

fan type MXE012-022418-00	FK serial no. 1	comm. no. Impexron, Anfrage Nr
your order no.	type of control valve (valve)	codeword Impexron, Anfrage Nr. 234779

fan type MXE012-022418-00	OP 1*	units acc. to customer's specification
type of connection	ducted	
operating condition	discharge operation	
handled gas	clean air	
designated volume flow	211 m ³ /min	11800 Nm ³ /h
designated static pressure increase	125 daPa	125 daPa
humidity	0 g/kg	0 g/kg
gas constant	R 287 J/(kg K)	287 J/(kg K)
coefficient of adiabatic compressibility Kappa	K 1,4 -	1,4 -
inlet temperature	t1 20 °C	20 °C
discharge temperature	t2 21 °C	21 °C
altitude	h 0 m	0 m
abs. atmos. pressure	P0 101,33 kPa	101,33 kPa
athmos. density	ρ0 1,205 kg/m ³	1,205 kg/m ³
density at inlet	ρ1 1,205 kg/m ³	1,205 kg/m ³
volume flow	V1 211 m ³ /min	12664 m ³ /h
total pressure increase	Δpt 132 daPa	132 daPa
dynamic pressure	pd2 12 daPa	12 daPa
dynamic pressure	pd1 12 daPa	12 daPa
static pressure increase	Δpst 133 daPa	133 daPa
shaft power	PW 5,8 kW	5,8 kW
impeller speed	nI 1740 rpm	1740 rpm
rec. motor power	PM 6,3 kW	6,3 kW
motor synchronous speed	nM 1760 rpm	1760 rpm
tip speed	u2 57 m/s	57 m/s
C-weighted meas.surf.sound pressure level at 1m distance with		
both sides ducted	LpCm 72 dB(C)	
free inlet	LpC5 90 dB(C)	
free discharge	LpC6 90 dB(C)	
A-weighted total sound power level		
inlet	LwAi1 93 dB(A)	
discharge	LwAi2 93 dB(A)	
correct.value A-weight.dB(A)	dLkA 9 dB(A)	
A-weighted meas.surf.sound pressure level at 1m distance with		
both sides ducted	LpAm 64 dB(A)	
free inlet	LpA5 83 dB(A)	
free discharge	LpA6 83 dB(A)	
superficial dimension	Ls-k 16 dB	
characteristic curve type	Δp/Pw 7/7 -	
efficiency at total pressure increase	ηtot 80,1 %	
efficiency at static pressure increase	ηstat 80,5 %	

* BP 1 : Bp1

DN1 SFV1.0 EV1.0 RE1.0 AKZ1.0 AKZ2.0 AKZ1.2

2.2.1.17

Tolerances dependent on class of accuracy in accordance to DIN 24166 in range of efficiency $\eta \geq 0,9 \times \eta_{max}$. Coordination for class of accuracy (G.KI.) see product specification.
At any rate, please pay attention to the techn. indications made in our Handbook of fans.
pressure units : 1 daPa = 10 Pa = 10 N/m² = 0,1 mbar = 1,0197 mmWC

class of accuracy	1	2	3
Δpt und V1 [%]	+/- 2,5	+/- 5	+/- 10
PW [%]	+ 3	+ 8	+ 16
Lw und Lp [dB]	+ 3	+ 4	+ 6

fan type MXE012-022418-00	FK serial no. 1	comm. no. Impexron, Anfrage Nr
your order no.	type of control valve (valve)	codeword Impexron, Anfrage Nr. 234779

fan type MXE012-022418-00	OP 2*	units acc. to customer's specification
type of connection	ducted	
operating condition	discharge operation	
handled gas	clean air	
designated volume flow	195 m ³ /min	11800 Nm ³ /h
designated static pressure increase	125 daPa	125 daPa
humidity	0 g/kg	0 g/kg
gas constant	R 287 J/(kg K)	287 J/(kg K)
coefficient of adiabatic compressibility Kappa	K 1,4 -	1,4 -
inlet temperature	t1 -2 °C	-2 °C
discharge temperature	t2 -1 °C	-1 °C
altitude	h 0 m	0 m
abs. atmos. pressure	P0 101,33 kPa	101,33 kPa
athmos. density	ρ0 1,303 kg/m ³	1,303 kg/m ³
density at inlet	ρ1 1,303 kg/m ³	1,303 kg/m ³
volume flow	V1 195 m ³ /min	11713 m ³ /h
total pressure increase	Δpt 152 daPa	152 daPa
dynamic pressure	pd2 11 daPa	11 daPa
dynamic pressure	pd1 11 daPa	11 daPa
static pressure increase	Δpst 152 daPa	152 daPa
shaft power	PW 6,1 kW	6,1 kW
impeller speed	nl 1740 rpm	1740 rpm
rec. motor power	PM kW	kW
motor synchronous speed	nM rpm	rpm
tip speed	u2 57 m/s	57 m/s
C-weighted meas.surf.sound pressure level at 1m distance with		
both sides ducted	LpCm 73 dB(C)	
free inlet	LpC5 91 dB(C)	
free discharge	LpC6 91 dB(C)	
A-weighted total sound power level		
inlet	LwAi1 94 dB(A)	
discharge	LwAi2 94 dB(A)	
correct.value A-weight.dB(A)	dLkA 9 dB(A)	
A-weighted meas.surf.sound pressure level at 1m distance with		
both sides ducted	LpAm 65 dB(A)	
free inlet	LpA5 84 dB(A)	
free discharge	LpA6 84 dB(A)	
superficial dimension	Ls-k 16 dB	
characteristic curve type	Δp/Pw 7/7 -	
efficiency at total pressure increase	ηtot 80,3 %	
efficiency at static pressure increase	ηstat 80,6 %	

* BP 2 : Bp2

DN1 SFV1.0 EV1.0 RE1.0 AKZ1.0 AKZ2.0 AKZ1.2

2.2.1.17

Tolerances dependent on class of accuracy in accordance to DIN 24166 in range of efficiency
 $\eta \geq 0,9 \times \eta_{max}$. Coordination for class of accuracy (G.Kl.) see product specification.
 At any rate, please pay attention to the techn. indications made in our Handbook of fans.
 pressure units : 1 daPa = 10 Pa = 10 N/m² = 0,1 mbar = 1,0197 mmWC

class of accuracy	1	2	3
Δpt und V1 [%]	+/- 2,5	+/- 5	+/- 10
PW [%]	+ 3	+ 8	+ 16
Lw und Lp [dB]	+ 3	+ 4	+ 6

fan type MXE012-022418-00	FK serial no. 1	comm. no. Impexron, Anfrage Nr
your order no.	type of control valve (valve)	codeword Impexron, Anfrage Nr. 234779

fan type MXE012-022418-00	OP 3*	units acc. to customer's specification
type of connection	ducted	
operating condition	discharge operation	
handled gas	clean air	
designated volume flow	240 m ³ /min	11800 Nm ³ /h
designated static pressure increase	125 daPa	125 daPa
humidity	0 g/kg	0 g/kg
gas constant	R 287 J/(kg K)	287 J/(kg K)
coefficient of adiabatic compressibility Kappa	K 1,4 -	1,4 -
inlet temperature	t1 50 °C	50 °C
discharge temperature	t2 51 °C	51 °C
altitude	h 245 m	245 m
abs. atmos. pressure	P0 98,41 kPa	98,41 kPa
athmos. density	ρ0 1,062 kg/m ³	1,062 kg/m ³
density at inlet	ρ1 1,062 kg/m ³	1,062 kg/m ³
volume flow	V1 240 m ³ /min	14375 m ³ /h
total pressure increase	Δpt 101 daPa	101 daPa
dynamic pressure	pd2 13 daPa	13 daPa
dynamic pressure	pd1 14 daPa	14 daPa
static pressure increase	Δpst 102 daPa	102 daPa
shaft power	PW 5,3 kW	5,3 kW
impeller speed	nI 1740 rpm	1740 rpm
rec. motor power	PM kW	kW
motor synchronous speed	nM rpm	rpm
tip speed	u2 57 m/s	57 m/s
C-weighted meas.surf.sound pressure level at 1m distance with		
both sides ducted	LpCm 71 dB(C)	
free inlet	LpC5 89 dB(C)	
free discharge	LpC6 89 dB(C)	
A-weighted total sound power level		
inlet	LwAi1 92 dB(A)	
discharge	LwAi2 92 dB(A)	
correct.value A-weight.dB(A)	dLkA 9 dB(A)	
A-weighted meas.surf.sound pressure level at 1m distance with		
both sides ducted	LpAm 63 dB(A)	
free inlet	LpA5 82 dB(A)	
free discharge	LpA6 82 dB(A)	
superficial dimension	Ls-k 16 dB	
characteristic curve type	Δp/Pw 7/7 -	
efficiency at total pressure increase	ηtot 76,6 %	
efficiency at static pressure increase	ηstat 77,1 %	

* BP 3 : Bp3

DN1 SFV1.0 EV1.0 RE1.0 AKZ1.0 AKZ2.0 AKZ1.2

2.2.1.17

Tolerances dependent on class of accuracy in accordance to DIN 24166 in range of efficiency
 $\eta \geq 0,9 \times \eta_{max}$. Coordination for class of accuracy (G.KI.) see product specification.
 At any rate, please pay attention to the techn. indications made in our Handbook of fans.
 pressure units : 1 daPa = 10 Pa = 10 N/m² = 0,1 mbar = 1,0197 mmWC

class of accuracy	1	2	3
Δpt und V1 [%]	+/- 2,5	+/- 5	+/- 10
PW [%]	+ 3	+ 8	+ 16
Lw und Lp [dB]	+ 3	+ 4	+ 6

fan type MXE012-022418-00	FK serial no. 1	comm. no. Impexron, Anfrage Nr
your order no.	type of control valve (valve)	codeword Impexron, Anfrage Nr. 234779

housing data

inlet size	A \emptyset	560	mm
discharge size	B1	560	mm
discharge size	B2	450	mm
diffusor	B1'	-	mm
diffusor	B2'	-	mm
length of suction box	AN	-	mm
width of suction box	BN	-	mm
thickness of fan housing	sGV	3	mm
section thickness	sSP	3	mm

impeller data

impeller outer diameter	D2	644	mm
blade diameter	D2S	629	mm
no. of blades	z	9	-
intermediate blades	z'	-	-
massmoment of inertia of impeller	lLr	1,922	kgm ²
shaft diameter	dW	0	mm
massmoment of inertia of shaft	IW	0	kgm ²

boundary conditions

design temperature	tB	20	°C
max. operating temperature	tmax	80	°C
max. impeller speed	nVmax	1844	1/min
inlet speed	c1	14,3	m/s
inlet speed AK	c1'	-	m/s
outlet speed	c2	13,8	m/s
outlet speed DIF	c2'	-	m/s

weight specification

Typ

fan without motor	MXE	219	kg
motor	1LA9130-4KA	49,2	kg
total weight *		268,2	kg



technical data page 3

Liste 17_1 80Grad

quotation item
KRV 201704234-00 - 1.02

designation
Dilution air fan

date
14.11.2017 / cab

fan type MXE012-022418-00	FK serial no. 1	comm. no. Impexron, Anfrage Nr
your order no.	type of control valve (valve)	codeword Impexron, Anfrage Nr. 234779

drive components

bearing unit	fixed bearing	-
	loose bearing	-
coupling	size	-
- rated output torque	Mmax	Nm
- max. speed of coupling	Nmax	1/min
material of shaft	mat shaft	-

impeller data

- back plate	sTRGS	4	mm
- shroud	sD	3	mm
- impeller nozzle	sDü	4	mm
- blade	sSch	4	mm
- material of blade	Mat_LRE	1.0577 - S355J2	-
- natural frequency	fLRE		Hz
- blade pass frequency	fSch	261	Hz
bending critical speed of shaft	nkrit shaft	-	1/min

shaft sealing

type	-
material	-
material of sleeve	-

wear protection of impeller

struct. design	-
material	-
thickness of wear protection	mm

DN1 SFV1.0 EV1.0 RE1.0 AKZ1.0 AKZ2.0 AKZ1.2

2.2.1.17

Tolerances dependent on class of accuracy in accordance to DIN 24166 in range of efficiency $\eta \geq 0,9 \times \eta_{max}$. Coordination for class of accuracy (G.Kl.) see product specification.
At any rate, please pay attention to the techn. indications made in our Handbook of fans.
pressure units : 1 daPa = 10 Pa = 10 N/m² = 0,1 mbar = 1,0197 mmWC

class of accuracy	1	2	3
Δp_t und V_1 [%]	+/- 2,5	+/- 5	+/- 10
PW [%]	+ 3	+ 8	+ 16
L_w und L_p [dB]	+ 3	+ 4	+ 6

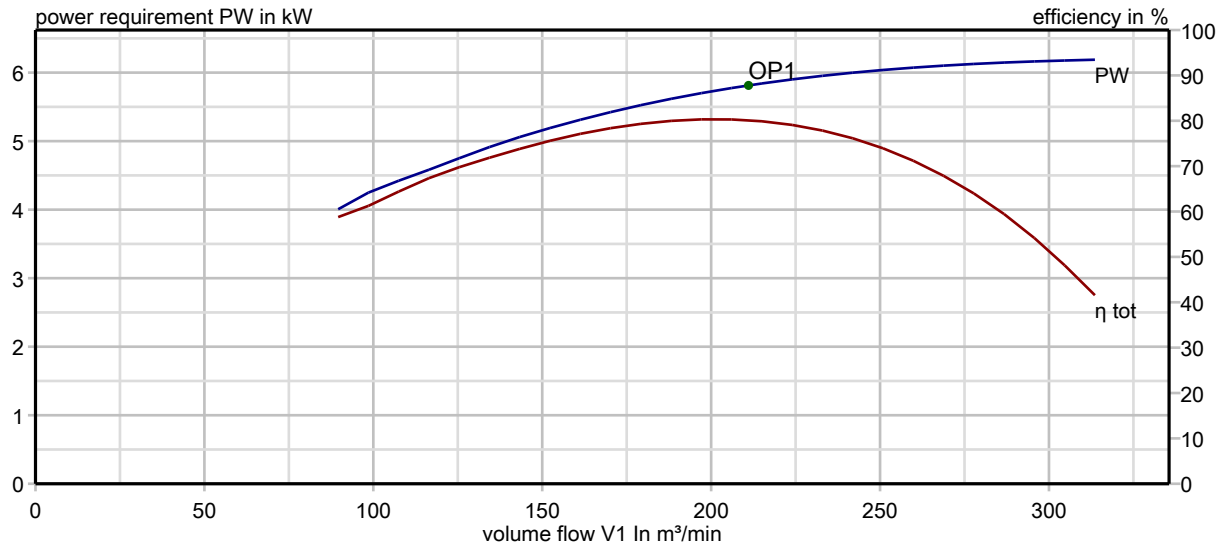
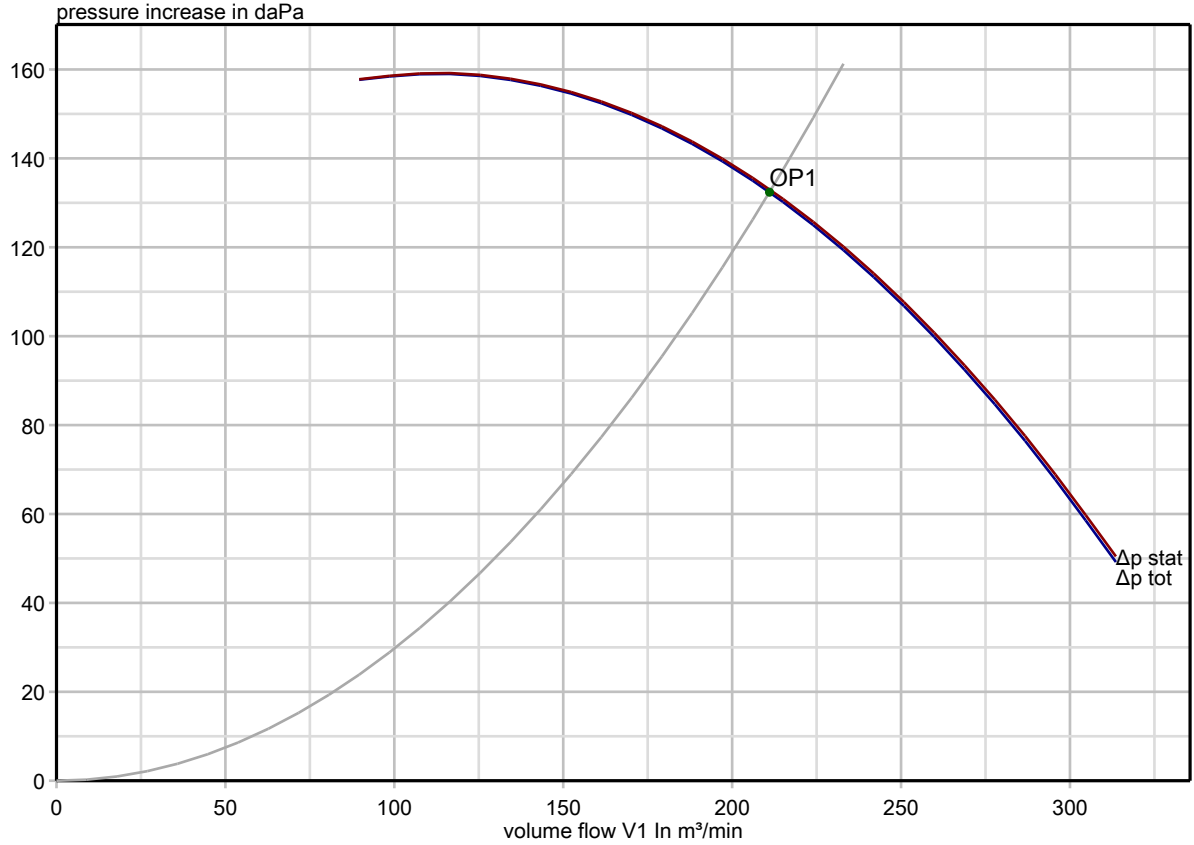


FAN CHARACTERISTIC CURVE

Liste 17_1 80Grad

quotation item	KRV 201704234-00 - 1.02
designation	Dilution air fan
date	14.11.2017 / cab

fan type MXE012-022418-00	FK serial no. 1	comm. no. Impexron, Anfrage Nr
your order no.	type of control valve (valve)	codeword Impexron, Anfrage Nr. 234779



	NP	OP 1	OP 2	OP 3	OP 4	OP 5	OP 6
volume flow V1		211,1					
total pressure increase Δp_t		132					
density at inlet ρ_1		1,205					
impeller speed n1		1740					
inletguidevane/damp.							

DN1 SFV1.0 EV1.0 RE1.0 AKZ1.0 AKZ2.0 AKZ1.2

2.2.1.17

Tolerances dependent on class of accuracy in accordance to DIN 24166 in range of efficiency $\eta \geq 0,9 \times \eta_{max}$. Coordination for class of accuracy (G.Kl.) see product specification.
At any rate, please pay attention to the techn. indications made in our Handbook of fans.
pressure units: 1 daPa = 10 Pa = 10 N/m² = 0,1 mbar = 1,0197 mmWC

class of accuracy	1	2	3
Δp_t und V1 [%]	+/- 2,5	+/- 5	+/- 10
PW [%]	+ 3	+ 8	+ 16
Lw und Lp [dB]	+ 3	+ 4	+ 6

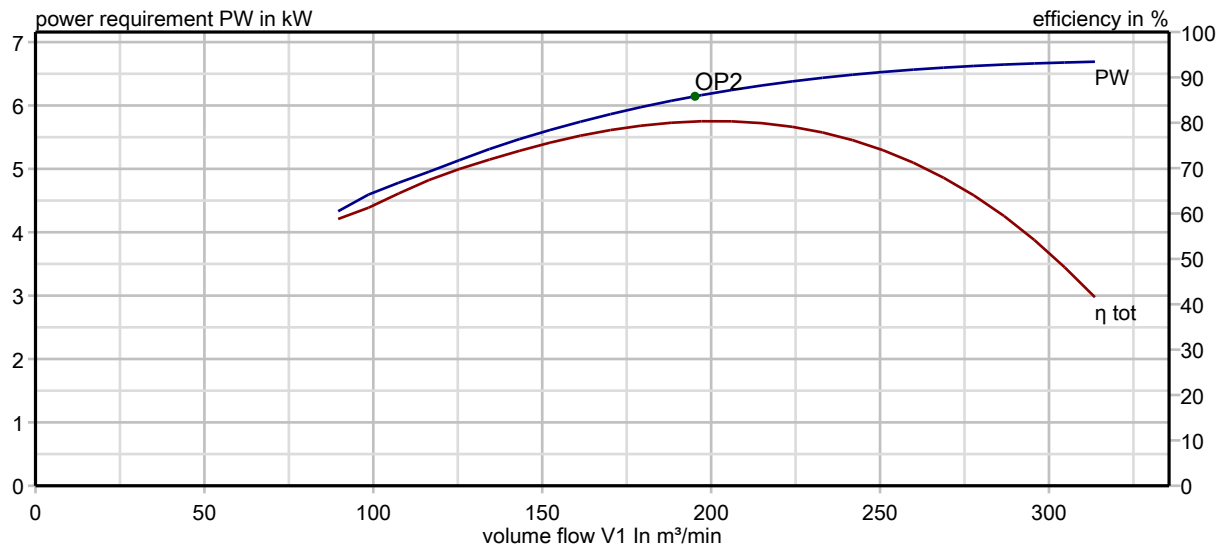
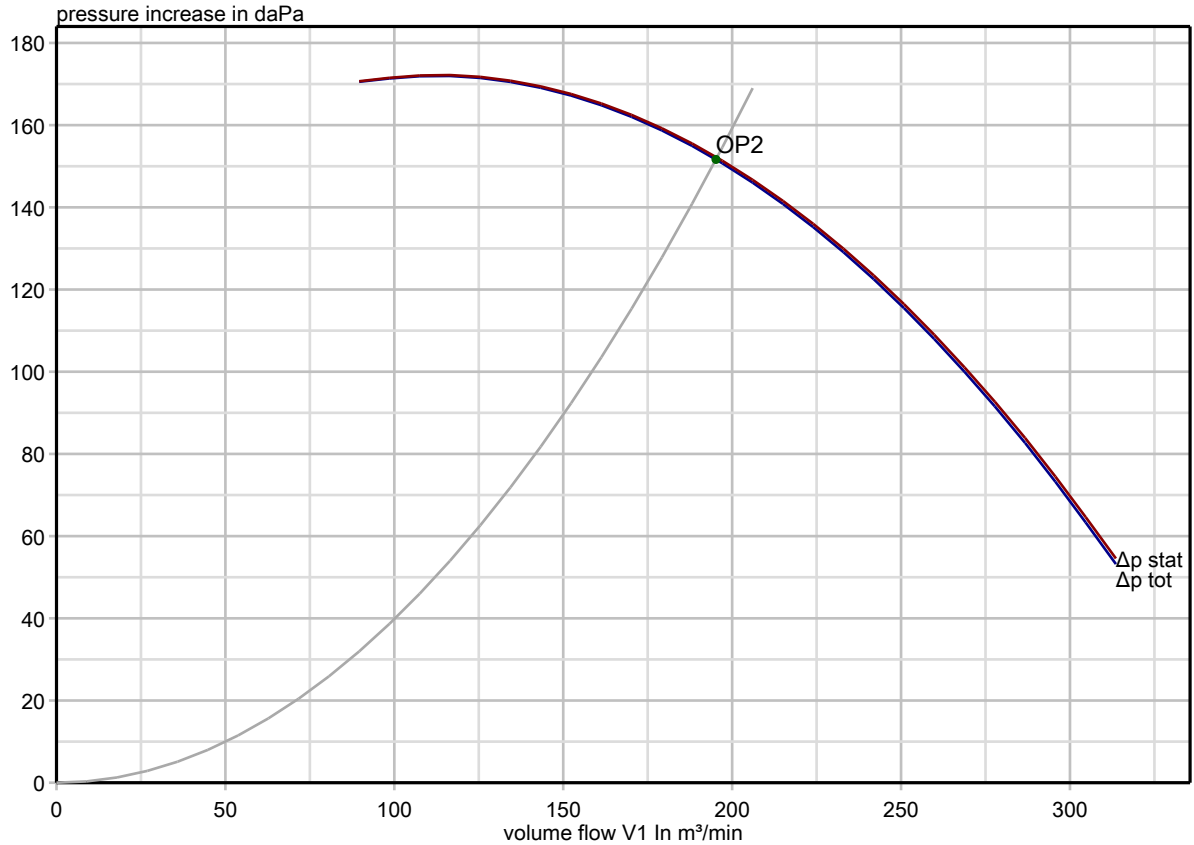


FAN CHARACTERISTIC CURVE

Liste 17_1 80Grad

quotation item	KRV 201704234-00 - 1.02
designation	Dilution air fan
date	14.11.2017 / cab

fan type MXE012-022418-00	FK serial no. 1	comm. no. Impexron, Anfrage Nr
your order no.	type of control valve (valve)	codeword Impexron, Anfrage Nr. 234779



		NP	OP 1	OP 2	OP 3	OP 4	OP 5	OP 6
volume flow V1	m³/min			195,2				
total pressure increase Δp_t	daPa			152				
density at inlet ρ_1	kg/m³			1,303				
impeller speed n1	rpm			1740				
inletguidevane/damp.								

DN1 SFV1.0 EV1.0 RE1.0 AKZ1.0 AKZ2.0 AKZ1.2

2.2.1.17

Tolerances dependent on class of accuracy in accordance to DIN 24166 in range of efficiency $\eta \geq 0,9 \times \eta_{max}$. Coordination for class of accuracy (G.Kl.) see product specification.
At any rate, please pay attention to the techn. indications made in our Handbook of fans.
pressure units : 1 daPa = 10 Pa = 10 N/m² = 0,1 mbar = 1,0197 mmWC

class of accuracy	1	2	3
Δp_t und V1 [%]	+/- 2,5	+/- 5	+/- 10
PW [%]	+ 3	+ 8	+ 16
Lw und Lp [dB]	+ 3	+ 4	+ 6

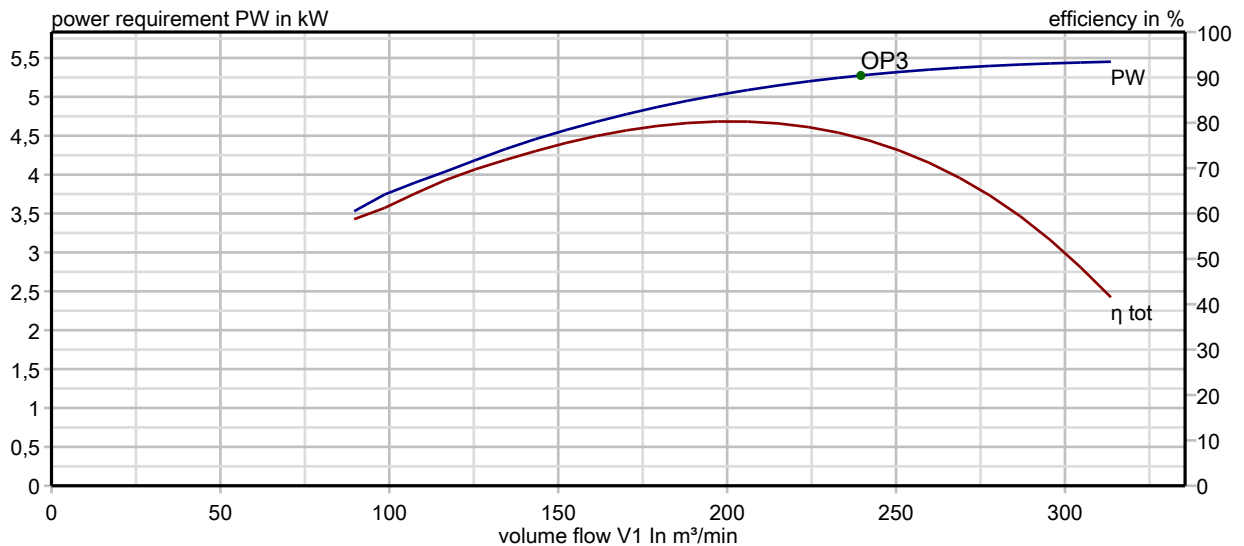
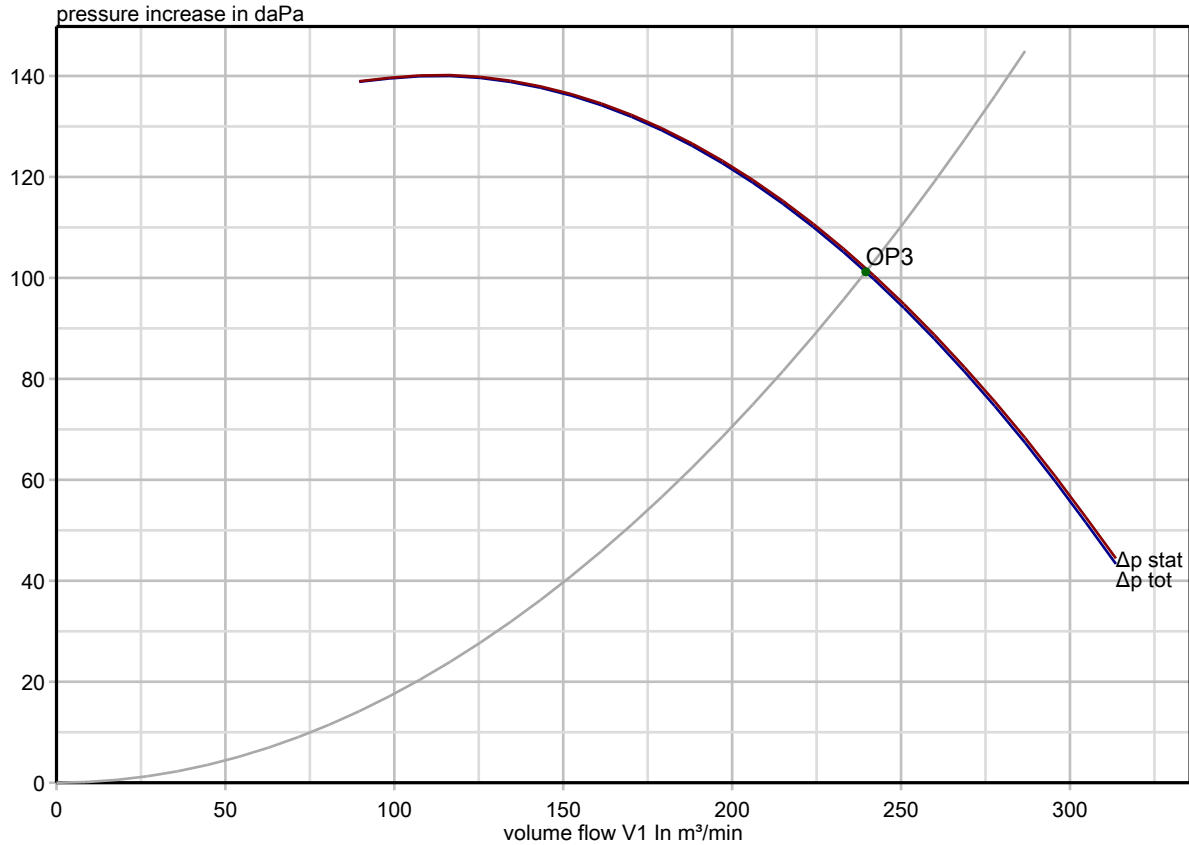


FAN CHARACTERISTIC CURVE

Liste 17_1 80Grad

quotation item	KRV 201704234-00 - 1.02
designation	Dilution air fan
date	14.11.2017 / cab

fan type MXE012-022418-00	FK serial no. 1	comm. no. Impexron, Anfrage Nr
your order no.	type of control valve (valve)	codeword Impexron, Anfrage Nr. 234779



		NP	OP 1	OP 2	OP 3	OP 4	OP 5	OP 6
volume flow V1	m ³ /min				239,6			
total pressure increase Δpt	daPa				101			
density at inlet ρ1	kg/m ³				1,062			
impeller speed n1	rpm				1740			
inletguidevane/damp.								

DN1 SFV1.0 EV1.0 RE1.0 AKZ1.0 AKZ2.0 AKZ1.2

2.2.1.17

Tolerances dependent on class of accuracy in accordance to DIN 24166 in range of efficiency $\eta \geq 0,9 \times \eta_{max}$. Coordination for class of accuracy (G.Kl.) see product specification.
At any rate, please pay attention to the techn. indications made in our Handbook of fans.
pressure units : 1 daPa = 10 Pa = 10 N/m² = 0,1 mbar = 1,0197 mmWC

class of accuracy	1	2	3
Δpt und V1 [%]	+/- 2,5	+/- 5	+/- 10
PW [%]	+ 3	+ 8	+ 16
Lw und Lp [dB]	+ 3	+ 4	+ 6



SOUND DATA

Liste 17_1 80Grad

quotation item
KRV 201704234-00 - 1.02

designation
Dilution air fan

date
14.11.2017 / cab

fan type MXE012-022418-00	FK serial no. 1	comm. no. Impexron, Anfrage Nr
your order no.	type of control valve (valve)	codeword Impexron, Anfrage Nr. 234779

technical data of fan at $\rho=1,205 \text{ kg/m}^3$ (OP 1 Bp1) :

total pressure increase	Δp_t	132 daPa	volume flow	V1	211,06 m ³ /min
impeller speed	nl	1740 rpm	shaft power	PW	5,8 kW
no. of blades	z	9 -	main residual frequency	f	261 Hz
drive motor	PM	6,3 kW	motor speed	nM	1760 rpm

sound data:

superficial dimension	Ls-k	16,0 dB	corr. value A-weighting	dLkA	9,1 dB(A)
A-weighted total sound power level at inlet:	LwAi1	92,8 dB(A)	at discharge	LwAi2	92,8 dB(A)
A-weighted free inlet resp. free discharge sound pressure level at 1m distance from hemisphere radius					
at inlet:	LpA5	82,7 dB(A)	at discharge	LpA6	82,7 dB(A)
A-weighted external sound power level				LwAa	80,2 dB(A)
A-weighted meas. surf. sound pressure level				LpA	64,2 dB(A)
A-weight. meas. surface sound pressure level of drive			LpAMo		66,0 dB(A)
A-weight. meas. surface sound press.level fan and drive			LpAMo+LpA		dB(A)

sound correction value

speed correction	dLn	0 dB	deviation of nominal point	dLbp	0 dB
density correction	dLt	0 dB	other corrections	dLs	0 dB

octave spectrum

frequency	fm in Hz	63	125	250	500	1000	2000	4000	8000	Dim
main residual frequ.	dLD-okt	0,0	0,0	2,2	0,5	0,1	0,0	0,0	0,0	dB
relative octave spectrum	dLw-okt	-3,9	-5,3	-7,7	-11,0	-15,1	-20,2	-26,2	-33,1	dB
A-weighting	dLA	-26,2	-16,1	-8,6	-3,2	0,0	1,2	1,0	-1,1	dB
total sound power	Lwi2-okt	97,6	96,1	95,9	90,9	86,4	81,2	75,2	68,3	dB
	Lwi1-okt	97,6	96,2	96,0	91,0	86,4	81,2	75,2	68,3	dB
	LwAi2-okt	71,4	80,0	87,3	87,7	86,4	82,4	76,2	67,2	dB(A)
	LwAi1-okt	71,4	80,1	87,4	87,8	86,4	82,4	76,2	67,2	dB(A)
A-weighted external sound power level	LwAa-okt	58,8	67,5	74,8	75,2	73,8	69,8	63,6	54,6	dB(A)
A-weighted meas. surf. sound pressure level	LpA-okt	42,8	51,5	58,8	59,2	57,8	53,9	47,7	38,6	dB(A)

Remark : The rounding of the values to whole figures results necessarily in differences of further calculations.
At calculation of the sound pressure level a reduction of 3 dB for self shielding of the fan housing is to be taken into account.
LpA = LwAa - Ls - 3 dB(A)
DN1 SFV1.0 EV1.0 RE1.0 AKZ1.0 AKZ2.0 AKZ1.2

2.2.1.17

Tolerances dependent on class of accuracy in accordance to DIN 24166 in range of efficiency $\eta \geq 0,9 \times \eta_{max}$. Coordination for class of accuracy (G.KI.) see product specification.
At any rate, please pay attention to the techn. indications made in our Handbook of fans.
pressure units : 1 daPa = 10 Pa = 10 N/m² = 0,1 mbar = 1,0197 mmWC

class of accuracy	1	2	3
Δp_t und V1 [%]	+/- 2,5	+/- 5	+/- 10
PW [%]	+ 3	+ 8	+ 16
Lw und Lp [dB]	+ 3	+ 4	+ 6



SOUND DATA

Liste 17_1 80Grad

quotation item
KRV 201704234-00 - 1.02

designation
Dilution air fan

date
14.11.2017 / cab

fan type MXE012-022418-00	FK serial no. 1	comm. no. Impexron, Anfrage Nr
your order no.	type of control valve (valve)	codeword Impexron, Anfrage Nr. 234779

technical data of fan at $\rho=1,303 \text{ kg/m}^3$ (OP 2 Bp2) :

total pressure increase Δp_t	152 daPa	volume flow V1	195,22 m ³ /min
impeller speed nl	1740 rpm	shaft power PW	6,1 kW
no. of blades z	9 -	main residual frequency f	261 Hz
drive motor PM	6,3 kW	motor speed nM	1760 rpm

sound data:

superficial dimension Ls-k	16,0 dB	corr. value A-weighting dLkA	9,1 dB(A)
A-weighted total sound power level at inlet: LwAi1	93,8 dB(A)	at discharge LwAi2	93,8 dB(A)
A-weighted free inlet resp. free discharge sound pressure level at 1m distance from hemisphere radius			
at inlet: LpA5	83,7 dB(A)	at discharge LpA6	83,7 dB(A)
A-weighted external sound power level LwAa			81,2 dB(A)
A-weighted meas. surf. sound pressure level LpA			65,3 dB(A)
A-weight. meas. surface sound pressure level of drive LpAMo			66,0 dB(A)
A-weight. meas. surface sound press.level fan and drive LpAMo+LpA			dB(A)

sound correction value

speed correction dLn	0 dB	deviation of nominal point dLbp	+1 dB
density correction dLt	0 dB	other corrections dLs	0 dB

octave spectrum

frequency	fm in Hz	63	125	250	500	1000	2000	4000	8000	Dim
main residual frequ. dLD-okt		0,0	0,0	2,3	0,5	0,1	0,0	0,0	0,0	dB
relative octave spectrum dLw-okt		-3,9	-5,3	-7,7	-11,0	-15,1	-20,2	-26,2	-33,1	dB
A-weighting dLA		-26,2	-16,1	-8,6	-3,2	0,0	1,2	1,0	-1,1	dB
total sound power	Lwi2-okt	98,5	97,1	97,0	91,9	87,3	82,2	76,2	69,3	dB
	Lwi1-okt	98,6	97,1	97,0	92,0	87,4	82,2	76,2	69,3	dB
	LwAi2-okt	72,3	81,0	88,4	88,7	87,3	83,4	77,2	68,2	dB(A)
	LwAi1-okt	72,4	81,0	88,4	88,8	87,4	83,4	77,2	68,2	dB(A)
A-weighted external sound power level	LwAa-okt	59,8	68,4	75,8	76,2	74,8	70,8	64,6	55,6	dB(A)
A-weighted meas. surf. sound pressure level	LpA-okt	43,8	52,4	59,8	60,2	58,8	54,8	48,6	39,6	dB(A)

Remark : The rounding of the values to whole figures results necessarily in differences of further calculations.
At calculation of the sound pressure level a reduction of 3 dB for self shielding of the fan housing is to be taken into account.
LpA = LwAa - Ls - 3 dB(A)
DN1 SFV1.0 EV1.0 RE1.0 AKZ1.0 AKZ2.0 AKZ1.2

2.2.1.17

Tolerances dependent on class of accuracy in accordance to DIN 24166 in range of efficiency $\eta \geq 0,9 \times \eta_{max}$. Coordination for class of accuracy (G.KI.) see product specification.
At any rate, please pay attention to the techn. indications made in our Handbook of fans.
pressure units : 1 daPa = 10 Pa = 10 N/m² = 0,1 mbar = 1,0197 mmWC

class of accuracy	1	2	3
Δp_t und V1 [%]	+/- 2,5	+/- 5	+/- 10
PW [%]	+ 3	+ 8	+ 16
Lw und Lp [dB]	+ 3	+ 4	+ 6



SOUND DATA

Liste 17_1 80Grad

quotation item
KRV 201704234-00 - 1.02

designation
Dilution air fan

date
14.11.2017 / cab

fan type MXE012-022418-00	FK serial no. 1	comm. no. Impexron, Anfrage Nr
your order no.	type of control valve (valve)	codeword Impexron, Anfrage Nr. 234779

technical data of fan at $\rho-1 = 1,062 \text{ kg/m}^3$ (OP 3 Bp3) :

total pressure increase Δp_t	101 daPa	volume flow V1	239,58 m ³ /min
impeller speed nl	1740 rpm	shaft power PW	5,3 kW
no. of blades z	9 -	main residual frequency f	261 Hz
drive motor PM	6,3 kW	motor speed nM	1760 rpm

sound data:

superficial dimension Ls-k	16,0 dB	corr. value A-weighting dLkA	9,1 dB(A)
A-weighted total sound power level at inlet: LwAi1	91,8 dB(A)	at discharge LwAi2	91,8 dB(A)
A-weighted free inlet resp. free discharge sound pressure level at 1m distance from hemisphere radius			
at inlet: LpA5	81,7 dB(A)	at discharge LpA6	81,6 dB(A)
A-weighted external sound power level LwAa	79,2 dB(A)		
A-weighted meas. surf. sound pressure level LpA	63,2 dB(A)		
A-weight. meas. surface sound pressure level of drive LpAMo	66,0 dB(A)		
A-weight. meas. surface sound press. level fan and drive LpAMo+LpA	dB(A)		

sound correction value

speed correction dLn	0 dB	deviation of nominal point dLbp	0 dB
density correction dLt	-1 dB	other corrections dLs	0 dB

octave spectrum

frequency	fm in Hz	63	125	250	500	1000	2000	4000	8000	Dim
main residual frequ. dLD-okt		0,0	0,0	2,0	0,4	0,1	0,0	0,0	0,0	dB
relative octave spectrum dLw-okt		-3,9	-5,3	-7,7	-11,0	-15,1	-20,2	-26,2	-33,1	dB
A-weighting dLA		-26,2	-16,1	-8,6	-3,2	0,0	1,2	1,0	-1,1	dB
total sound power	Lwi2-okt	96,6	95,1	94,8	89,9	85,4	80,2	74,2	67,3	dB
	Lwi1-okt	96,6	95,2	94,9	90,0	85,4	80,3	74,3	67,4	dB
	LwAi2-okt	70,4	79,0	86,2	86,7	85,4	81,4	75,2	66,2	dB(A)
	LwAi1-okt	70,4	79,1	86,3	86,8	85,4	81,5	75,3	66,3	dB(A)
A-weighted external sound power level LwAa-okt		57,8	66,5	73,7	74,2	72,8	68,9	62,7	53,7	dB(A)
A-weighted meas. surf. sound pressure level LpA-okt		41,9	50,5	57,7	58,2	56,9	52,9	46,7	37,7	dB(A)

Remark : The rounding of the values to whole figures results necessarily in differences of further calculations.
At calculation of the sound pressure level a reduction of 3 dB for self shielding of the fan housing is to be taken into account.
LpA = LwAa - Ls - 3 dB(A)

DN1 SFV1.0 EV1.0 RE1.0 AKZ1.0 AKZ2.0 AKZ1.2

2.2.1.17

Tolerances dependent on class of accuracy in accordance to DIN 24166 in range of efficiency $\eta \geq 0,9 \times \eta_{max}$. Coordination for class of accuracy (G.KI.) see product specification.
At any rate, please pay attention to the techn. indications made in our Handbook of fans.
pressure units : 1 daPa = 10 Pa = 10 N/m² = 0,1 mbar = 1,0197 mmWC

class of accuracy	1	2	3
Δp_t und V1 [%]	+/- 2,5	+/- 5	+/- 10
PW [%]	+ 3	+ 8	+ 16
Lw und Lp [dB]	+ 3	+ 4	+ 6

TORQUE DIAGRAM

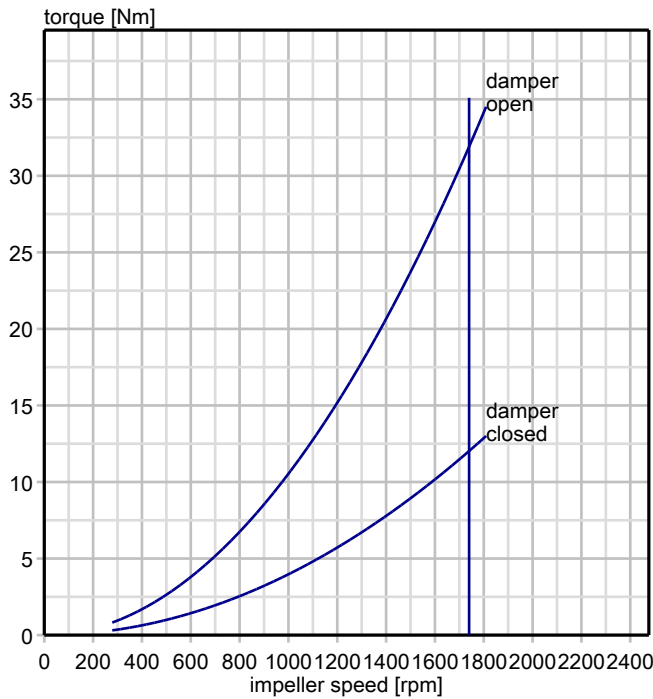
Liste 17_1 80Grad

quotation item
KRV 201704234-00 - 1.02

designation
Dilution air fan

date
14.11.2017 / cab

fan type MXE012-022418-00	FK serial no. 1	comm. no. Impexron, Anfrage Nr
your order no.	type of control valve (valve)	codeword Impexron, Anfrage Nr. 234779



design point : OP1 —

V1 = 211 m³/min
 Δp_t = 132 daPa
 PW = 5,81 kW
 nI = 1740 rpm
 ρ_1 = 1,205 kg/m³
 J (imp.) = 1,92 kgm²

class of accuracy	1	2	3
Δp_t und V1 [%]	+/- 2,5	+/- 5	+/- 10
PW [%]	+ 3	+ 8	+ 16
Lw und Lp [dB]	+ 3	+ 4	+ 6



MOTOR DATA / START-UP

Liste 17_1 80Grad

quotation item	KRV 201704234-00 - 1.02
designation	Dilution air fan
date	14.11.2017 / cab

fan type MXE012-022418-00	FK serial no. 1	comm. no. Impexron, Anfrage Nr
your order no.	type of control valve (valve)	codeword Impexron, Anfrage Nr. 234779

The following data apply to the fan nominal point.

Start-up data

rated output motor torque	36,0	Nm
torque Y	28,2	Nm
torque Δ	104,4	Nm
load torque in NP	32,4	Nm
load torque closed damper	16,2	Nm
moment of inertia relative to nM	2,0	kgm ²
start-up time in NP Y	23,9	s
start-up time closed damper Y	16,7	s
start-up time in NP Δ	4,0	s
start-up time closed damper Δ	3,7	s
theoretical starting time	6,3	s
mass inertia ratio I _v /I _m	43,0	-

Δ-start-up possible (DOL start-up)

YΔ-start-up possible (star-delta start-up)

DN1 SFV1.0 EV1.0 RE1.0 AKZ1.0 AKZ2.0 AKZ1.2

2.2.1.17

Tolerances dependent on class of accuracy in accordance to DIN 24166 in range of efficiency $\eta \geq 0,9 \times \eta_{max}$. Coordination for class of accuracy (G.Kl.) see product specification.
At any rate, please pay attention to the techn. indications made in our Handbook of fans.
pressure units : 1 daPa = 10 Pa = 10 N/m² = 0,1 mbar = 1,0197 mmWC

class of accuracy	1	2	3
Δpt und V1 [%]	+/- 2,5	+/- 5	+/- 10
PW [%]	+ 3	+ 8	+ 16
Lw und Lp [dB]	+ 3	+ 4	+ 6