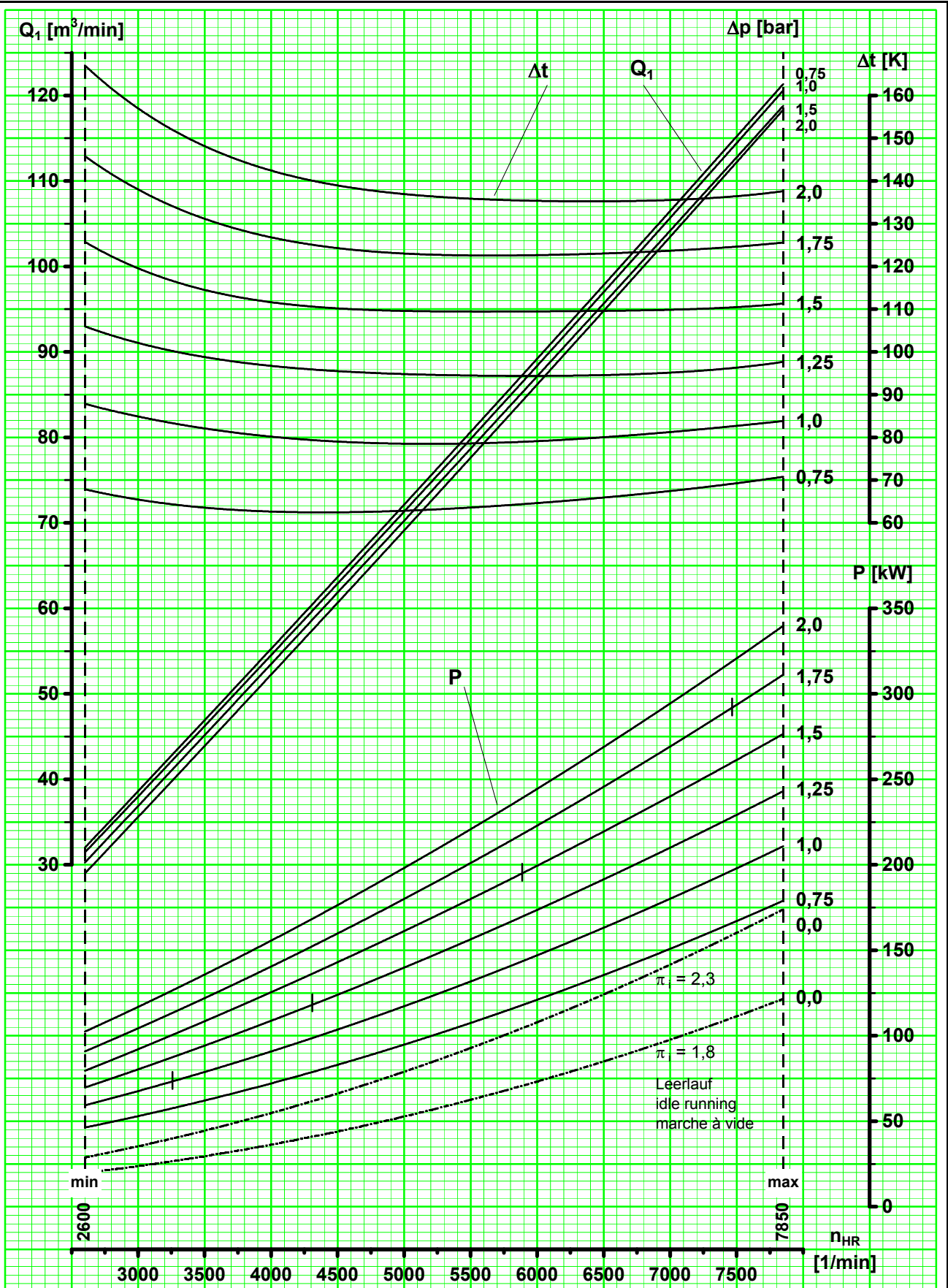
REV. 01

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1	VENDOR (COMPRESSOR)	Airpack Netherlands B.V.	REFERENCE :	23383-COM
2	TYPE / MODEL	Aerzen VML95	SERIAL NO. :	T-2025-00806/00807
3	SERVICE	Air compressor	OPERATION :	Continuous
4	QUANTITY	2 (1+1)		
5	INLET CONDITIONS		PACKAGE SCOPE OF SUPPLY	
6	GAS HANDLED	Air	COMPRESSOR TYPE :	Oil free screw
7	INLET CONDITIONS		DRIVER TYPE :	MV motor
8	PRESSURE	bar(g) 0	COUPLING / GUARD :	Flexible / Non-sparking
9	TEMPERATURE	°C 5-48	RCU AND SAFETY SWITCHES FOR MOTORS :	N/A
10	REL. HUMIDITY	% 65-100	INTAKE FILTER / SILENCER :	Included
11	OPERATING DENSITY	kg/m3 1,1	INTERCOOLING :	N/A
12	MOLECULAR MASS	g/mol 28,97	AFTERCOOLER :	N/A
13	Cp/Cv	1,4	LUBE-OIL COOLER :	Air-cooled
14	Z	1	LUBE-OIL FILTER :	Included
15	VISCOSITY	PaS 1.97*10 <sup>-5</sup>		
16	INLET FILTER DIFF. PRESS.	Mbar 10	AUTO CONDENSATE TRAP :	N/A
17	DISCHARGE CONDITIONS		AIR DRYER :	N/A
18	PRESSURE	bar(g) 1,46	NITROGEN GENERATOR :	N/A
19	FLOW RATE	Nm³/h 4247	BLOW-OFF SILENCER :	N/A
20	TEMPERATURE	°C 167	CONTROL PANEL :	LPS and Junction box
21	CONNECTION	ANSI 10" 150# RF	VIBRATION MONITOR :	N/A
22	COMP. PERFORMANCE		INTERCONNECTING PIPEWORK & VALVES :	N/A
23	SPEED	rpm 6253	ACOUSTIC ENCLOSURE :	Included
24	ABSORBED POWER	kW 195	FOUNDATION BOLTS :	Included
25	TYPE	Oil free screw	RECEIVER VESSELS :	N/A
26	DESIGN TEMP/PRESS	°C/bar(g) -10-230 / 3.2	LIGHTING :	N/A
27	COMPRESSION RATIO	2,44	BASEPLATE :	Included
28	VOL. EFFICIENCY	% TBD	FIRST OIL FILLING :	Included
29	NOISE @ 1M	dBA 78		
29	DRIVER PERFORMANCE		UTILITY SUPPLIES	
30	OPERATING SPEED	rpm 2980	ELECTRICAL SUPPLY :	
31	RATING	kW 250	V 6000	PH 3 Hz 50
32	MANUFACTURER	WEG	V 400	PH 3 Hz 50
33	NO. OF POLES	2	V 230	PH 1 Hz 50
34	DRIVE	DIRECT	COOLING MEDIUM :	AIR
35		NOTE 1	TEMPERATURE :	AMBIENT
36			PRESSURE :	AMBIENT
37	SITE CONDITIONS		WEIGHTS AND DIMENSIONS	
38	ELEVATION	m <1000	COMPRESSOR	kg 2568
39	AMB. TEMPERATURE	°C 5-48	DRIVER	kg 2141
40	AMB. PRESSURE	bar(g) 0	MISCELLANEOUS	kg TBD
41	REL. HUMIDITY	% 65-100	TOTAL	kg TBD
42	AREA CLASSIFICATION	Safe area		
43	NOISE LIMITATION	dBA 85	SIZE	mm L X W X H TBD
44				
45				
46	CASING		BEARING HOUSING	
47			TYPE	ANTI-FRICTION
48	MATERIAL	EN-GJL-250	BALL / ROLLER	ROLLER
49	COOLING	AIR-COOLED		
50	DRIVE DIRECTION	CW	LUBRICATION	
51			LUBE SYSTEM :	FORCED, GEAR PUMP
52			LUBE OIL PUMP DRIVE :	kW DRIVEN BY GEARBOX
53	ROTORS		SYSTEM OIL CAPACITY	L TBD
54	NO. OF LOBES MALE	3	LUBE OIL COOLER	AIR-COOLED
55	NO. OF LOBES FEMALE	4	LUBE OIL FILTER	INCLUDED
56	MATERIAL	C45N	THERMOSTATIC VALVE	YES
57				
58	TIMING GEARS		STANDARDS AND SPECIFICATIONS	
59	MATERIAL	16 Mn Cr5	Compressor: Mfr. Std.	
60	TYPE	HELICAL, TEETH HARDENED		
61	SEALING		INSTRUMENTATION	
62	SHAFT SEALING TYPE	LABYRINTH	FUNCTION	TYPE(S)
63	CONVEYING CHAMBER SEAL TYPE	PISTON RING LABYRINTH	COMPRESSOR INLET PRESSURE	GAUGE & TRANSMITTER
64	SKID / COMPRESSOR CONNECTIONS		COMPRESSOR DISCHARGE TEMPERATURE	TRANSMITTER
65	NOZZLE	SIZE RATING FACING POSITION	COMPRESSOR DISCHARGE PRESSURE	GAUGE & TRANSMITTER
66			COMPRESSOR OIL TEMPERATURE	TRANSMITTER
67	AIR DISCHARGE	10" 150# RF TOP	COMPRESSOR OIL PRESSURE	GAUGE & TRANSMITTER
68			COMPRESSOR INLET FILTER DIFF.PRESSURE	TRANSMITTER
69			COMPRESSOR OIL LEVEL	SIGHT GLASS
70			MAIN MOTOR TEMPERATURE (BEARINGS AND WINDINGS)	RTD

71 NOTES : 1. FOR MORE INFORMATION ABOUT THE DRIVER REFER TO 3944-VD-0171-DYP-RE-400-LST-0004

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$Q_1$ : Ansaugvolumenstrom (Luft) bei $p_1 = 1,0$ bar und $t_1 = 20^\circ C$ $n_{HR}$ : Hauptrotordrehzahl $n_V$ : Verdichterwellendrehzahl $P$ : Leistungsbedarf an der Kupplung $\Delta t$ : Temperaturerhöhung $\Delta p$ : Druckerhöhung $\pi_i$ : Eingebautes Druckverhältnis	intake volume flow (air) at $p_1 = 1.0$ bar and $t_1 = 20^\circ C$ main rotor speed compressor shaft speed power required at the coupling temperature rise pressure difference built-in compression ratio	débit aspiré (air) pour $p_1 = 1,0$ bar et $t_1 = 20^\circ C$ vitesse du rotor principal vitesse de l'arbre du compresseur puissance absorbée à l'accouplement élévation de température pression différentielle rapport de compression interne
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Leistungsdiagramm - **Überdruck** - für Schraubenverdichterstufe  
 performance diagram - **overpressure** - for screw compressor stage  
 courbes de fonctionnement - **fonctionnement en pression** - pour étage de compresseur à vis

**VML 95**



## Startup Curve



Project
[REDACTED]

Annotations

Client

Order Number
[REDACTED]

		Operating Mode		<input checked="" type="checkbox"/> Idle Mode <span style="float: right; border: 1px solid gray; border-radius: 50%; padding: 2px;">?</span>	
		$\Delta p=1460$ mbar		$p1 = p2=1013$ mbar (a)	
Main rotor speed	$n_{HR}$	6253	1/min	6253	1/min
Motor Speed	$n_{Mot}$	2980	1/min	2980	1/min
Power consumption at coupling	$P_K$	195	kW	40	kW
Torque at Motor Shaft	$M_L$	625	Nm	128	Nm
Moment of Inertia at Motor Shaft	$J_{red} = mr^2$	6,33	kgm <sup>2</sup>		
		Operating Mode			

The nominal rating of the driving machine must be selected at least 10% higher than the power of the compressor shaft.

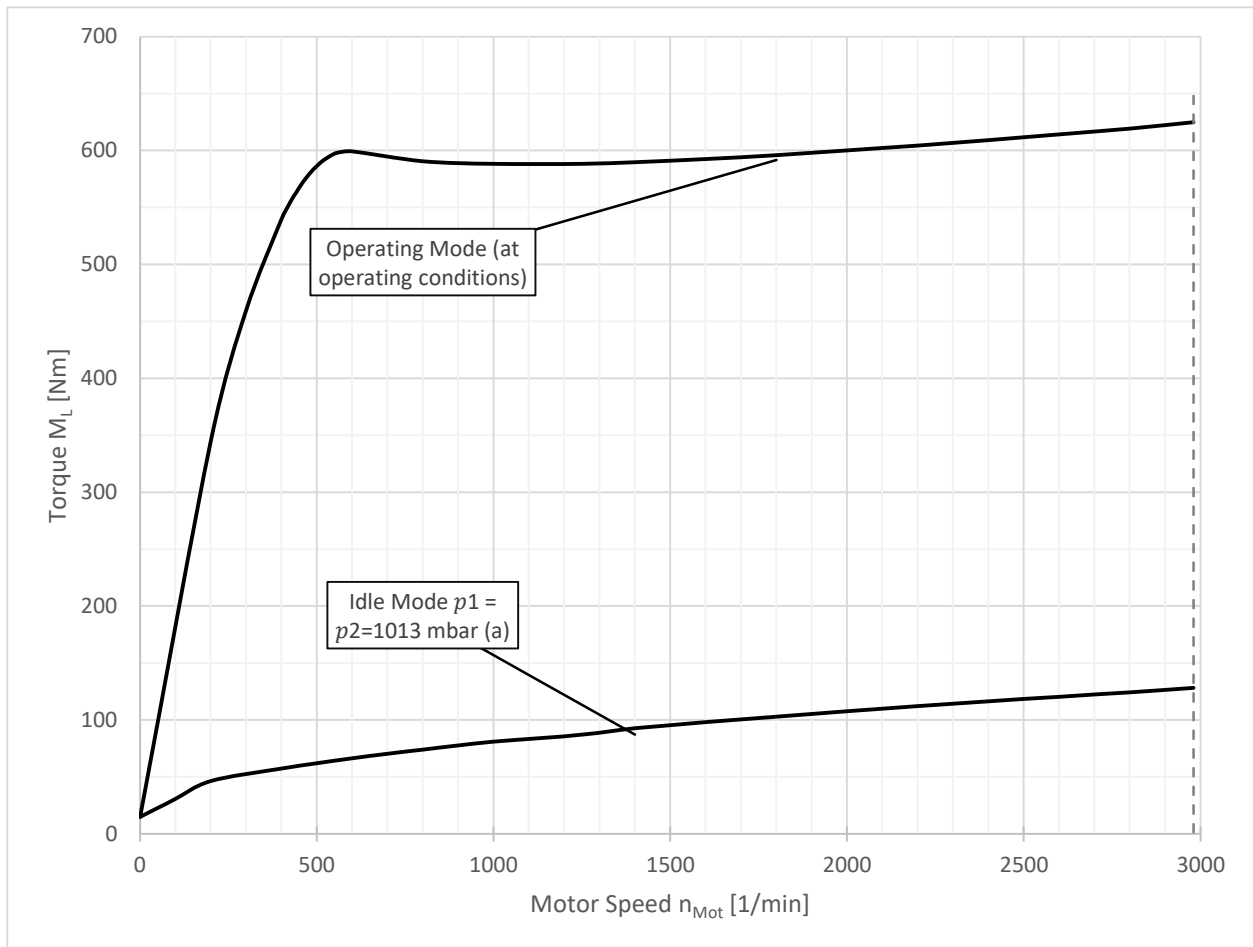
Application Example. All information is subject to change.



## Startup Curve



Project	
[REDACTED]	
Annotations	
Client	Order Number
	[REDACTED]



Startup Curve Screw Compressor VML 95



## Startup Curve



Project	
[REDACTED]	
Annotations	
Client	Order Number
	[REDACTED]

Application Example. All information is subject to change.



## 300 KT polyethylene plant project (ASPC)



DATE: 15-5-2025

DOC NO.: 23383-11B COMPRESSOR DATA SHEET

REV. 01

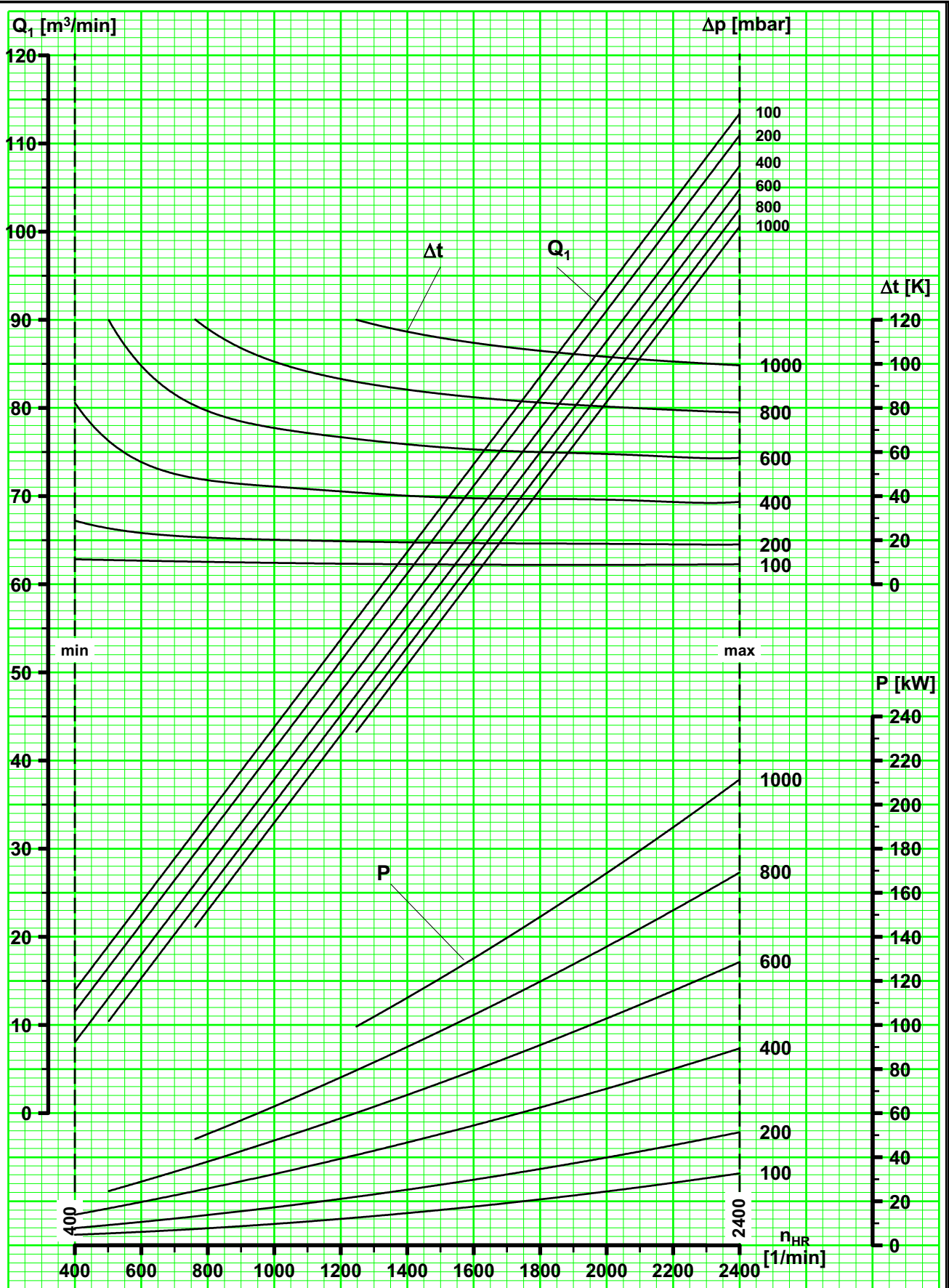
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1	VENDOR (COMPRESSOR)	Airpack Netherlands B.V.	REFERENCE :	23383-COM	
2	TYPE / MODEL	Aerzen GM100S	SERIAL NO. :	T-2025-00808/00809	
3	SERVICE	Roots Blower	OPERATION :	Continuous	
4	QUANTITY	2 (1+1)			
5	INLET CONDITIONS			PACKAGE SCOPE OF SUPPLY	
6	GAS HANDLED	Air	COMPRESSOR TYPE :	Positive Displacement	
7	INLET CONDITIONS			DRIVER TYPE :	
8	PRESSURE	bar(g)	0	COUPLING / GUARD :	
9	TEMPERATURE	°C	5-48	V-Belt	
10	REL. HUMIDITY	%	65-100	RCU AND SAFETY SWITCHES FOR MOTORS :	
11	OPERATING DENSITY	kg/m3	1,1	N/A	
12	MOLECULAR MASS	g/mol	28,97	INTAKE FILTER / SILENCER :	
13	Cp/Cv		1,4	Included	
14	Z		1	INTERCOOLING :	
15	VISCOSITY	PaS	1.97*10 <sup>-5</sup>	N/A	
16	INLET FILTER DIFF. PRESS.	Mbar	10	AFTERCOOLER :	
17	DISCHARGE CONDITIONS			LUBE-OIL COOLER :	
18	PRESSURE	bar(g)	0,97	Air-cooled	
19	FLOW RATE	Nm³/h	4266	LUBE-OIL FILTER :	
20	TEMPERATURE	°C	154	Included	
21	CONNECTION		ANSI 10" 150# RF	AUTO CONDENSATE TRAP :	
22	COMP. PERFORMANCE			N/A	
23	SPEED	rpm	2244	AIR DRYER :	
24	ABSORBED POWER	kW	193	N/A	
25	TYPE		Positive Displacement	NITROGEN GENERATOR :	
26	DESIGN TEMP/PRESS	°C/bar(g)	-10-155 / 2.1	N/A	
27	COMPRESSION RATIO		1,95	BLOW-OFF SILENCER :	
28	VOL. EFFICIENCY	%	TBD	N/A	
29	NOISE @ 1M	dBA	81	CONTROL PANEL :	
30	DRIVER PERFORMANCE			LPS and Junction box	
31	OPERATING SPEED	rpm	1488	VIBRATION MONITOR :	
32	RATING	kW	250	N/A	
33	MANUFACTURER		WEG	INTERCONNECTING PIPEWORK & VALVES :	
34	NO. OF POLES		4	N/A	
35	DRIVE		V-BELT	ACOUSTIC ENCLOSURE :	
36			NOTE 1	Included	
37	SITE CONDITIONS			FOUNDATION BOLTS :	
38	ELEVATION	m	<1000	Included	
39	AMB. TEMPERATURE	°C	5-48	RECEIVER VESSELS :	
40	AMB. PRESSURE	bar(g)	0	N/A	
41	REL. HUMIDITY	%	65-100	LIGHTING :	
42	AREA CLASSIFICATION		Safe area	N/A	
43	NOISE LIMITATION	dBA	85	BASEPLATE :	
44				Included	
45				FIRST OIL FILLING :	
46				Included	
47	CASING			UTILITY SUPPLIES	
48	MATERIAL		EN-GJL-200	ELECTRICAL SUPPLY :	
49	COOLING		AIR-COOLED	V	6000
50	DRIVE DIRECTION		CW	PH	3
51				Hz	50
52				V	400
53				PH	3
54				Hz	50
55				V	230
56				PH	1
57				Hz	50
58				COOLING MEDIUM :	
59				AIR	
60				TEMPERATURE :	
61				AMBIENT	
62				PRESSURE :	
63				AMBIENT	
64				WEIGHTS AND DIMENSIONS	
65				BLOWER	kg
66				DRIVER	kg
67				MISCELLANEOUS	kg
68				TOTAL	kg
69					TBD
70				SIZE	mm
71				L X W X H	TBD
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**Aerzener Maschinenfabrik GmbH**

Reherweg 28 - D-31855 Aerzen - Telefon (0 51 54) 81 0 - info@aerzener.de - www.aerzener.com



$Q_1$  : Ansaugvolumenstrom (Luft)  
bei  $p_1 = 1,0$  bar und  $t_1 = 20^\circ\text{C}$

$n_{HR}$  : Hauptrotordrehzahl  
 $n_V$  : Antriebswellendrehzahl  
 $P$  : Leistungsbedarf an der Kupplung  
 $\Delta t$  : Temperaturerhöhung  
 $\Delta p$  : Druckerhöhung

intake volume flow (air)  
at  $p_1 = 1.0$  bar and  $t_1 = 20^\circ\text{C}$

main rotor speed  
drive shaft speed  
power required at the coupling  
temperature rise  
pressure difference

débit aspiré (air)  
pour  $p_1 = 1,0$  bar et  $t_1 = 20^\circ\text{C}$   
vitesse du rotor principal  
vitesse de l'arbre d'entraînement  
puissance absorbée à l'accouplement  
élévation de température  
pression différentielle

Leistungsdiagramm - Überdruck - für Drehkolbengebläsestufe  
performance diagram - overpressure - for stage of rotary piston blower  
courbes de fonctionnement - fonctionnement en pression - pour étage de surpresseur à pistons rotatifs

**GM 100 S**

$n_V / n_{HR} = 1$

03/2020  
TRD / Evers

4000556899

## Startup Curve



Project
[REDACTED]

Annotations

Client

Order Number
[REDACTED]

		Operating Mode $\Delta p=970$ mbar		<input checked="" type="checkbox"/> Idle Mode $p1 = p2=1013$ mbar (a) <span style="float: right;">?</span>	
Main rotor speed	$n_{HR}$	2244	1/min	2244	1/min
Motor Speed	$n_{Mot}$	1488	1/min	1488	1/min
Power consumption at coupling	$P_K$	193	kW	40	kW
Torque at Motor Shaft	$M_L$	1239	Nm	257	Nm
Moment of Inertia at Motor Shaft	$J_{red} = mr^2$	6,82	kgm <sup>2</sup>		
		Operating Mode		Idle Mode	

The nominal rating of the driving machine must be selected at least 10% higher than the power of the compressor shaft.

Application Example. All information is subject to change.



## Startup Curve

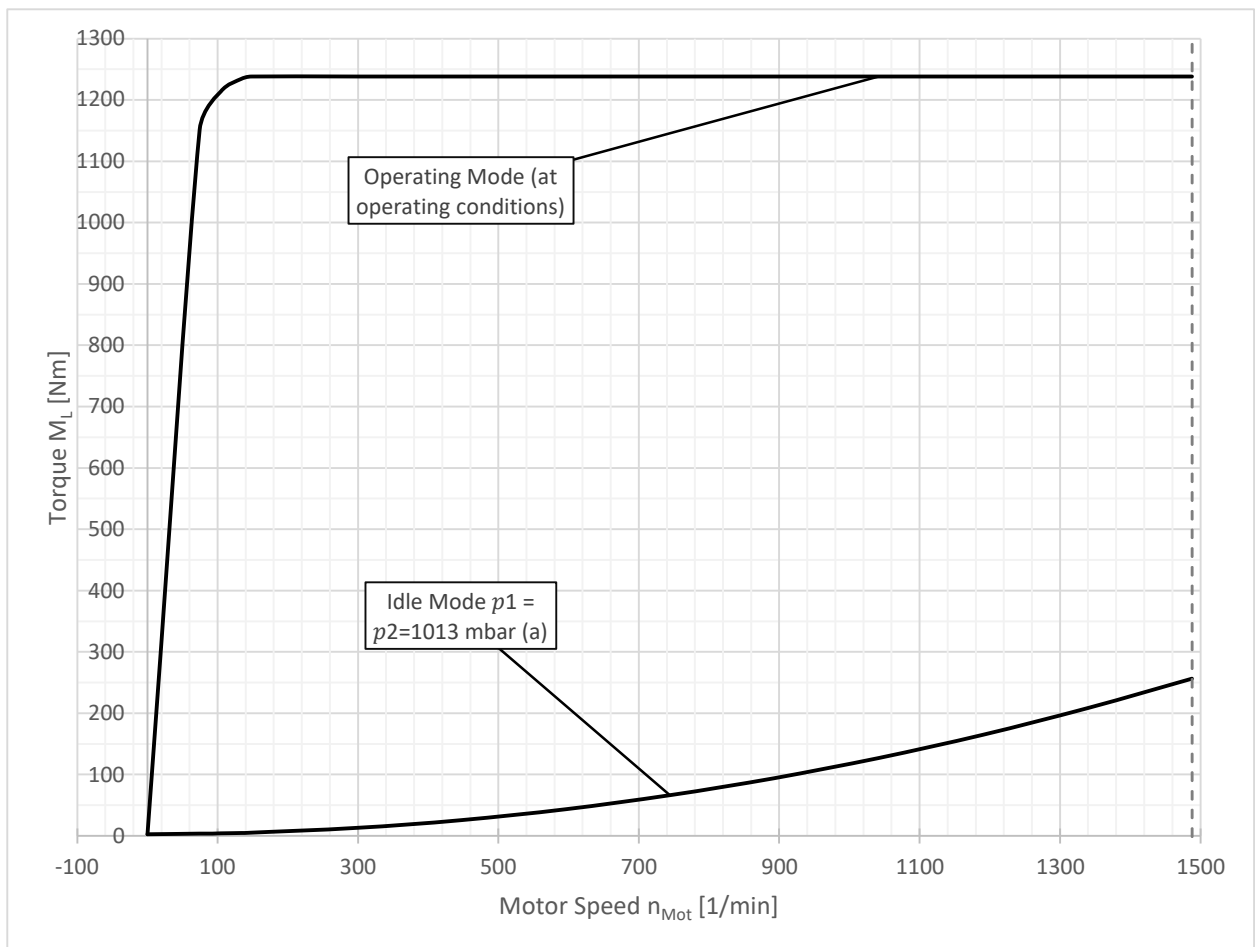


Project
[REDACTED]

Annotations

Client

Order Number
[REDACTED]



Startup Curve Blower GM 100S



## Startup Curve



Project	
[REDACTED]	
Annotations	
Client	Order Number
	[REDACTED]

Application Example. All information is subject to change.



## 300 KT polyethylene plant project (ASPC)



DATE: 15-5-2025

DOC NO.: 23383-11B COMPRESSOR DATA SHEET

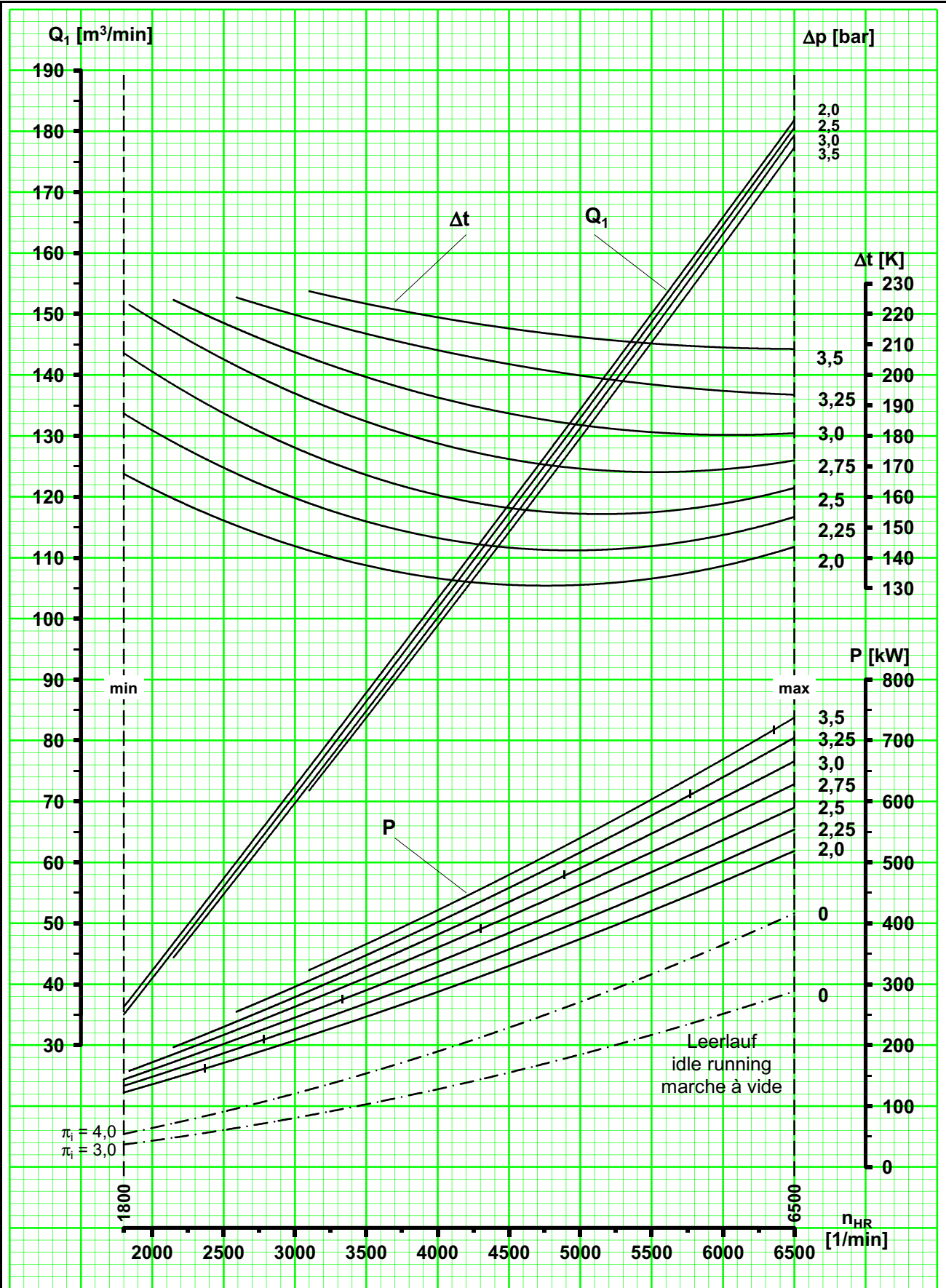
REV. 01

PAGE: 5 of 6

1	VENDOR (COMPRESSOR)	Airpack Netherlands B.V.	REFERENCE :	23383-COM
2	TYPE / MODEL	Aerzen VM140	SERIAL NO. :	T-2025-00810/00811
3	SERVICE	Air compressor	OPERATION :	Continuous
4	QUANTITY	2 (1+1)		
5	INLET CONDITIONS		PACKAGE SCOPE OF SUPPLY	
6	GAS HANDLED	Air	COMPRESSOR TYPE :	Oil free screw
7	INLET CONDITIONS		DRIVER TYPE :	MV motor
8	PRESSURE	bar(g) 0	COUPLING / GUARD :	Flexible / Non-sparking
9	TEMPERATURE	°C 5-48	RCU AND SAFETY SWITCHES FOR MOTORS:	N/A
10	REL. HUMIDITY	% 65-100	INTAKE FILTER / SILENCER:	Included
11	OPERATING DENSITY	kg/m3 1,1	INTERCOOLING:	N/A
12	MOLECULAR MASS	g/mol 28,97	AFTERCOOLER:	N/A
13	Cp/Cv	1,4	LUBE-OIL COOLER:	Air-cooled
14	Z	1	LUBE-OIL FILTER:	Included
15	VISCOSITY	PaS 1.97*10 <sup>-5</sup>		
16	INLET FILTER DIFF. PRESS.	Mbar 10	AUTO CONDENSATE TRAP:	N/A
17	DISCHARGE CONDITIONS		AIR DRYER:	N/A
18	PRESSURE	bar(g) 2,2	NITROGEN GENERATOR:	N/A
19	FLOW RATE	Nm³/h 7339	BLOW-OFF SILENCER:	N/A
20	TEMPERATURE	°C 205	CONTROL PANEL:	LPS and Junction box
21	CONNECTION	ANSI 10" 150# RF	VIBRATION MONITOR:	N/A
22	COMP. PERFORMANCE		INTERCONNECTING PIPEWORK & VALVES :	N/A
23	SPEED	rpm 5860	ACOUSTIC ENCLOSURE:	Included
24	ABSORBED POWER	kW 479	FOUNDATION BOLTS:	Included
25	TYPE	Oil free screw	RECEIVER VESSELS:	N/A
26	DESIGN TEMP/PRESS	°C/bar(g) -10-280 / 5	LIGHTING:	N/A
27	COMPRESSION RATIO	3,17	BASEPLATE:	Included
28	VOL. EFFICIENCY	% TBD	FIRST OIL FILLING	Included
29	NOISE @ 1M	dBA 85		
29	DRIVER PERFORMANCE		UTILITY SUPPLIES	
30	OPERATING SPEED	rpm 2985	ELECTRICAL SUPPLY :	
31	RATING	kW 590	V 6000	PH 3 Hz 50
32	MANUFACTURER	WEG	V 400	PH 3 Hz 50
33	NO. OF POLES	2	V 230	PH 1 Hz 50
34	DRIVE	DIRECT	COOLING MEDIUM :	AIR
35		NOTE 1	TEMPERATURE:	AMBIENT
36			PRESSURE:	AMBIENT
37	SITE CONDITIONS		WEIGHTS AND DIMENSIONS	
38	ELEVATION	m <1000	COMPRESSOR	kg 5298
39	AMB. TEMPERATURE	°C 5-48	DRIVER	kg 4002
40	AMB. PRESSURE	bar(g) 0	MISCELLANEOUS	kg TBD
41	REL. HUMIDITY	% 65-100	TOTAL	kg TBD
42	AREA CLASSIFICATION	Safe area		
43	NOISE LIMITATION	dBA 85	SIZE	mm L X W X H TBD
44				
45				
46	BEARING HOUSING			
47	CASING		TYPE ANTI-FRICTION	
48	MATERIAL	EN-GJL-250	BALL / ROLLER	ROLLER
49	COOLING	AIR-COOLED		
50	DRIVE DIRECTION	CW	LUBRICATION	
51			LUBE SYSTEM :	FORCED, GEAR PUMP
52			LUBE OIL PUMP DRIVE :	kW DRIVEN BY GEARBOX
53	ROTORS		SYSTEM OIL CAPACITY	L TBD
54	NO. OF LOBES MALE	4	LUBE OIL COOLER	AIR-COOLED
55	NO. OF LOBES FEMALE	6	LUBE OIL FILTER	INCLUDED
56	MATERIAL	C45N	THERMOSTATIC VALVE	YES
57				
58	TIMING GEARS		STANDARDS AND SPECIFICATIONS	
59	MATERIAL	16 Mn Cr5	Compressor: Mfr. Std.	
60	TYPE	HELICAL, TEETH HARDENED		
61	SEALING		INSTRUMENTATION	
62	SHAFT SEALING TYPE	LABYRINTH	FUNCTION	TYPE(S)
63	CONVEYING CHAMBER SEAL TYPE	PISTON RING LABYRINTH	COMPRESSOR INLET PRESSURE	GAUGE & TRANSMITTER
64	SKID / COMPRESSOR CONNECTIONS		COMPRESSOR DISCHARGE TEMPERATURE	TRANSMITTER
65	NOZZLE	SIZE RATING FACING POSITION	COMPRESSOR DISCHARGE PRESSURE	GAUGE & TRANSMITTER
66			COMPRESSOR OIL TEMPERATURE	TRANSMITTER
67	AIR DISCHARGE	10" 150# RF TOP	COMPRESSOR OIL PRESSURE	GAUGE & TRANSMITTER
68			COMPRESSOR INLET FILTER DIFF.PRESSURE	TRANSMITTER
69			COMPRESSOR OIL LEVEL	SIGHT GLASS
70			MAIN MOTOR TEMPERATURE (BEARINGS AND WINDINGS)	RTD

71 NOTES : 1. FOR MORE INFORMATION ABOUT THE DRIVER REFER TO 3944-VD-0171-DYP-RE-400-LST-0004

72



$Q_1$ : Ansaugvolumenstrom (Luft) bei $p_1 = 1,0$ bar und $t_1 = 20^\circ\text{C}$ $n_{HR}$ : Hauptrotordrehzahl $n_V$ : Antriebswellendrehzahl $P$ : Leistungsbedarf an der Kupplung $\Delta t$ : Temperaturerhöhung $\Delta p$ : Druckerhöhung $\pi_i$ : Eingebautes Druckverhältnis	intake volume flow (air) at $p_1 = 1.0$ bar and $t_1 = 20^\circ\text{C}$ main rotor speed drive shaft speed power required at the coupling temperature rise pressure difference built-in compression ratio	débit aspiré (air) pour $p_1 = 1,0$ bar et $t_1 = 20^\circ\text{C}$ vitesse du rotor principal vitesse de l'arbre d'entraînement puissance absorbée à l'accouplement élévation de température pression différentielle rapport de compression interne
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Leistungsdiagramm - **Überdruck** - für Schraubenverdichterstufe  
 performance diagram - **overpressure** - for screw compressor stage  
 courbes de fonctionnement - **fonctionnement en pression** - pour étage de compresseur à vis

**VM 140**

$n_V / n_{HR} = i$	06/2015	V2 - 886 SAP 4000123754
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## Startup Curve



Project
[REDACTED]

Annotations

Client

Order Number
[REDACTED]

		Operating Mode $\Delta p=2200$ mbar		<input checked="" type="checkbox"/> Idle Mode $p1 = p2=1013$ mbar (a) <span style="float: right; border: 1px solid gray; border-radius: 50%; padding: 2px;">?</span>	
Main rotor speed	$n_{HR}$	5860	1/min	5860	1/min
Motor Speed	$n_{Mot}$	2985	1/min	2985	1/min
Power consumption at coupling	$P_K$	479	kW	40	kW
Torque at Motor Shaft	$M_L$	1532	Nm	128	Nm
Moment of Inertia at Motor Shaft	$J_{red} = mr^2$	24,33	kgm <sup>2</sup>		
		Operating Mode			

The nominal rating of the driving machine must be selected at least 10% higher than the power of the compressor shaft.

Application Example. All information is subject to change.



## Startup Curve

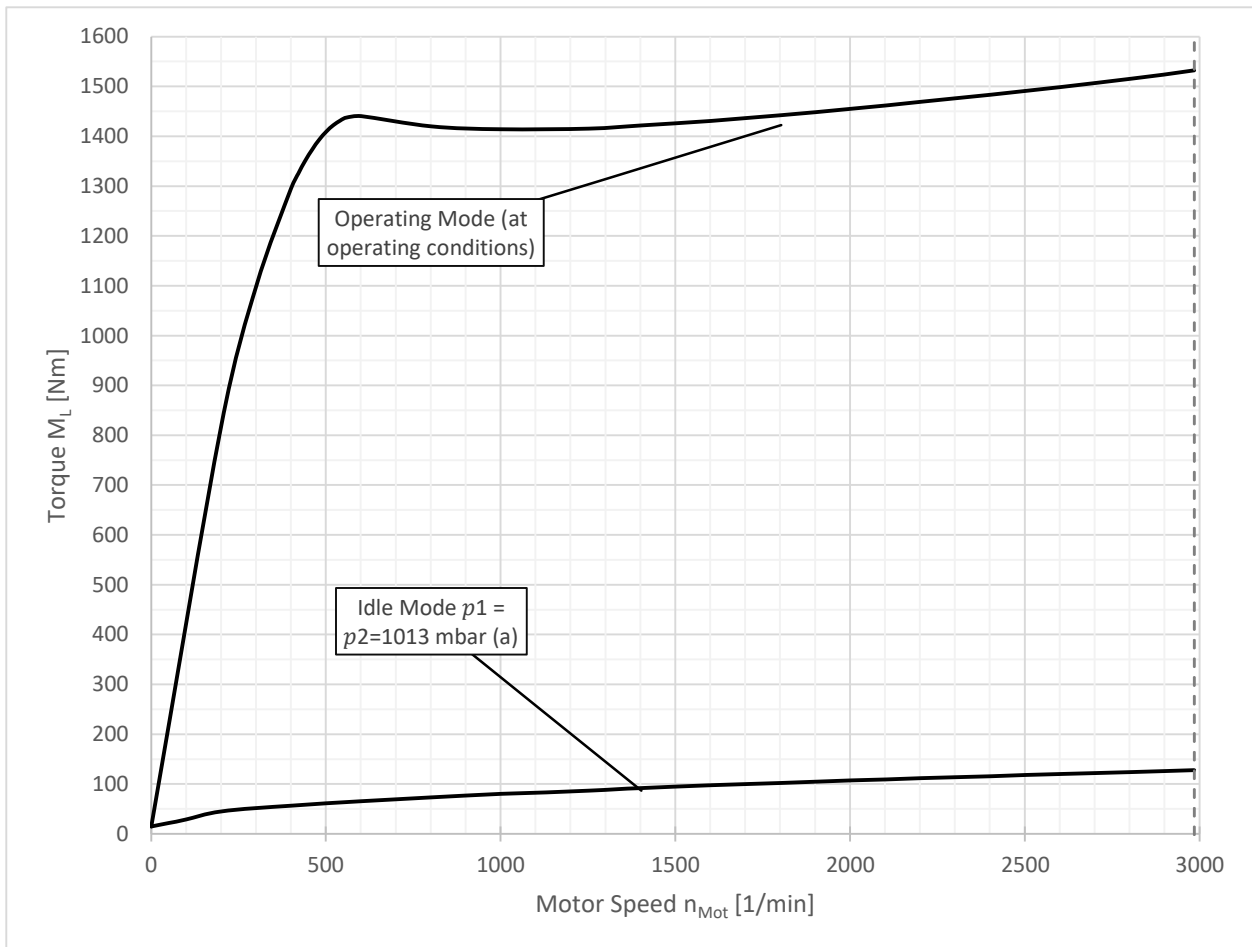


Project
[REDACTED]

Annotations

Client

Order Number
[REDACTED]



Startup Curve Screw Compressor VM 140



## Startup Curve



Project	
[REDACTED]	
Annotations	
Client	Order Number
	[REDACTED]

Application Example. All information is subject to change.



## 300 KT polyethylene plant project (ASPC)



DATE: 15-5-2025

DOC NO.: 23383-11B COMPRESSOR DATA SHEET

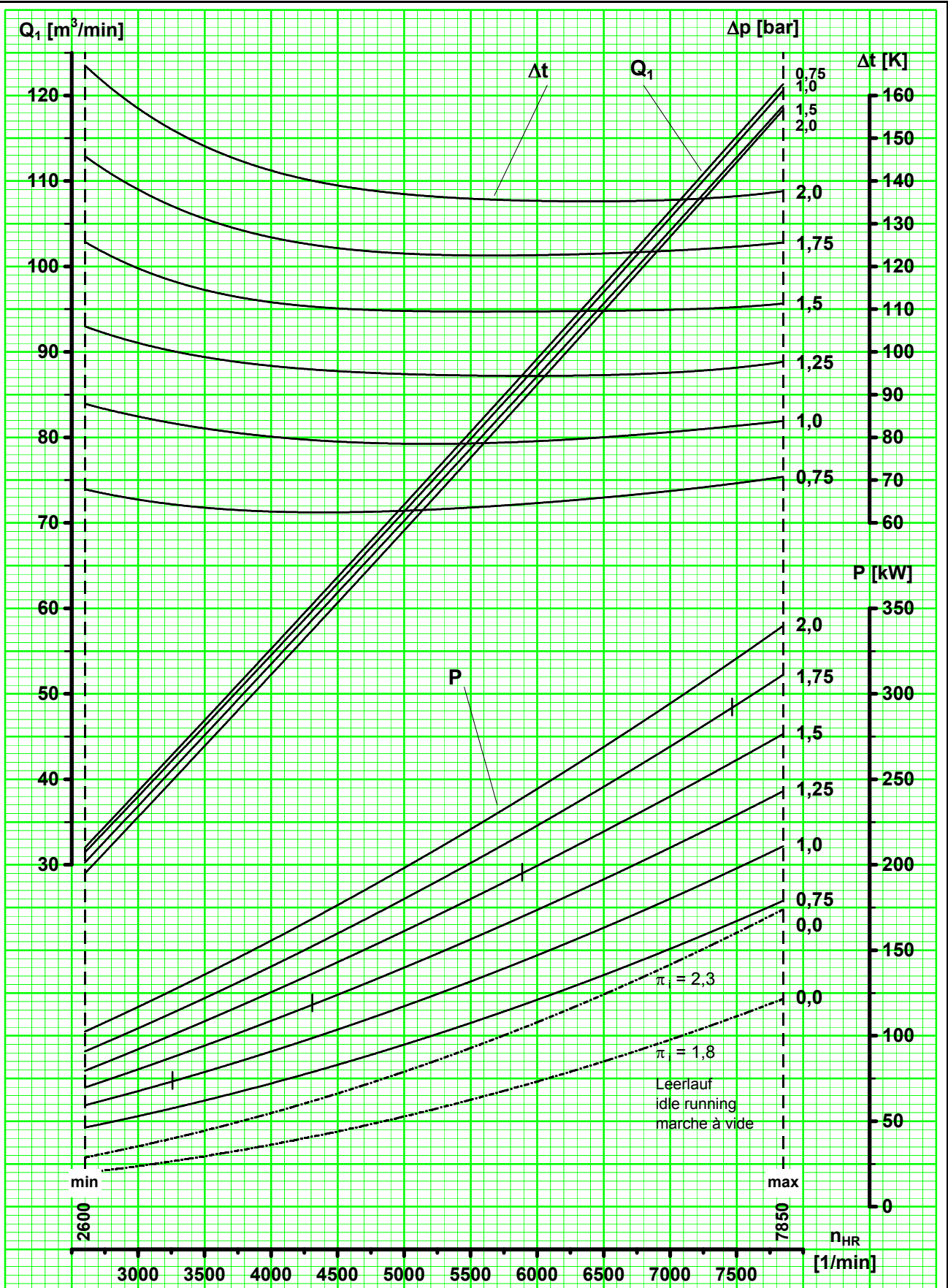
REV. 01

PAGE: 6 of 6

1	VENDOR (COMPRESSOR)	Airpack Netherlands B.V.	REFERENCE :	23383-COM	
2	TYPE / MODEL	Aerzen VML95	SERIAL NO. :	T-2025-00812/00813/00814	
3	SERVICE	Air compressor	OPERATION :	Continuous	
4	QUANTITY	3 (2+1)			
5	INLET CONDITIONS			PACKAGE SCOPE OF SUPPLY	
6	GAS HANDLED	Air	COMPRESSOR TYPE :	Oil free screw	
7	INLET CONDITIONS			DRIVER TYPE :	
8	PRESSURE	bar(g)	0	COUPLING / GUARD :	
9	TEMPERATURE	°C	5-48	RCU AND SAFETY SWITCHES FOR MOTORS :	
10	REL. HUMIDITY	%	65-100	INTAKE FILTER / SILENCER :	
11	OPERATING DENSITY	kg/m <sup>3</sup>	1,1	INTERCOOLING :	
12	MOLECULAR MASS	g/mol	28,97	AFTERCOOLER :	
13	Cp/Cv		1,4	LUBE-OIL COOLER :	
14	Z		1	LUBE-OIL FILTER :	
15	VISCOSITY	PaS	1.97*10 <sup>-5</sup>		
16	INLET FILTER DIFF. PRESS.	Mbar	10	AUTO CONDENSATE TRAP :	
17	DISCHARGE CONDITIONS			AIR DRYER :	
18	PRESSURE	bar(g)	1,41	NITROGEN GENERATOR :	
19	FLOW RATE	Nm <sup>3</sup> /h	4226	BLOW-OFF SILENCER :	
20	TEMPERATURE	°C	164	CONTROL PANEL :	
21	CONNECTION		ANSI 10" 150# RF	VIBRATION MONITOR :	
22	COMP. PERFORMANCE			INTERCONNECTING PIPEWORK & VALVES :	
23	SPEED	rpm	6253	ACOUSTIC ENCLOSURE :	
24	ABSORBED POWER	kW	189	FOUNDATION BOLTS :	
25	TYPE		Oil free screw	RECEIVER VESSELS :	
26	DESIGN TEMP/PRESS	°C/bar(g)	-10-230 / 3.2	LIGHTING :	
27	COMPRESSION RATIO		2,39	BASEPLATE :	
28	VOL. EFFICIENCY	%	TBD	FIRST OIL FILLING :	
29	NOISE @ 1M	dBA	78		
29	DRIVER PERFORMANCE			UTILITY SUPPLIES	
30	OPERATING SPEED	rpm	2980	ELECTRICAL SUPPLY :	
31	RATING	kW	250	V	6000
32	MANUFACTURER		WEG	PH	3
33	NO. OF POLES		2	Hz	50
34	DRIVE		DIRECT	V	400
35			NOTE 1	PH	3
36				Hz	50
37	SITE CONDITIONS			WEIGHTS AND DIMENSIONS	
38	ELEVATION	m	<1000	COOLING MEDIUM :	AIR
39	AMB. TEMPERATURE	°C	5-48	TEMPERATURE :	AMBIENT
40	AMB. PRESSURE	bar(g)	0	PRESSURE :	AMBIENT
41	REL. HUMIDITY	%	65-100		
42	AREA CLASSIFICATION		Safe area	COMPRESSOR	kg
43	NOISE LIMITATION	dBA	85	DRIVER	kg
44				MISCELLANEOUS	kg
45				TOTAL	kg
46				SIZE	mm
47	CASING			BEARING HOUSING	
48	MATERIAL		EN-GJL-250	TYPE	
49	COOLING		AIR-COOLED	BALL / ROLLER	
50	DRIVE DIRECTION		CW	LUBRICATION	
51				LUBE SYSTEM :	FORCED, GEAR PUMP
52				LUBE OIL PUMP DRIVE :	kW
53	ROTORS			SYSTEM OIL CAPACITY	
54	NO. OF LOBES MALE		3	LUBE OIL COOLER	AIR-COOLED
55	NO. OF LOBES FEMALE		4	LUBE OIL FILTER	INCLUDED
56	MATERIAL		C45N	THERMOSTATIC VALVE	YES
57					
58	TIMING GEARS			STANDARDS AND SPECIFICATIONS	
59	MATERIAL		16 Mn Cr5	Compressor: Mfr. Std.	
60	TYPE		HELICAL, TEETH HARDENED		
61	SEALING			INSTRUMENTATION	
62	SHAFT SEALING TYPE		LABYRINTH	FUNCTION	
63	CONVEYING CHAMBER SEAL TYPE		PISTON RING LABYRINTH	TYPE(S)	
64	SKID / COMPRESSOR CONNECTIONS			COMPRESSOR INLET PRESSURE	
65	NOZZLE	SIZE	RATING	COMPRESSOR DISCHARGE TEMPERATURE	
66	SIZE			COMPRESSOR DISCHARGE PRESSURE	
67	RATING			COMPRESSOR OIL TEMPERATURE	
68	FACING			COMPRESSOR OIL PRESSURE	
69	POSITION			COMPRESSOR INLET FILTER DIFF.PRESSURE	
70	AIR DISCHARGE	10"	150#	COMPRESSOR OIL LEVEL	
71				MAIN MOTOR TEMPERATURE (BEARINGS AND WINDINGS)	
72				RTD	

71 NOTES : 1: FOR MORE INFORMATION ABOUT THE DRIVER REFER TO 3944-VD-0171-DYP-RE-400-LST-0004

72



$Q_1$ : Ansaugvolumenstrom (Luft) bei $p_1 = 1,0$ bar und $t_1 = 20^\circ\text{C}$ $n_{HR}$ : Hauptrotordrehzahl $n_V$ : Verdichterwellendrehzahl $P$ : Leistungsbedarf an der Kupplung $\Delta t$ : Temperaturerhöhung $\Delta p$ : Druckerhöhung $\pi_i$ : Eingebautes Druckverhältnis	intake volume flow (air) at $p_1 = 1.0$ bar and $t_1 = 20^\circ\text{C}$ main rotor speed compressor shaft speed power required at the coupling temperature rise pressure difference built-in compression ratio	débit aspiré (air) pour $p_1 = 1,0$ bar et $t_1 = 20^\circ\text{C}$ vitesse du rotor principal vitesse de l'arbre du compresseur puissance absorbée à l'accouplement élévation de température pression différentielle rapport de compression interne
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Leistungsdiagramm - **Überdruck** - für Schraubenverdichterstufe  
 performance diagram - **overpressure** - for screw compressor stage  
 courbes de fonctionnement - **fonctionnement en pression** - pour étage de compresseur à vis

**VML 95**



## Startup Curve



Project
[REDACTED]

Annotations

Client

Order Number
[REDACTED]

		Operating Mode		<input checked="" type="checkbox"/> Idle Mode <span style="border: 1px solid gray; border-radius: 50%; padding: 2px;">?</span>	
		$\Delta p=1410$ mbar		$p1 = p2=1013$ mbar (a)	
Main rotor speed	$n_{HR}$	6253	1/min	6253	1/min
Motor Speed	$n_{Mot}$	2980	1/min	2980	1/min
Power consumption at coupling	$P_K$	189	kW	40	kW
Torque at Motor Shaft	$M_L$	606	Nm	128	Nm
Moment of Inertia at Motor Shaft	$J_{red} = mr^2$	6,33	kgm <sup>2</sup>		
		Operating Mode			

The nominal rating of the driving machine must be selected at least 10% higher than the power of the compressor shaft.

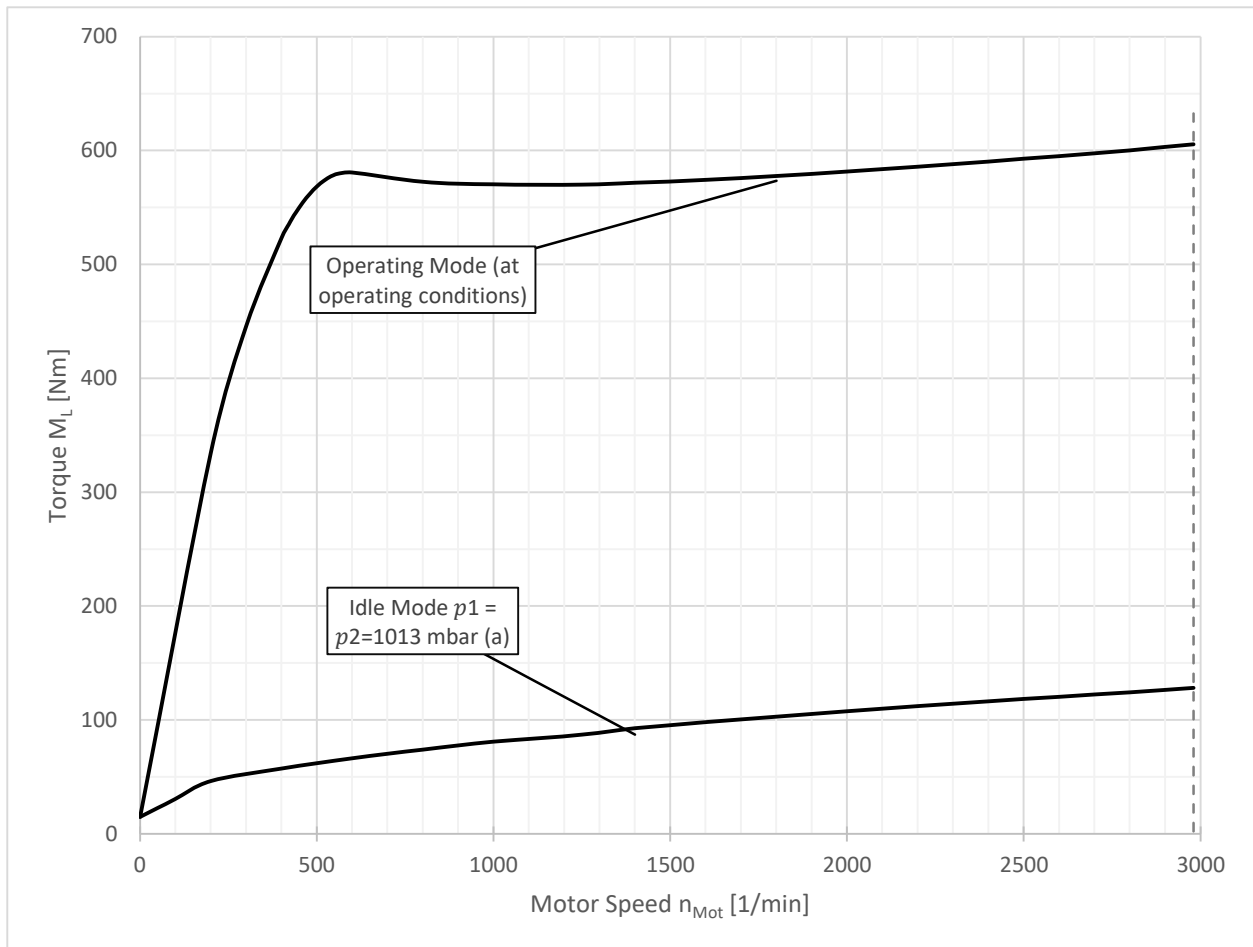
Application Example. All information is subject to change.



## Startup Curve



Project	
[REDACTED]	
Annotations	
Client	Order Number
	[REDACTED]



Startup Curve Screw Compressor VML 95



## Startup Curve



Project	
[REDACTED]	
Annotations	
Client	Order Number
	[REDACTED]

Application Example. All information is subject to change.