

Technical Data

Centrifugal fan VHR-630-280M



customer: Impexron GmbH	ventec No.: P113057
Inquiry: 309878 (Ersatz zu A108218)	Date: 04.12.18
Code:	Pos: 1

Output data fan

<i>Medium</i>		air	
<i>Altitude</i>	H	38	m
<i>Barometric height</i>	P ₀	10084	daPa
<i>Operation point</i>	BP	1	
<i>Standard density</i>	ρ _N	1,293	kg/m ³
<i>Operation density</i>	ρ ₁	1,116	kg/m ³
<i>Flow rate</i>	VB	4.500	Bm ³ /h
<i>Flow rate</i>	V _B	1,25	Bm ³ /s
<i>Inlet temperature</i>	t ₁	42	°C
<i>outlet temperature</i>	t ₂	49	°C
<i>Static pressure at inlet</i>	p _{st1}	0	daPa
<i>Total pressure difference</i>	Δp _t	216	daPa
<i>Static pressure at outlet</i>	p _{st2}	207	daPa
<i>Fan speed</i>	n _{vent}	2.895	min ⁻¹
<i>Fan power</i>	P _w	3,2	kW
<i>Max. working temperature</i>	t _{max}	80	°C
<i>Mass moment of inertia</i>	I	0,3	kgm ²
<i>Starting time</i>	th	4	s

Design M Outlet position GR 360

Impeller, backward-curved blades
welded and dynamically balanced
Balance quality grade G 6.3 acc. DIN ISO 1940, T1
Material: 1.0577 *Blade-∅:* 430 mm

Casing
inside intermittend welded, outside fully welded, inletflange loose, cover plate at suction side, welded to support, support and casing intermittend welded, with inspection door
Material: 1.0038
inlet spigot
DN 355, flange conform to DIN 24154 T2
Outlet spigot:
282 x 357, flange conform to DIN 24193 T3
Shaft sealing
Gap sealing

Material:
Drive arrangement 5, acc. ISO 13349
Impeller on the shaft of the motor

Noise level (Sound pressure, measured in 1m distance)

<i>Noise pressure, fully ducted fan</i>	LPA1	64	dB[A]
<i>Noise pressure, free inlet</i>	LPA5	69	dB[A]
<i>Noise pressure, casing and free inlet</i>	LPA7	68	dB[A]
<i>measuring area</i>	Ls	14	dB

The noise data are valid at free field with following noise controll: casing without noise controll, suction pipe with silencer, pressure pipe without noise controll,

Motor

<i>Brand</i>	our own option	<i>Frame size</i> 112M-2	
<i>IE code</i>	IE3	<i>Rated data</i>	<i>Operating Data</i>
<i>Rated output power</i>	P _{Mot}	4	4
<i>Full-load speed</i>	n _{Mot}	2895	2895
<i>Voltage</i>	U	400	400
<i>Protection class</i>		IP 55	
<i>Frequency</i>	f	50	50
<i>Type of construction</i>		IM B3	
<i>Thermal detector</i>		3 x PTC	
<i>Coolant temperature</i>		40	40
suitable for FC ,			

Explanations

Output data fan
technical delivery requirements and tolerances acc. ISO 13348

Noise level
Noise data acc. DIN EN ISO 3746
noises caused by motors, bearings, V-belt-drives, pipings and structure-borne sound are not taken into account

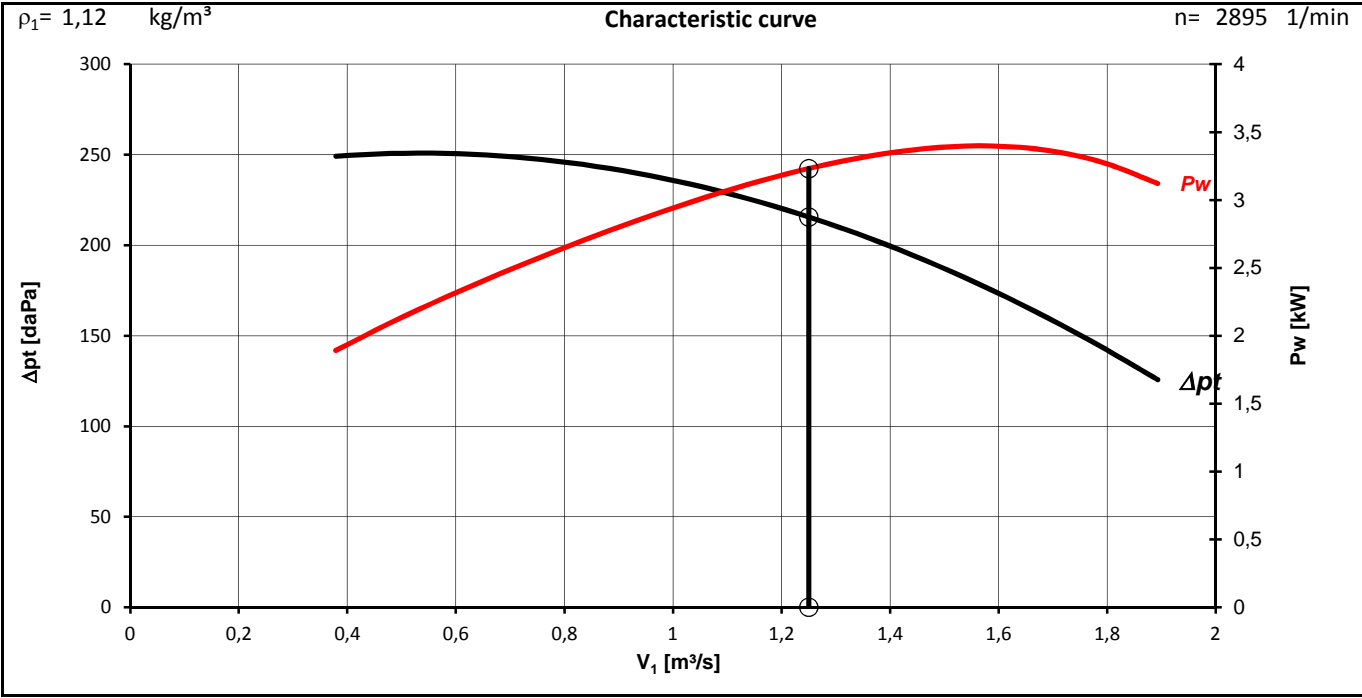
VFD operation
Possible resonance frequencies must be blocked on the VFD. Frequent changes in speed can reduce the service life of the impeller. Please contact us.

Centrifugal fan characteristic curve

Centrifugal fan
VHR-630-280M

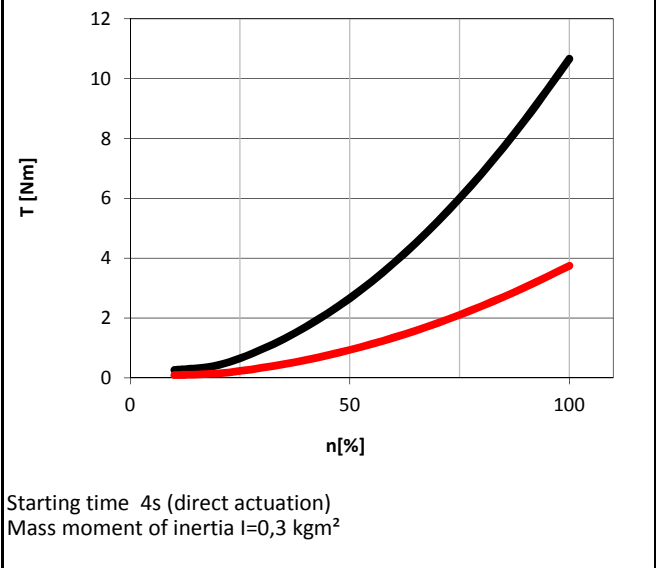


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		Oktav mid frequencies in Hz									Σ	ρ ₁ = 1,12 kg/m ³ n = 2895 1/min
		63	125	250	500	1K	2K	4K	8K			
Noise power, suction pipe inside	L _{W13} dB(A)	72	82	88	93	92	88	83	75	97	The noise data are valid at free field with following noise controll: casing without noise controll, suction pipe with silencer, pressure pipe without noise controll,	
Noise power, inlet	L _{W5} dB(A)	59	73	77	74	66	65	66	64	81		
Noise power, pressure pipe inside	L _{W14} dB(A)	73	83	89	94	92	89	84	76	98		
Noise power, outlet	L _{W6} dB(A)	56	71	82	92	92	89	84	76	96		
Noise pressure, fully ducted fan	L _{p1} dB(A)	49	55	57	59	55	51	45	38	64		
Noise pressure, casing and free inlet	L _{p7} dB(A)	50	60	64	63	57	54	53	50	68		
Noise pressure, casing and free outlet	L _{p8} dB(A)	50	59	68	78	78	75	70	62	82		

Starting up curve



Technical Data

Centrifugal fan VHR-560-280M



customer: Impexron GmbH	ventec No.: P113057
Inquiry: 309878 (Ersatz zu A108218)	Date: 04.12.18
Code:	Pos: 2

Output data fan

<i>Medium</i>		air	
<i>Altitude</i>	H	38	m
<i>Barometric height</i>	P ₀	10084	daPa
<i>Operation point</i>	BP	1	
<i>Standard density</i>	ρ _N	1,293	kg/m ³
<i>Operation density</i>	ρ ₁	1,116	kg/m ³
<i>Flow rate</i>	VB	6.000	Bm ³ /h
<i>Flow rate</i>	V _B	1,67	Bm ³ /s
<i>Inlet temperature</i>	t ₁	42	°C
<i>outlet temperature</i>	t ₂	50	°C
<i>Static pressure at inlet</i>	p _{st1}	0	daPa
<i>Total pressure difference</i>	Δp _t	290	daPa
<i>Static pressure at outlet</i>	p _{st2}	270	daPa
<i>Fan speed</i>	n _{vent}	2.950	min ⁻¹
<i>Fan power</i>	P _w	5,9	kW
<i>Max. working temperature</i>	t _{max}	80	°C
<i>Mass moment of inertia</i>	I	0,5	kgm ²
<i>Starting time</i>	th	3	s

For these performance data, VFD operation is required

Noise level

(Sound pressure, measured in 1m distance)

<i>Noise pressure, fully ducted fan</i>	LPA1	68	dB[A]
<i>Noise pressure, free inlet</i>	LPA5	72	dB[A]
<i>Noise pressure, casing and free inlet</i>	LPA7	72	dB[A]
<i>measuring area</i>	Ls	14	dB

The noise data are valid at free field with following noise controll: casing without noise controll, suction pipe with silencer, pressure pipe without noise controll,

Motor

<i>Brand</i>	our own option	<i>Frame size</i> 132S-2	
<i>IE code</i>	IE3	<i>Rated data</i>	<i>Operating Data</i>
<i>Rated output power</i>	P _{Mot}	7,5	7,5 kW
<i>Full-load speed</i>	n _{Mot}	2910	2910 min ⁻¹
<i>Voltage</i>	U	400	400 V
<i>Protection class</i>		IP 55	
<i>Frequency</i>	f	50	50 Hz
<i>Type of construction</i>		IM B3	
<i>Thermal detector</i>		3 x PTC	
<i>Coolant temperature</i>		40	40 °C

suitable for FC ,

Design

M

Outlet postion GR 360

Impeller, backward-curved blades

welded and dynamically balanced

Balance quality grade G 6.3 acc. DIN ISO 1940, T1

Material: 1.0577 *Blade-∅:* 486 mm

Casing

inside intermittend welded, outside fully welded, inletflange loose, cover plate at suction side, welded to support, support and casing intermittend welded, with inspection door

Material: 1.0038

inlet spigot

DN 355, flange conform to DIN 24154 T2

Outlet spigot:

282 x 357, flange conform to DIN 24193 T3

Shaft sealing

Gap sealing

Material:

Drive arrangement 5, acc. ISO 13349

Impeller on the shaft of the motor

Explanations

Output data fan

technical delivery requirements and tolerances acc. ISO 13348

Noise level

Noise data acc. DIN EN ISO 3746

noises caused by motors, bearings, V-belt-drives, pipings and structure-borne sound are not taken into account

VFD operation

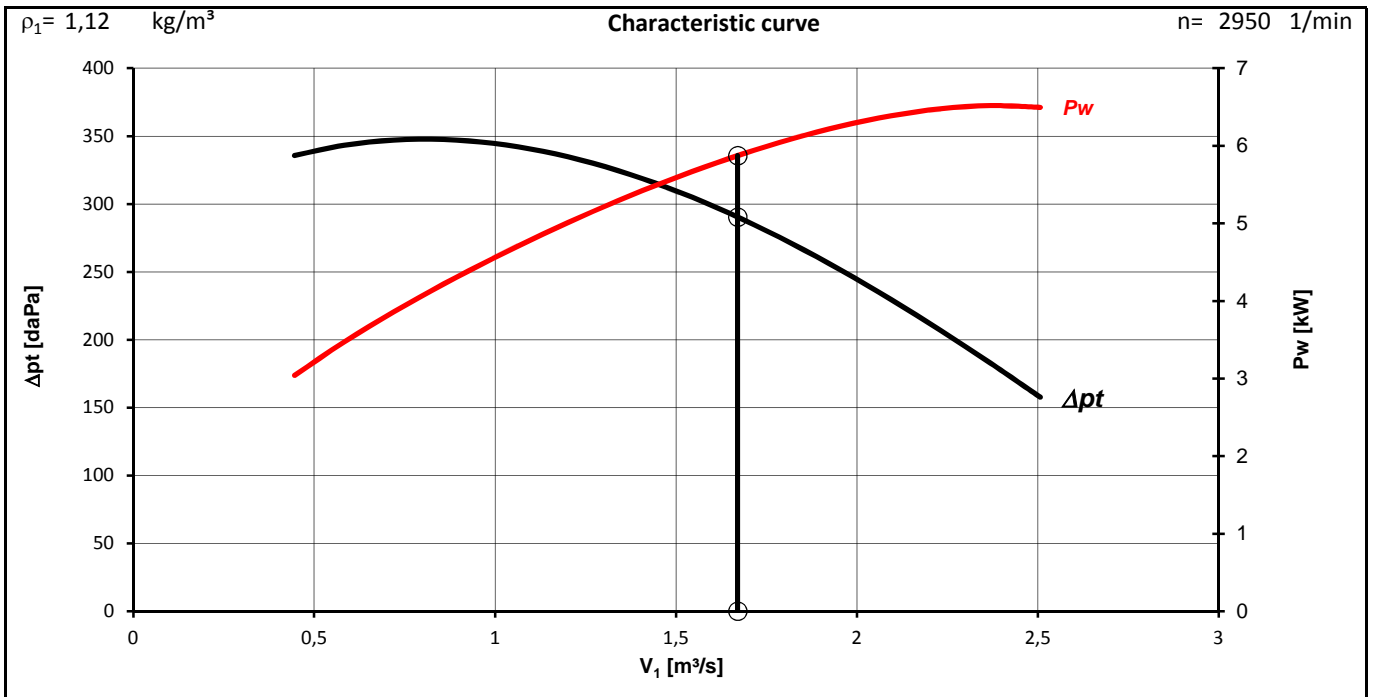
Possible resonance frequencies must be blocked on the VFD. Frequent changes in speed can reduce the service life of the impeller. Please contact us.

characteristic curve

Centrifugal fan
VHR-560-280M

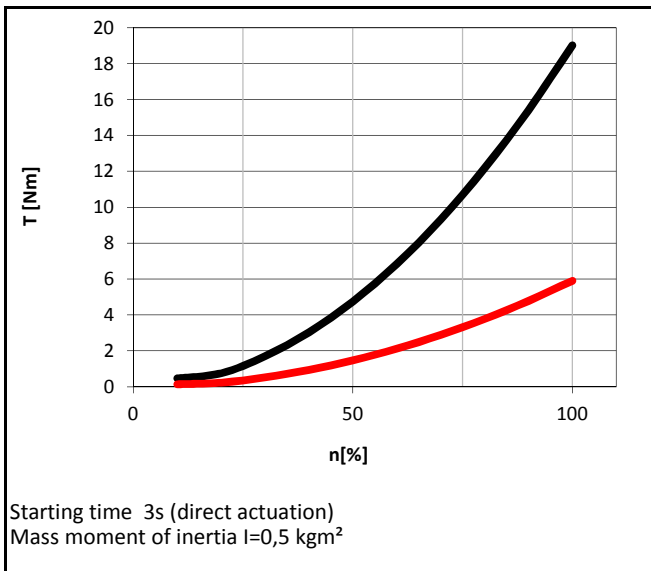


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Code:	Pos: 2



		Oktav mid frequencies in Hz									Σ	$\rho_1 = 1,12 \text{ kg/m}^3$ $n = 2950 \text{ 1/min}$
		63	125	250	500	1K	2K	4K	8K			
Noise power, suction pipe inside	$L_{W13} \text{ dB(A)}$	77	86	92	97	96	92	87	80	101	The noise data are valid at free field with following noise controll: casing without noise controll, suction pipe with silencer, pressure pipe without noise controll,	
Noise power, inlet	$L_{W5} \text{ dB(A)}$	64	77	81	77	70	68	69	67	84		
Noise power, pressure pipe inside	$L_{W14} \text{ dB(A)}$	78	88	93	99	97	94	89	81	103		
Noise power, outlet	$L_{W6} \text{ dB(A)}$	60	76	87	96	96	94	89	81	101		
Noise pressure, fully ducted fan	$L_{p1} \text{ dB(A)}$	54	60	62	64	60	56	50	43	68		
Noise pressure, casing and free inlet	$L_{p7} \text{ dB(A)}$	55	65	68	67	61	58	56	54	72		
Noise pressure, casing and free outlet	$L_{p8} \text{ dB(A)}$	54	64	73	82	82	80	75	67	87		

Starting up curve



Technical Data

Centrifugal fan VHR-450-200M



customer: Impexron GmbH	ventec No.: P113057
Inquiry: 309878 (Ersatz zu A108218)	Date: 04.12.18
Code:	Pos: 3

Output data fan

<i>Medium</i>		#NV	
<i>Altitude</i>	H	38	m
<i>Barometric height</i>	P ₀	10084	daPa
<i>Operation point</i>	BP	1	
<i>Standard density</i>	ρ _N		kg/m ³
<i>Operation density</i>	ρ ₁		kg/m ³
<i>Flow rate</i>	V _B		Bm ³ /s
<i>Inlet temperature</i>	t ₁		°C
<i>outlet temperature</i>	t ₂		°C
<i>Static pressure at inlet</i>	p _{st1}	0	daPa
<i>Total pressure difference</i>	Δp _t		daPa
<i>Static pressure at outlet</i>	p _{st2}		daPa
<i>Fan speed</i>	n _{vent}		min ⁻¹
<i>Fan power</i>	P _w		kW
<i>Max. working temperature</i>	t _{max}	80	°C
<i>Mass moment of inertia</i>	I	0,3	kgm ²
<i>Starting time</i>	th	3	s

Design M Outlet position GR 90

Impeller, backward-curved blades
welded and dynamically balanced
Balance quality grade G 2.5 acc. DIN ISO 1940, T1
<i>Material:</i> 1.0577 <i>Blade-Ø:</i> 439 mm
Casing
#NV
<i>Material:</i> 1.0038
<i>inlet spigot</i>
DN 250, flange conform to DIN 24154 T2
<i>Outlet spigot:</i>
202 x 252, flange conform to DIN 24193 T3
<i>Shaft sealing</i>
Gap sealing
 <i>Material:</i>
Drive arrangement 5, acc. ISO 13349
Impeller on the shaft of the motor

Noise level (Sound pressure, measured in 1m distance)

<i>Noise pressure, fully ducted fan</i>	LPA1		dB[A]
<i>Noise pressure, free inlet</i>	LPA5		dB[A]
<i>Noise pressure, casing and free inlet</i>	LPA7		dB[A]
<i>measuring area</i>	Ls	14	dB

The noise data are valid at free field with following noise controll: casing without noise controll, suction pipe with silencer, pressure pipe without noise controll,

Motor

<i>Brand</i>	our own option	<i>Frame size</i> 112M-2	
<i>IE code</i>	IE3	<i>Rated data</i>	<i>Operating Data</i>
<i>Rated output power</i>	P _{Mot}	4	4 kW
<i>Full-load speed</i>	n _{Mot}	2895	2895 min ⁻¹
<i>Voltage</i>	U	400	400 V
<i>Protection class</i>		IP 55	
<i>Frequency</i>	f	50	50 Hz
<i>Type of construction</i>		IM B5	
<i>Thermal detector</i>		3 x PTC	
<i>Coolant temperature</i>		40	40 °C

suitable for FC ,

Explanations

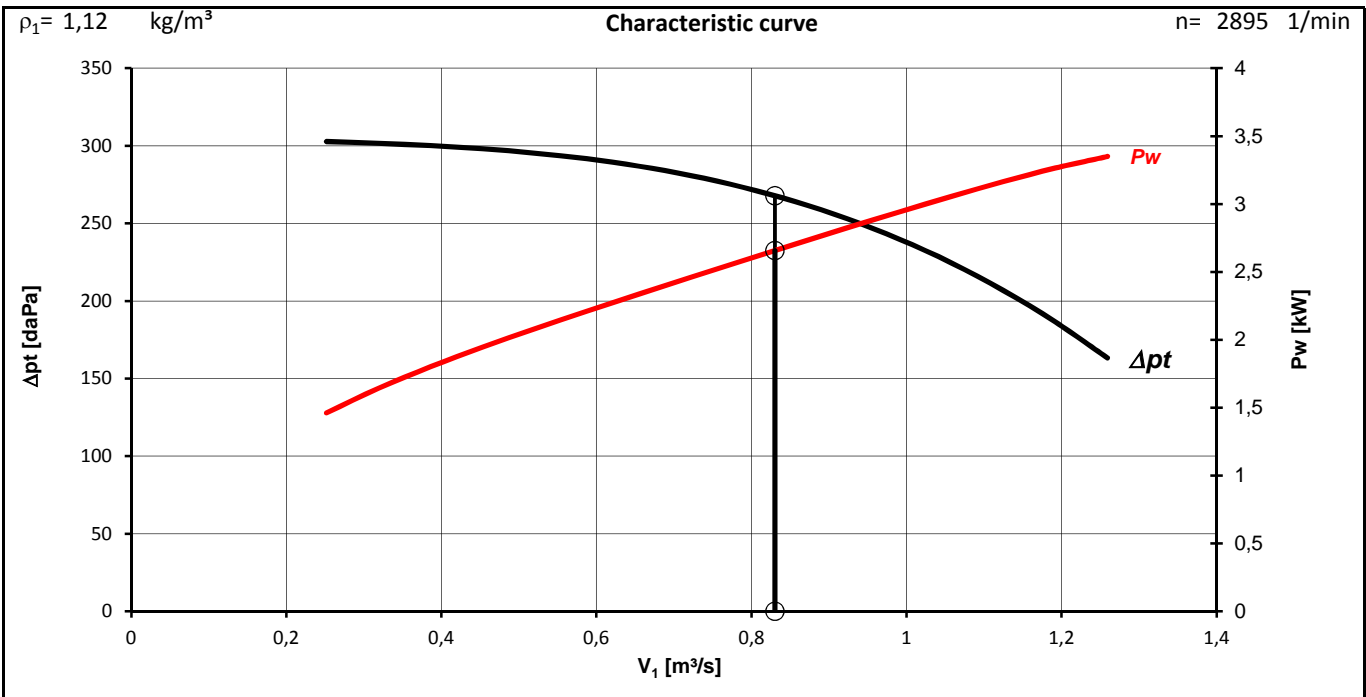
Output data fan
<i>technical delivery requirements and tolerances acc. ISO 13348</i>
Noise level
<i>Noise data acc. DIN EN ISO 3746</i>
<i>noises caused by motors, bearings, V-belt-drives, pipings and structure-borne sound are not taken into account</i>
VFD operation
<i>Possible resonance frequencies must be blocked on the VFD. Frequent changes in speed can reduce the service life of the impeller. Please contact us.</i>

characteristic curve

Centrifugal fan
VHR-450-200M



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Code:	Pos: 3



		Oktav mid frequencies in Hz									Σ	$\rho_1 = 1,12 \text{ kg/m}^3$ $n = 2895 \text{ 1/min}$
		63	125	250	500	1K	2K	4K	8K			
Noise power, suction pipe inside	L_{W13} dB(A)	73	82	88	93	92	88	83	75	97	The noise data are valid at free field with following noise controll: casing without noise controll, suction pipe with silencer, pressure pipe without noise controll,	
Noise power, inlet	L_{W5} dB(A)	57	71	77	73	66	64	65	63	80		
Noise power, pressure pipe inside	L_{W14} dB(A)	75	85	91	96	94	91	86	78	100		
Noise power, outlet	L_{W6} dB(A)	55	70	81	92	93	90	86	78	97		
Noise pressure, fully ducted fan	L_{p1} dB(A)	53	59	61	64	59	55	51	39	68		
Noise pressure, casing and free inlet	L_{p7} dB(A)	54	61	65	65	60	56	54	50	70		
Noise pressure, casing and free outlet	L_{p8} dB(A)	53	61	68	78	79	76	72	64	83		

Starting up curve

