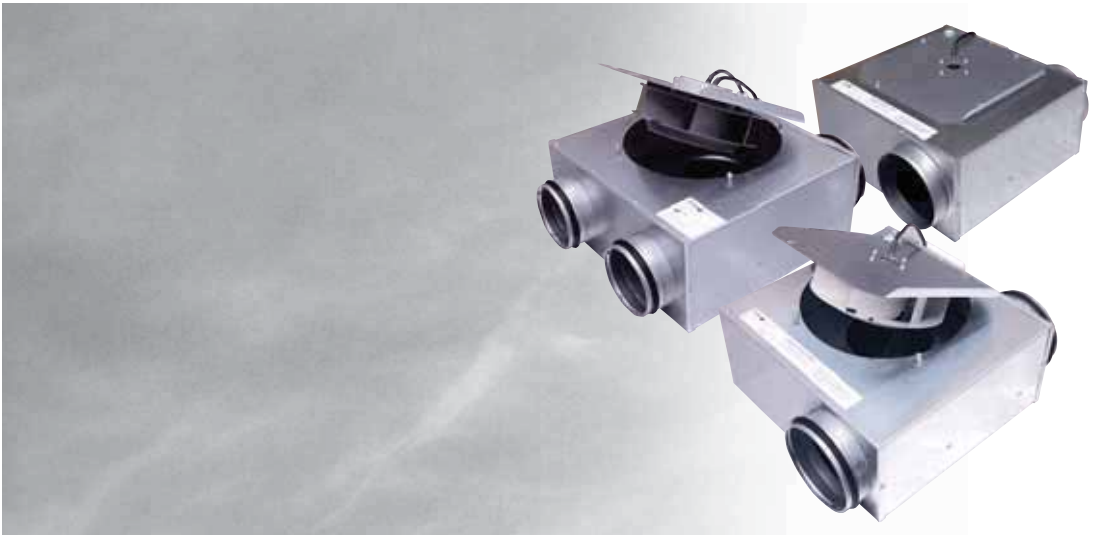
Bruksanvisning
Directions for use

LPKB/LPFB



SVENSK/ENGLISH VERSION

ÖSTBERG
HEALTHY INDOOR CLIMATE
WITH ENERGY EFFICIENT VENTILATION

Denna bruksanvisning omfattar produkterna LPKB och LPFB.

LPKB med en eller två anslutningar på inloppssidan.

LPFB utan tätningar på kanalanslutningarna.

BESKRIVNING

LPKB och LPFB är lågprofil kanalfläktar med bakåtböjda skovlar på fläkthjulet och swing-out utförande. De finns med en eller två anslutningar på inloppssidan.

Fläktarna är försedd med en AC- eller EC-motor av ytterrotortyp, som har underhållsfria dubbelkapslade kullager.

Fläktkåpan är tillverkad av galvaniserad stålplåt.

Den enda skillnaden på LPKB och LPFB är att LPFB inte har några tätningar på kanalanslutningarna.

ANVÄNDNING

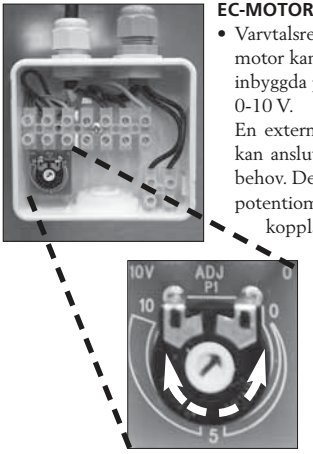
- LPKB och LPFB är tillgängligt för brukaren, enligt IEC 60335-2-40, att själv utföra den service och underhåll som här i denna bruksanvisning beskrives. Före allt sådant arbete skall dock fläkten ovillkorligen göras strömlös.
  Förbehåll från detta enligt IEC 60335-2-7.12 "Denna produkt är inte ämnad för användning av personer (inklusive barn) med nedsatt fysisk, sensorisk eller mental förmåga, eller bristande erfarenhet och kunskap, om de ej övervakas eller instrueras angående produktens användning av en person ansvarig för deras säkerhet."
  "Barn skall hållas under uppsikt för att försäkra att de inte leker med produkten."
- Fläkten ska användas för transport av ren luft, m.a.o den är ej avsedd för transport av brand- och explosionsfarliga ämnen, slipdamm, sot, o.dyl.
- Kondensatorn (gäller endast AC-motor) har begränsad livslängd och bör bytas efter 45.000 driftstimmar (ca 5 års kontinuerlig användning) för bibehållen fläktfunktion. Defekt kondensator kan orsaka skada.
- För maximal livslängd vid installation i fuktiga eller kalla utrymmen, bör fläkten vara i kontinuerlig drift.
- Fläkten kan monteras utomhus eller i andra fuktiga utrymmen. Tillse att dränering finns från fläktkåpan.
- Fläkten är avsedd att användas vid högst den spänning och frekvens som är angiven på fläktens produktetikett.
- Fläkten kan monteras i valfri position.

INSTALLATION

- Fläkten monteras enligt luftriktningspilen.
- Fläkten kanalansluts eller förses med beröringsskydd.
- Fläkten ska monteras på ett säkert sätt. Tillse att inga främmande föremål ligger kvar i fläkt/kanal.
- Fläkten ska monteras på ett sådant sätt att service och underhåll kan utföras. OBS! Beakta fläktens vikt och storlek.
- Fläkten ska monteras så att ev. vibrationer ej kan överföras till kanalsystem och byggnadsstomme. Använd t ex dukstos för detta.
- Elinstallation ska ske av behörig installatör.
- Elinstallation ska ske via allpolig strömbrytare i nära anslutning till fläkten eller via låsbar huvudströmbrytare.
- Kontrollera att fläkten är monterad och elektriskt ansluten på rätt sätt med skyddsjord och motorskydd.
- Till enfasfläktar används jordfelsbrytare (typ A).
- Kopplingsschema för respektive produkt se sidan 5 samt Tekniska data på sidan 6.

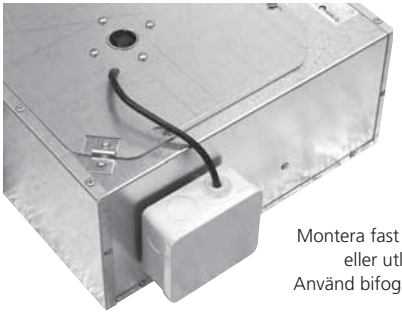
AC-MOTOR

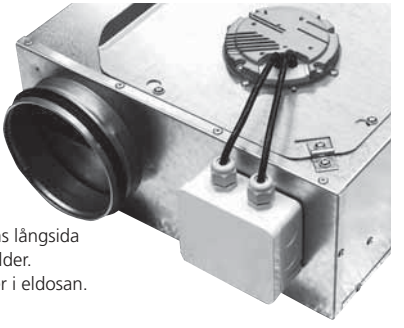
- För varvtalsreglering av AC-motor kan transformator/tyristor anslutas.
- AC-motorn har inbyggd termokontakt.



EC-MOTOR

- Varvtalsreglering av EC-motor kan göras med den inbyggda potentiometern 0-10 V.
  En extern potentiometer kan anslutas till plint vid behov. Den interna potentiometern ska då kopplas bort.
- EC-motor har varvtalsutgång 1 puls per varv.
- **EMC-KOMPATIBEL INSTALLATION AV EXTERNA STYRLEDNINGAR:** Eventuell styrkabel ska ej vara längre än 30 m. Om styrkabel är över 20 m används skärmad kabel. När en skärmad kabel används ansluts skärmen till endast en sida, d.v.s endast till enheten med skyddsjord (håll sladden kort och med så lite induktans som möjligt!) Se till att det är tillräckligt avstånd mellan elledningar och motorns styrkablar för att undvika störningar.
  OBS! Säkerställ rätt polaritet! Anslut aldrig nätspänning på analoga ingångar!
- EC-motorn har elektroniskt termo-/överströmsskydd.

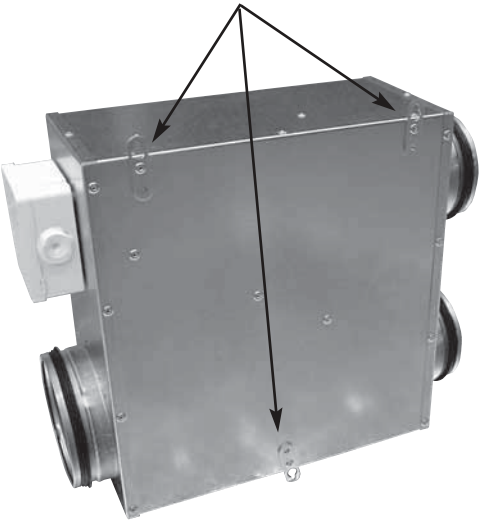




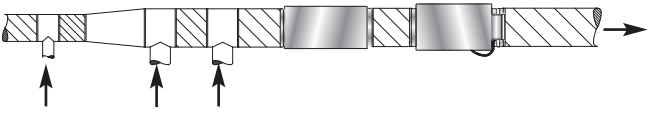
Montera fast eldosan på fläktens långsida
eller utloppsgaveln enl. bilder.
Använd bifogad skruv som ligger i eldosan.

INSTALLATIONSANVISNING

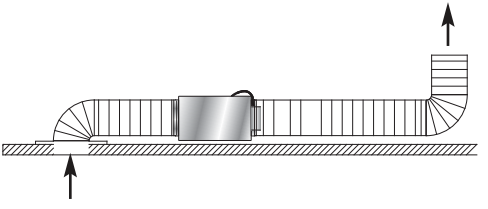
LPKB och LPFB kan enkelt monteras med hjälp av de tre fästena i valfri position..



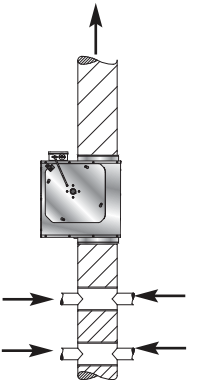
Installationsanvisningar för frånluftsystem för kanalfläkten LPKB och LPFB.



Frånluftssystem



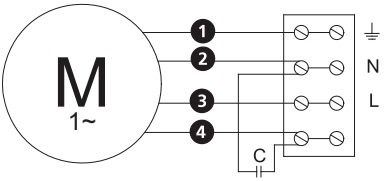
Frånluftssystem för takplacering



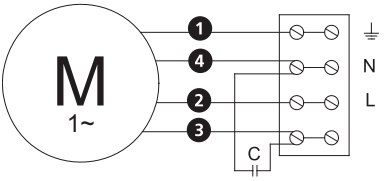
Frånluftssystem

KOPPLINGSSCHEMA

4040001
Enfas, 230V

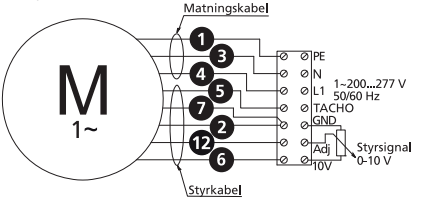


4040002
Enfas, 230 V



Ⓜ = Fläktmotor
1 = Gul/Grön
2 = Svart
3 = Blå
4 = Brun
5 = Vit
6 = Orange
7 = Grå
12 = Gul

4040143
Enfas, 230V



TEKNISKA DATA

	Spänning V/Hz	Ström A	Effekt W	Varvtal rpm	Vikt kg	Kopplings-schema	Kondensator µF	Isolations-klass, motor	Skyddsklass motor
LPKB 100+63 C1	230/50	0,26	30	2540	4,8	4040001	2	F	IP 44
LPKB 100+2x63 C1	230/50	0,25	58	2600	4,8	4040001	2	F	IP 44
LPKB 100+63 C1-r	230/50	0,19	42	1760	4,8	4040002	2	F	IP 44
LPKB 100+2x63 C1-r	230/50	0,18	39	1940	4,8	4040002	2	F	IP 44
LPKB 100 A1	230/50	0,20	43	1410	4,8	4040002	1	F	IP 44
LPKB 100+2x80 A1	″	″	″	″	″	″	″	″	″
LPFB 100 A1	″	″	″	″	″	″	″	″	″
LPKB 100 C1	230/50	0,25	58	2600	4,8	4040001	2	F	IP 44
LPKB 100+2x80 C1	″	″	″	″	″	″	″	″	″
LPFB 100 C1	″	″	″	″	″	″	″	″	″
LPKB 100 C1-r	230/50	0,18	39	1940	4,8	4040002	2	F	IP 44
LPKB 100+2x80 C1-r	″	″	″	″	″	″	″	″	″
LPFB 100 C1-r	″	″	″	″	″	″	″	″	″
LPKB 100 C1 EC	200-277/50/60	0,89	110	3770	4,8	4040143	-	F	IP 44
LPKB 100+2x80 C1 EC	″	″	″	″	″	″	″	″	″
LPKB 125 C1	230/50	0,26	59	2570	5,1	4040001	2	F	IP 44
LPKB 125+2x100 C1	″	″	″	″	″	″	″	″	″
LPFB 125 C1	″	″	″	″	″	″	″	″	″
LPKB 125 C1-r	230/50	0,18	41	1810	5,1	4040002	2	F	IP 44
LPKB 125+2x100 C1-r	″	″	″	″	″	″	″	″	″
LPFB 125 C1-r	″	″	″	″	″	″	″	″	″
LPKB 125 C1 EC	200-277/50/60	0,90	115	3780	5,0	4040143	-	F	IP 44
LPKB 125+2x100 C1 EC	″	″	″	″	″	″	″	″	″
LPKB 160 B1	230/50	0,26	61	2550	6,7	4040001	2	F	IP 44
LPKB 160+2x125 B1	″	″	″	″	″	″	″	″	″
LPFB 160 B1	″	″	″	″	″	″	″	″	″
LPKB 160 B1-r	230/50	0,19	42	1740	6,7	4040002	2	F	IP 44
LPKB 160+2x125 B1-r	″	″	″	″	″	″	″	″	″
LPFB 160 B1-r	″	″	″	″	″	″	″	″	″
LPKB 160 B1 EC	200-277/50/60	0,90	117	3640	6,7	4040143	-	F	IP 44
LPKB 160+2x125 B1 EC	″	″	″	″	″	″	″	″	″
LPKB 160 C1	230/50	0,46	106	2560	6,9	4040001	3	F	IP 44
LPKB 160+2x125 C1	″	″	″	″	″	″	″	″	″
LPFB 160 C1	″	″	″	″	″	″	″	″	″
LPKB 160 C1-r	230/50	0,29	66	1580	6,9	4040002	3	F	IP 44
LPKB 160+2x125 C1-r	″	″	″	″	″	″	″	″	″
LPFB 160 C1-r	″	″	″	″	″	″	″	″	″
LPKB 160 C1 EC	200-277/50/60	1,06	131	3220	6,7	4040143	-	F	IP 44
LPKB 160+2x125 C1 EC	″	″	″	″	″	″	″	″	″
LPKB 200 C1	230/50	0,67	153	2500	7,6	4040001	5	F	IP 44
LPFB 200 C1	″	″	″	″	″	″	″	″	″
LPKB 200 C1-r	230/50	0,46	103	1690	7,6	4040002	5	F	IP 44
LPFB 200 C1-r	″	″	″	″	″	″	″	″	″
LPKB 200 C1 EC	200-277/50/60	1,27	162	2870	7,4	4040143	-	F	IP 44

Ljuddata har framtagits med följande standarder för ljudmätning:
Tryck och flöde: SS-ISO 5801.
Bestämning av ljudeffektnivå i kanal: SS-EN ISO 5136.
Bestämning av ljudeffektnivå i efterklangsrum:
SS-EN ISO 3741.

BETECKNINGAR

$L_{wA}Tot$: Total A-vägd ljudeffektnivå dB(A) (ref 10^{-12}W)= summan av ljudeffektnivån i oktavbanden.

L_{wA}: A-vägd ljudeffektnivå i oktavband dB(A) (ref 10^{-12}W).

L_{pA}: A-vägd ljudtrycksnivå i dB(A) enligt normerad A-vägskorrektion och hänförd till rumsabsorbtionen 20 m² med halvsfärisk utbredning och 3 m avstånd.

LJUDDATA

LPKB 100+63 C1, LPKB 100+2x63 C1

230V 66 l/s 150 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	46	53	33	37	50	49	44	41	35	31
Inloppskanal		68	53	60	61	64	57	55	49	44
Utloppskanal		70	56	60	63	66	64	59	54	48
165V 56 l/s 115 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	43	50	30	34	47	45	40	37	32	30
Inloppskanal		64	49	56	59	60	53	51	44	38
Utloppskanal		67	53	58	62	62	60	55	50	42
135V 48 l/s 80 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	40	47	29	30	44	41	36	32	29	29
Inloppskanal		60	45	52	56	56	49	46	37	30
Utloppskanal		65	50	54	62	58	55	50	45	35
110V 34 l/s 50 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	33	40	24	27	34	37	29	29	28	29
Inloppskanal		53	40	47	46	50	42	38	27	21
Utloppskanal		56	45	50	47	52	48	43	34	26
80V 20 l/s 25 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	28	35	22	24	29	25	23	23	28	29
Inloppskanal		43	32	37	37	39	30	21	9	11
Utloppskanal		46	37	42	36	41	36	26	15	16

LPKB 100+63 C1-r, LPKB 100+2x63 C1-r

230V 31 l/s 150 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	38	45	29	32	40	39	36	36	30	30
Inloppskanal		62	45	54	59	55	50	47	39	32
Utloppskanal		64	52	57	60	55	53	49	42	34
195V 29 l/s 70 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	33	40	25	29	34	34	29	32	28	29
Inloppskanal		53	41	47	46	50	43	38	28	22
Utloppskanal		60	47	59	47	50	47	41	33	25
180V 24 l/s 55 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	30	37	25	25	31	32	27	27	28	29
Inloppskanal		50	38	45	42	46	39	33	22	18
Utloppskanal		52	43	48	41	46	42	35	25	21
165V 21 l/s 40 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	29	36	23	26	31	28	25	24	28	29
Inloppskanal		47	34	42	39	42	35	28	15	15
Utloppskanal		49	41	45	38	42	39	30	18	18
135V 16 l/s 25 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	27	34	23	21	26	23	23	23	28	29
Inloppskanal		40	29	34	33	36	27	16	6	11
Utloppskanal		43	36	40	32	36	31	18	8	14

r = Reducerat varvtal genom kondensatoromkoppling

LJUDDATA

LPKB 100 A1, LPKB 100+2x80 A1, LPFB 100 A1

230V 23 l/s 90 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	33	40	26	29	35	35	31	29	28	29
Inloppskanal		54	42	48	46	50	44	40	31	23
Utloppskanal		56	47	50	51	49	47	41	33	25
210V 19 l/s 60 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	30	37	24	26	31	31	27	26	28	29
Inloppskanal		49	37	44	41	45	39	32	21	18
Utloppskanal		50	42	45	39	44	41	33	23	20
180V 15 l/s 40 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	28	35	23	22	28	26	25	23	28	29
Inloppskanal		43	32	37	36	39	32	22	10	13
Utloppskanal		45	37	40	34	38	34	23	12	15
165V 13 l/s 30 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	27	34	22	21	28	23	24	23	28	29
Inloppskanal		40	29	34	34	36	29	17	7	11
Utloppskanal		542	34	39	32	35	31	18	8	14
135V 9 l/s 20 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	26	33	22	19	25	20	23	23	27	28
Inloppskanal		34	24	25	31	28	18	7	5	7
Utloppskanal		35	30	29	28	28	21	9	5	11

LPKB 100 C1, LPKB 100+2x80 C1, LPFB 100 C1

230V 66 l/s 150 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	46	53	33	37	50	49	44	41	35	31
Inloppskanal		68	53	60	61	64	57	55	49	44
Utloppskanal		70	56	60	63	66	64	59	54	48
165V 56 l/s 115 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	43	50	30	34	47	45	40	37	32	30
Inloppskanal		64	49	56	59	60	53	51	44	38
Utloppskanal		67	53	58	62	62	60	55	50	42
135V 48 l/s 80 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	40	47	29	30	44	41	36	32	29	29
Inloppskanal		60	45	52	56	56	49	46	37	30
Utloppskanal		65	50	54	62	58	55	50	45	35
110V 34 l/s 50 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	33	40	24	27	34	37	29	29	28	29
Inloppskanal		53	40	47	46	50	42	38	27	21
Utloppskanal		56	45	50	47	52	48	43	34	26
80V 20 l/s 25 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	28	35	22	24	29	25	23	23	28	29
Inloppskanal		43	32	37	37	39	30	21	9	11
Utloppskanal		46	37	42	36	41	36	26	15	16

LJUDDATA

LPKB 100 C1-r, LPKB 100+2x80 C1-r, LPFB 100 C1-r

230V 31 l/s 150 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	38	45	29	32	40	39	36	36	30	30
Inloppskanal		62	45	54	59	55	50	47	39	32
Utloppskanal		64	52	57	60	55	53	49	42	34
195V 29 l/s 70 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	33	40	25	29	34	34	29	32	28	29
Inloppskanal		53	41	47	46	50	43	38	28	22
Utloppskanal		60	47	59	47	50	47	41	33	25
180V 24 l/s 55 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	30	37	25	25	31	32	27	27	28	29
Inloppskanal		50	38	45	42	46	39	33	22	18
Utloppskanal		52	43	48	41	46	42	35	25	21
165V 21 l/s 40 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	29	36	23	26	31	28	25	24	28	29
Inloppskanal		47	34	42	39	42	35	28	15	15
Utloppskanal		49	41	45	38	42	39	30	18	18
135V 16 l/s 25 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	27	34	23	21	26	23	23	23	28	29
Inloppskanal		40	29	34	33	36	27	16	6	11
Utloppskanal		43	36	40	32	36	31	18	8	14

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LPKB 100 C1 EC, LPKB 100+2x80 C1 EC

10V 90 l/s 325 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	57	64	45	46	57	61	55	53	48	40
Inloppskanal		77	61	66	68	75	68	67	61	55
Utloppskanal		81	66	66	68	77	75	72	67	60
8,5V 80 l/s 260 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	54	61	37	48	55	58	51	50	45	37
Inloppskanal		79	63	65	67	78	66	64	58	51
Utloppskanal		79	64	63	66	75	73	69	64	56
7V 65 l/s 170 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	48	55	33	36	51	51	46	44	38	32
Inloppskanal		69	51	59	62	66	60	58	51	43
Utloppskanal		73	60	59	62	68	67	63	57	48
5,5V 50 l/s 105 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	44	51	29	34	47	47	44	37	32	30
Inloppskanal		64	46	54	60	60	54	52	43	34
Utloppskanal		67	52	53	61	63	60	56	49	38

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LPKB 125 C1, LPKB 125+2x100 C1, LPFB 125 C1

230V 79 l/s 150 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	47	54	33	37	50	51	46	41	35	31
Inloppskanal		69	51	60	63	66	57	54	51	46
Utloppskanal		71	56	60	64	67	64	59	56	48
165V 67 l/s 110 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	43	50	28	34	46	46	41	37	31	29
Inloppskanal		65	48	57	59	61	53	49	46	40
Utloppskanal		68	52	57	64	63	59	54	51	42
135V 55 l/s 80 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	39	46	27	31	41	42	37	33	29	29
Inloppskanal		61	44	52	55	57	48	45	40	33
Utloppskanal		63	48	54	57	58	54	50	45	35
110V 43 l/s 45 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	33	40	24	30	34	36	30	27	28	29
Inloppskanal		54	40	50	45	50	41	36	28	22
Utloppskanal		56	43	50	47	51	47	41	33	25
80V 24 l/s 20 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	28	35	23	22	28	27	24	24	28	29
Inloppskanal		43	30	38	36	40	28	19	9	12
Utloppskanal		56	43	50	47	52	46	41	33	25

LPKB 125 C1-r, LPKB 125+2x100 C1-r, LPFB 125 C1-r

230V 49 l/s 100 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	38	45	26	32	40	40	35	31	28	29
Inloppskanal		60	45	52	54	56	47	43	38	32
Utloppskanal		61	48	52	57	56	52	47	42	33
200V 40 l/s 65 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	34	41	24	33	36	36	30	28	28	29
Inloppskanal		54	40	49	47	51	41	37	29	24
Utloppskanal		56	44	49	48	51	47	41	34	26
180V 31 l/s 45 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	30	37	24	26	30	31	27	25	28	29
Inloppskanal		50	36	44	42	46	37	30	21	19
Utloppskanal		52	39	47	43	46	42	34	26	21
165V 26 l/s 35 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	29	36	23	25	29	28	25	24	27	29
Inloppskanal		47	33	41	39	43	33	25	15	16
Utloppskanal		48	37	42	39	43	38	28	20	18
135V 21 l/s 20 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	27	34	23	22	25	23	23	23	27	29
Inloppskanal		41	28	35	35	37	24	14	7	12
Utloppskanal		44	32	42	34	36	29	16	9	13

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LPKB 125 C1 EC, LPKB 125+2x100 C1 EC

10V 113 l/s 300 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	58	65	41	48	55	63	57	54	47	39
Inloppskanal		78	57	67	68	76	68	67	64	56
Utloppskanal		82	66	68	69	78	76	72	69	61
8,5V 103 l/s 240 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	57	64	40	46	52	62	54	52	45	37
Inloppskanal		78	56	65	66	77	66	64	61	53
Utloppskanal		80	62	66	68	77	74	69	66	58
7V 81 l/s 160 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	50	57	32	39	51	53	49	46	38	32
Inloppskanal		71	52	61	65	68	61	58	55	45
Utloppskanal		74	60	62	64	69	67	63	60	50
5,5V 62 l/s 100 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	45	52	28	36	48	48	44	39	32	30
Inloppskanal		66	47	55	60	62	54	51	46	36
Utloppskanal		68	51	55	64	64	61	56	52	40

LPKB 160 B1, LPKB 160+2x125 B1, LPFB 160 B1

230V 83 l/s 170 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	46	53	32	39	48	50	41	39	34	31
Inloppskanal		68	52	59	65	62	57	51	52	45
Utloppskanal		70	57	59	65	66	60	56	55	47
165V 69 l/s 120 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	42	49	28	35	44	46	37	35	30	29
Inloppskanal		65	48	53	62	58	52	46	45	38
Utloppskanal		66	53	55	62	62	55	52	50	40
135V 58 l/s 80 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	37	44	26	31	39	41	32	29	28	29
Inloppskanal		59	44	49	56	53	47	40	37	29
Utloppskanal		61	49	51	56	56	49	46	42	32
110V 42 l/s 50 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	32	39	25	28	32	35	26	25	28	29
Inloppskanal		52	38	45	47	47	40	32	27	18
Utloppskanal		55	45	47	49	50	42	39	32	23
80V 28 l/s 20 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	27	34	22	22	26	25	23	23	27	29
Inloppskanal		44	32	38	40	36	28	16	9	10
Utloppskanal		44	35	39	39	38	30	20	13	13

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LPKB 160 B1-r, LPKB 160+2x125 B1-r, LPFB 160 B1-r

230V 51 l/s 100 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	37	44	27	33	38	40	31	29	28	29
Inloppskanal		59	45	50	56	53	47	40	38	30
Utloppskanal		60	50	51	55	55	48	45	41	31
200V 40 l/s 65 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	32	39	24	30	33	35	27	27	28	29
Inloppskanal		53	40	47	48	48	41	33	28	20
Utloppskanal		55	48	47	48	50	42	38	32	23
180V 33 l/s 45 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	29	36	23	26	30	30	24	24	27	29
Inloppskanal		49	37	44	44	43	36	26	20	15
Utloppskanal		50	44	43	44	44	37	30	24	18
165V 28 l/s 35 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	28	35	23	26	28	27	23	23	27	29
Inloppskanal		47	35	41	42	40	33	21	15	13
Utloppskanal		47	41	41	41	41	34	26	19	16
135V 18 l/s 25 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	27	34	23	21	25	22	22	23	27	28
Inloppskanal		41	31	37	37	34	25	12	7	9
Utloppskanal		41	35	36	35	34	26	15	9	12

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LPKB 160 B1 EC, LPKB 160+2x125 B1 EC

10V 122 l/s 300 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	58	65	38	50	52	64	53	51	45	38
Inloppskanal		78	62	67	70	74	70	63	64	56
Utloppskanal		80	64	66	71	77	71	70	69	60
8V 101 l/s 220 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	55	62	39	48	52	61	50	48	42	35
Inloppskanal		74	56	62	67	71	66	59	59	51
Utloppskanal		77	61	63	68	73	68	66	64	55
7V 88 l/s 165 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	48	55	32	41	49	53	45	43	37	32
Inloppskanal		70	53	60	65	65	62	55	55	45
Utloppskanal		73	59	61	66	69	64	62	60	50
5,5V 69 l/s 100 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	44	51	28	36	45	48	40	36	31	30
Inloppskanal		67	50	61	63	60	55	48	47	35
Utloppskanal		67	53	58	62	63	57	55	52	39

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LPKB 160 C1, LPKB 160+2x125 C1, LPFB 160 C1

230V 115 l/s 240 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	51	58	34	43	53	55	48	44	40	32
Inloppskanal		74	53	61	69	71	64	56	57	46
Utloppskanal		76	59	61	68	74	66	63	63	50
165V 86 l/s 170 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	47	54	30	40	49	51	43	40	34	29
Inloppskanal		70	50	57	65	66	59	51	51	39
Utloppskanal		71	56	57	65	68	61	58	57	43
135V 69 l/s 115 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	42	49	26	36	45	44	39	35	29	29
Inloppskanal		64	47	54	61	59	53	45	43	30
Utloppskanal		65	51	52	61	61	54	51	48	33
110V 53 l/s 70 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	36	43	23	35	38	38	34	29	27	29
Inloppskanal		58	42	50	55	53	47	37	33	18
Utloppskanal		59	46	49	55	54	48	44	39	23
80V 35 l/s 30 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	30	37	21	27	29	31	31	24	27	29
Inloppskanal		48	36	41	41	43	38	23	15	9
Utloppskanal		48	39	41	42	44	39	28	21	14

LPKB 160 C1-r, LPKB 160+2x125 C1-r, LPFB 160 C1-r

230V 58 l/s 120 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	40	47	26	37	44	42	38	33	29	29
Inloppskanal		63	47	55	59	58	52	44	42	27
Utloppskanal		63	49	54	59	59	53	49	46	30
200V 47 l/s 75 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	36	43	24	34	39	37	33	28	27	29
Inloppskanal		58	42	51	54	52	46	36	32	17
Utloppskanal		58	45	51	53	53	47	42	36	20
180V 39 l/s 55 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	34	41	23	32	36	34	32	26	27	29
Inloppskanal		54	39	50	48	48	43	30	24	12
Utloppskanal		54	42	49	48	48	43	35	29	15
165V 35 l/s 45 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	32	39	22	29	34	34	32	24	26	29
Inloppskanal		52	38	48	45	46	40	26	19	10
Utloppskanal		52	41	47	45	46	40	31	24	13
135V 23 l/s 30 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	29	36	23	27	30	29	27	23	26	29
Inloppskanal		46	35	42	38	41	36	17	12	8
Utloppskanal		46	37	43	39	40	34	21	15	11

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LPKB 160 C1 EC, LPKB 160+2x125 C1 EC

10V 154 l/s 300 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	57	64	37	49	57	62	54	53	48	38
Inloppskanal		79	57	66	73	77	69	65	65	55
Utloppskanal		82	63	67	74	78	72	73	71	60
8,5V 131 l/s 230 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	53	60	34	47	55	56	51	49	44	34
Inloppskanal		75	57	63	71	71	66	62	61	50
Utloppskanal		78	62	65	72	74	69	69	67	55
7V 110 l/s 145 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	49	56	29	41	50	53	46	44	36	30
Inloppskanal		70	52	63	66	65	60	57	53	42
Utloppskanal		73	57	62	67	68	63	64	59	46
5,5V 83 l/s 100 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	44	51	25	37	45	47	42	40	30	29
Inloppskanal		66	48	56	61	61	56	52	46	34
Utloppskanal		68	53	56	62	63	59	60	52	39

LPKB 200 C1, LPFB 200 C1

230V 180 l/s 250 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	54	61	32	46	58	56	49	46	41	38
Inloppskanal		74	57	63	70	70	61	61	57	52
Utloppskanal		78	62	64	73	74	67	67	62	57
165V 151 l/s 175 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	49	56	30	45	52	50	43	41	36	33
Inloppskanal		72	53	60	70	64	55	57	52	46
Utloppskanal		75	58	64	72	69	61	62	57	53
135V 124 l/s 110 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	45	52	27	45	48	46	40	37	33	31
Inloppskanal		67	48	59	65	59	50	51	45	34
Utloppskanal		69	53	63	65	63	55	57	52	41
110V 96 l/s 70 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	40	47	26	45	38	40	31	30	27	29
Inloppskanal		60	45	58	53	51	43	40	34	22
Utloppskanal		63	51	61	55	56	48	48	41	28
80V 62 l/s 30 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	34	41	28	40	30	28	24	23	27	29
Inloppskanal		54	38	54	44	41	31	25	17	11
Utloppskanal		58	40	58	45	45	37	31	22	16

LJUDDATA

LPKB 200 C1-r, LPFB 200 C1-r

230V 104 l/s 150 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	44	51	30	46	47	44	37	34	30	30
Inloppskanal		65	49	57	62	58	50	50	42	33
Utloppskanal		67	57	60	63	61	53	54	45	35
200V 76 l/s 100 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	42	49	23	47	39	39	32	30	28	29
Inloppskanal		61	50	58	54	53	44	41	34	23
Utloppskanal		64	55	61	54	54	46	45	36	25
180V 70 l/s 70 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	39	46	24	44	36	35	29	25	27	29
Inloppskanal		57	45	55	49	48	39	34	27	16
Utloppskanal		60	51	58	50	50	42	39	29	20
165V 63 l/s 55 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	35	42	28	40	34	33	27	24	27	29
Inloppskanal		56	42	54	47	45	35	30	22	13
Utloppskanal		59	49	57	48	47	39	34	26	20
135V 49 l/s 35 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	31	38	26	36	29	26	24	22	27	29
Inloppskanal		54	40	53	41	39	27	19	14	12
Utloppskanal		56	44	55	41	41	31	24	16	15

r = Reducerat varvtal genom kondensatoromkoppling

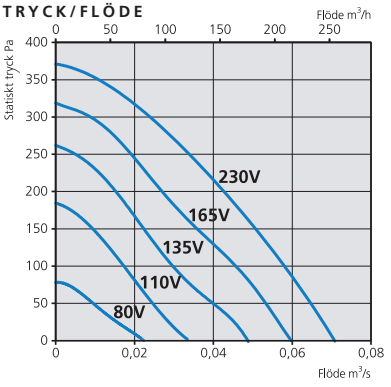
LPKB 200 C1 EC

10V 194 l/s 300 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	56	63	41	48	58	60	54	49	43	34
Inloppskanal		79	62	68	74	75	67	67	62	54
Utloppskanal		84	65	68	79	80	74	72	68	59
8V 173 l/s 230 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	54	61	35	46	58	56	49	46	39	32
Inloppskanal		75	58	65	71	71	63	63	58	49
Utloppskanal		80	62	66	74	76	70	69	64	55
7V 139 l/s 170 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	50	57	30	42	53	53	45	41	34	30
Inloppskanal		72	55	61	69	67	59	58	53	42
Utloppskanal		77	59	63	75	72	65	64	59	49
5,5V 104 l/s 95 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Omgivning	42	49	25	38	45	45	37	33	28	29
Inloppskanal		66	51	56	62	61	51	50	42	31
Utloppskanal		69	54	57	65	64	57	55	48	37

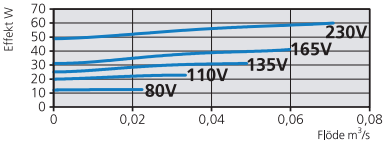
TRYCK- OCH FLÖDESDIAGRAM

LPKB 100+63 C1

TRYCK/FLÖDE

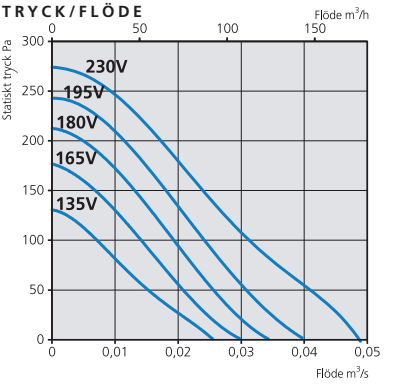


EFFEKT/FLÖDE

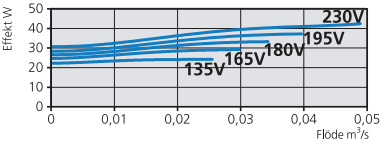


LPKB 100+63 C1-r

TRYCK/FLÖDE

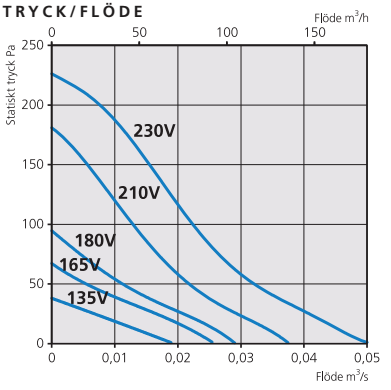


EFFEKT/FLÖDE



LPKB 100 A1, LPKB 100+2x80 A1, LPFB 100 A1

TRYCK/FLÖDE



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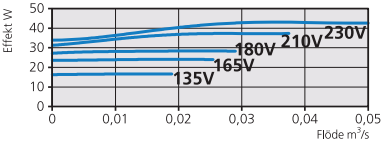
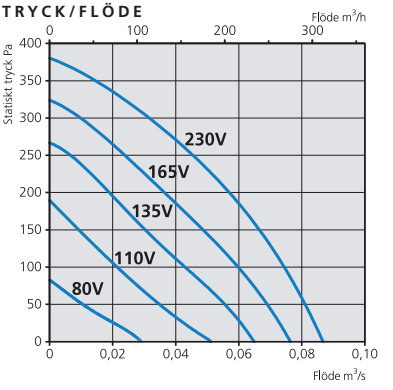
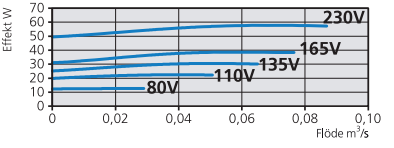


LPKB 100 C1, LPKB 100+2x63 C1, LPKB 100+2x80 C1, LPFB 100 C1

TRYCK/FLÖDE



EFFEKT/FLÖDE

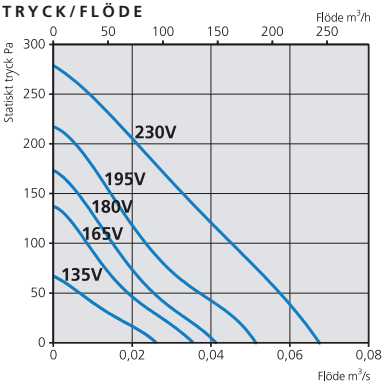


r = Reducerat varvtal genom kondensatoromkoppling

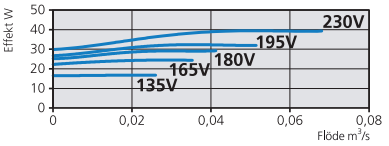
TRYCK- OCH FLÖDESDIAGRAM

LPKB 100 C1-r, LPKB 100+2x63 C1-r, LPKB 100+2x80 C1-r, LPFB 100 C1-r

TRYCK/FLÖDE

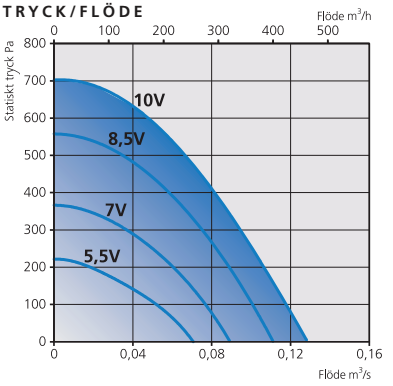


EFFEKT/FLÖDE



LPKB 100 C1 EC, LPKB 100+2x80 C1 EC

TRYCK/FLÖDE



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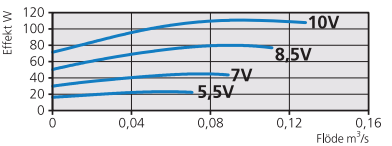
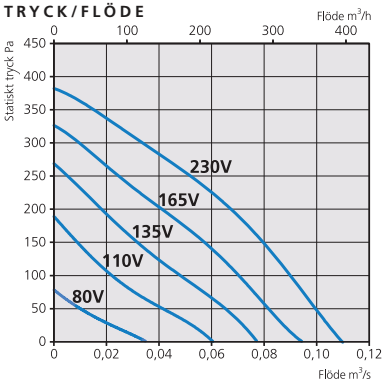


LPKB 125 C1, LPKB 125+2x100 C1, LPFB 125 C1

TRYCK/FLÖDE



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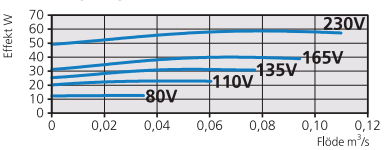
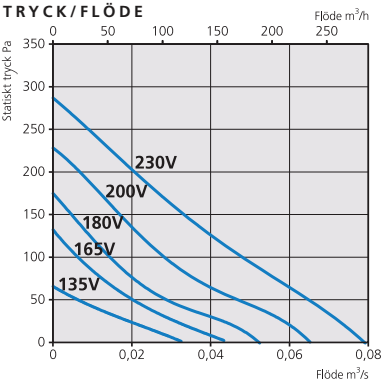


LPKB 125 C1-r, LPKB 125+2x100 C1-r, LPFB 125 C1-r

TRYCK/FLÖDE



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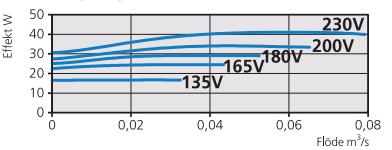
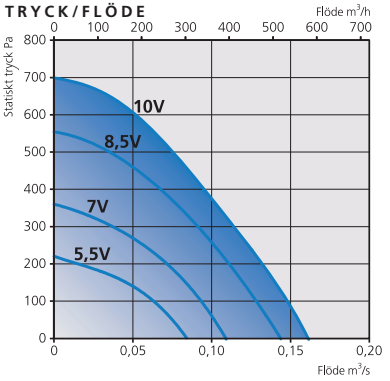


r = Reducerat varvtal genom kondensatoromkoppling

TRYCK- OCH FLöDESDIAGRAM

LPKB 125 C1 EC, LPKB 125+2x100 C1 EC

TRYCK/FLÖDE



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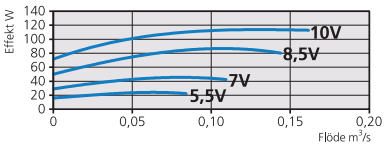
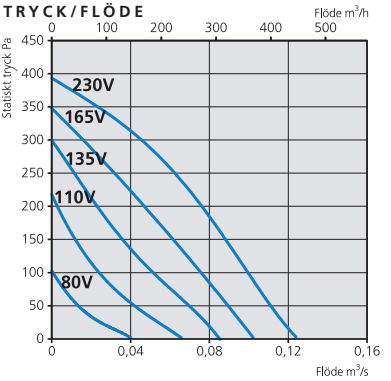


LPKB 160 B1, LPKB 160+2x125 B1, LPFB 160 B1

TRYCK/FLÖDE



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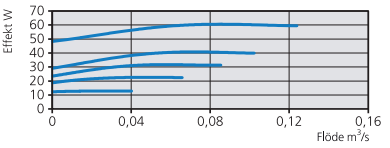
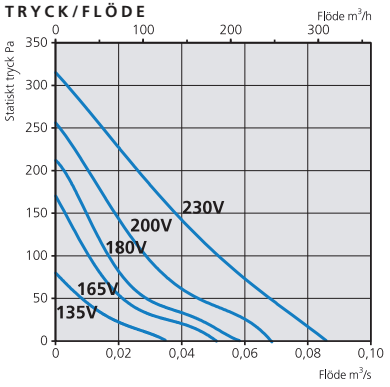


LPKB 160 B1-r, LPKB 160+2x125 B1-r, LPFB 160 B1-r

TRYCK/FLÖDE



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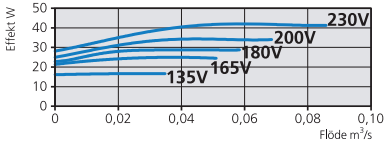
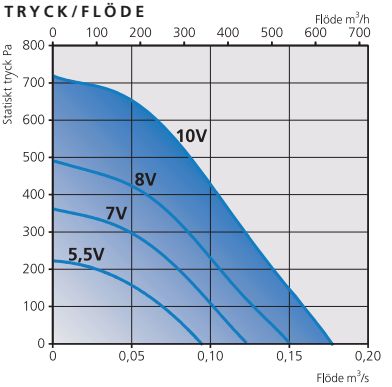


LPKB 160 B1 EC, LPKB 160+2x125 B1 EC

TRYCK/FLÖDE



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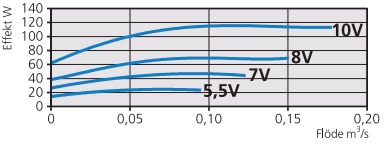
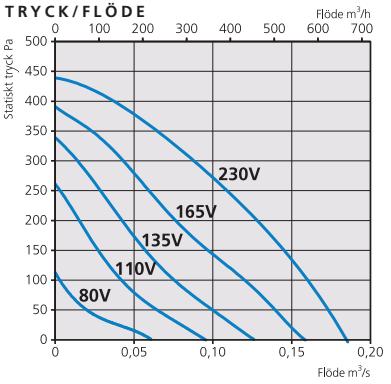


r = Reducerat varvtal genom kondensatoromkoppling

TRYCK- OCH FLöDESDIAGRAM

LPKB 160 C1, LPKB 160+2x125 C1, LPFB 160 C1

TRYCK/FLÖDE



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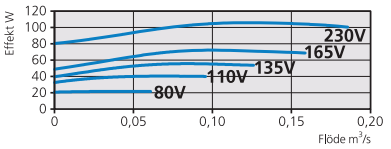
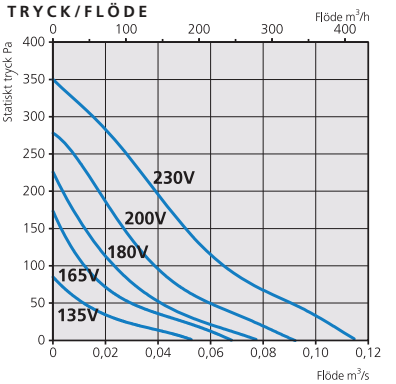


LPKB 160 C1-r, LPKB 160+2x125 C1-r, LPFB 160 C1-r

TRYCK/FLÖDE



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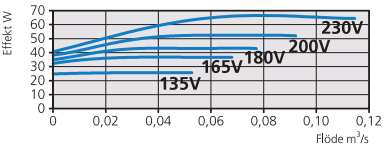
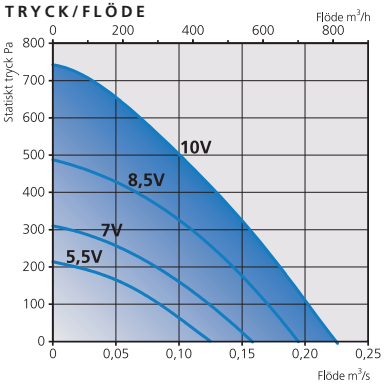
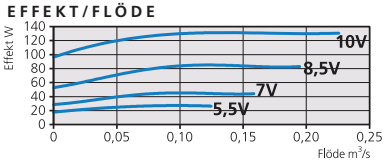


LPKB 160 C1 EC, LPKB 160+2x125 C1 EC

TRYCK/FLÖDE

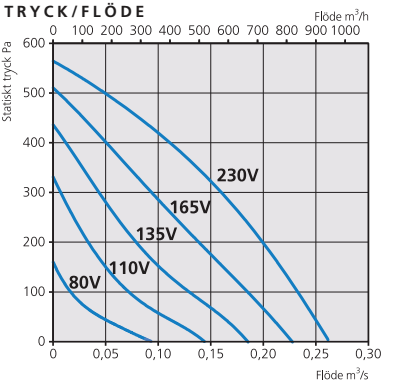


EFFEKT/FLÖDE



LPKB 200 C1, LPFB 200 C1

TRYCK/FLÖDE



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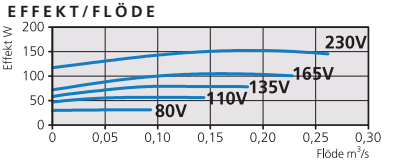
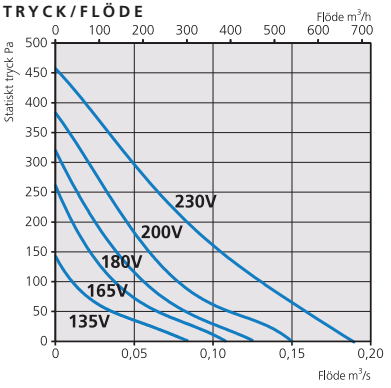


r = Reducerat varvtal genom kondensatoromkoppling

TRYCK- OCH FLöDESDIAGRAM

LPKB 200 C1-r, LPFB 200 C1-r

TRYCK/FLÖDE



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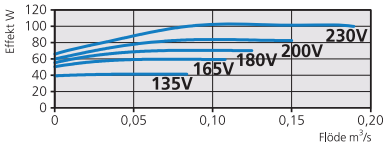
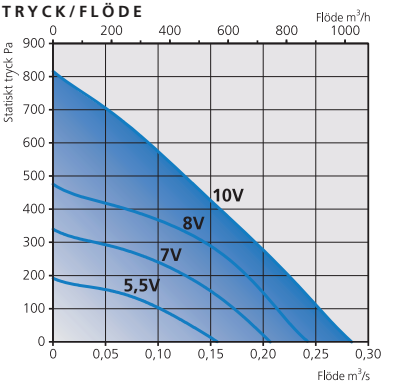


LPKB 200 C1 EC

TRYCK/FLÖDE



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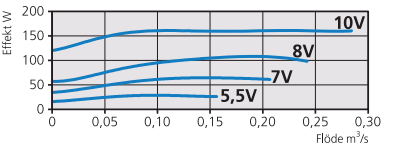
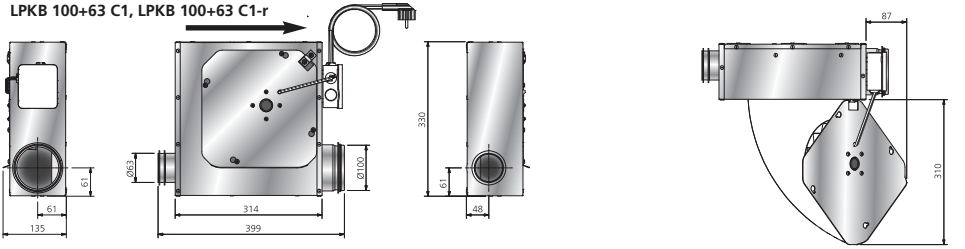


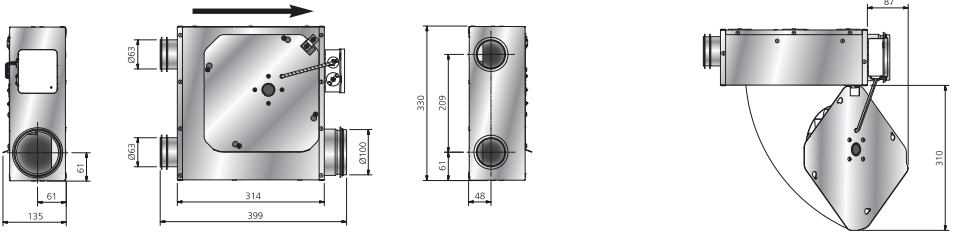
r = Reducerat varvtal genom kondensatoromkoppling

MÅTTSKISSER

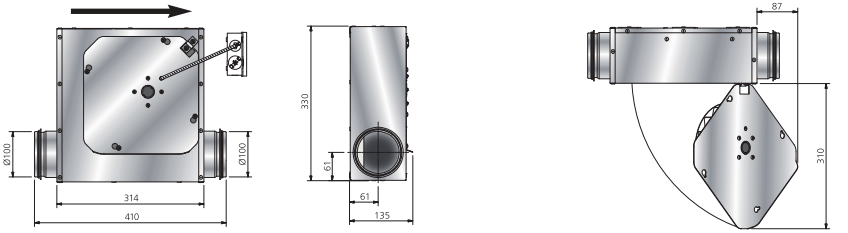
LPKB 100+63 C1, LPKB 100+63 C1-r



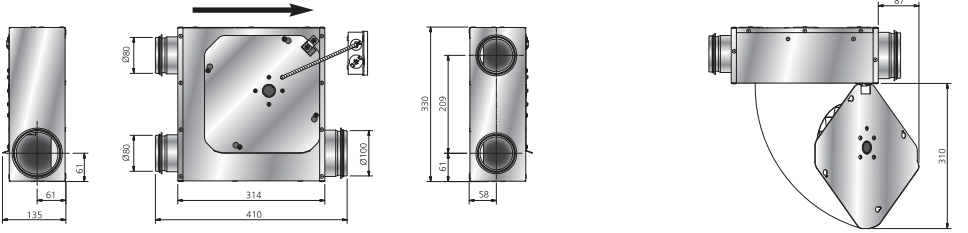
LPKB 100+2x63 C1, LPKB 100+2x63 C1-r



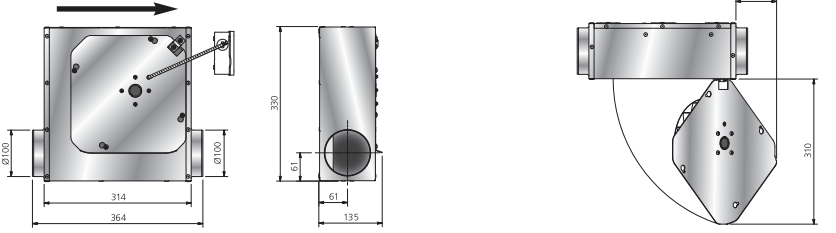
LPKB 100 A1, LPKB 100 C1, LPKB 100 C1-r



LPKB 100+2x80 A1, LPKB 100+2x80 C1, LPKB 100+2x80 C1-r

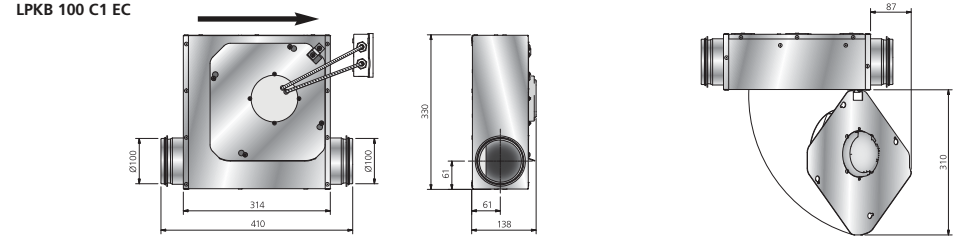


LPFB 100 A1, LPFB 100 C1, LPFB 100 C1-r

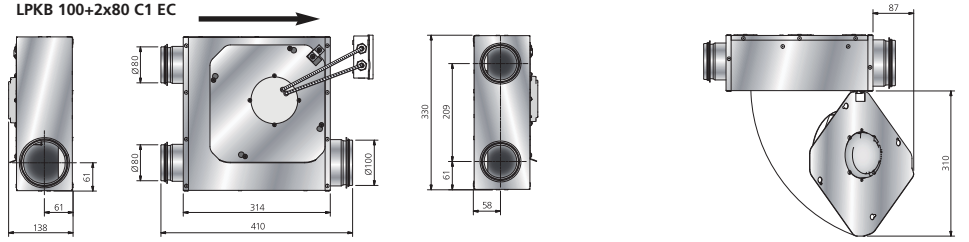


MÅTTSKISSER

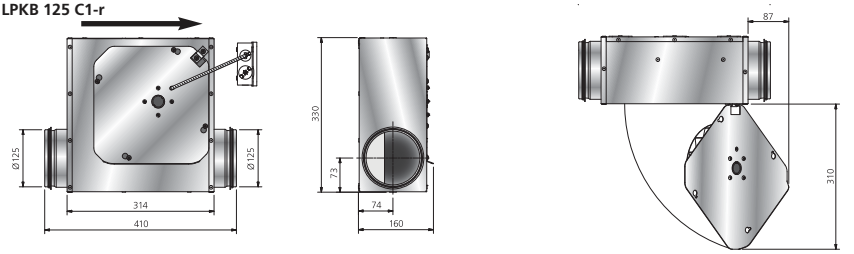
LPKB 100 C1 EC



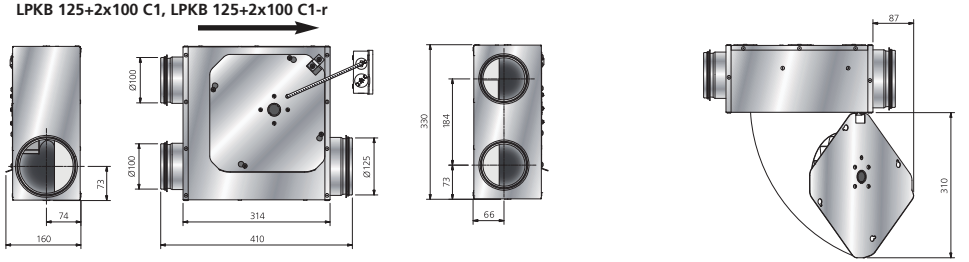
LPKB 100+2x80 C1 EC



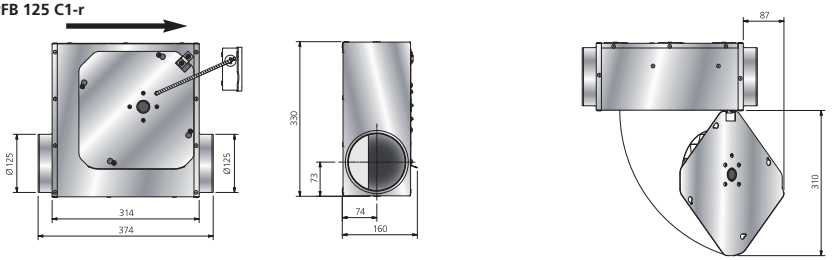
LPKB 125 C1, LPKB 125 C1-r



LPKB 125+2x100 C1, LPKB 125+2x100 C1-r

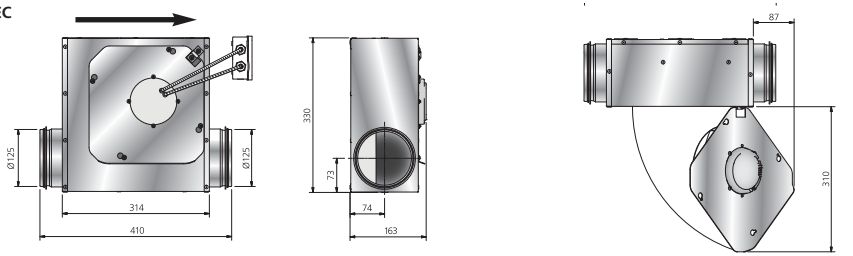


LPFB 125 C1, LPFB 125 C1-r

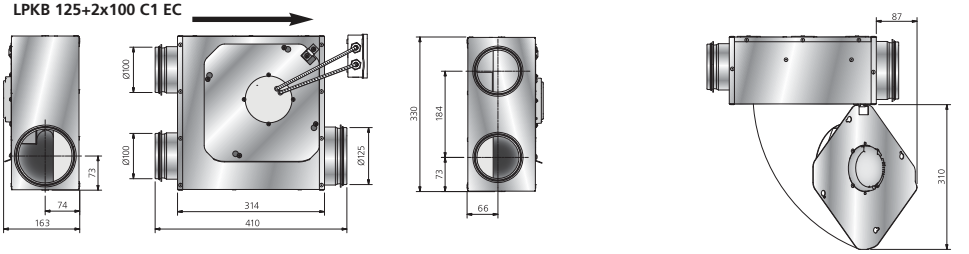


MÅTTSKISSER

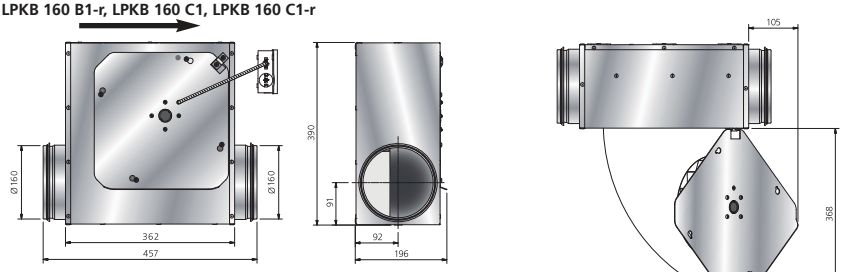
LPKB 125 C1 EC



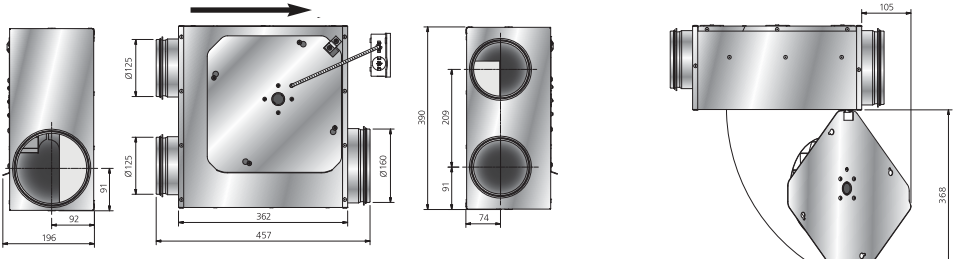
LPKB 125+2x100 C1 EC



LPKB 160 B1, LPKB 160 B1-r, LPKB 160 C1, LPKB 160 C1-r

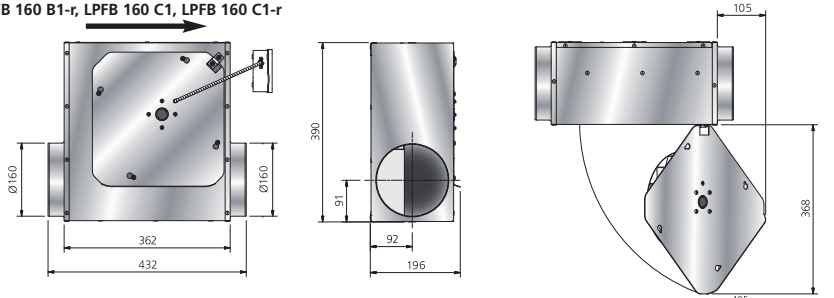


LPKB 160+2x125 B1, LPKB 160+2x125 B1-r, LPKB 160+2x125 C1, LPKB 160+2x125 C1-r

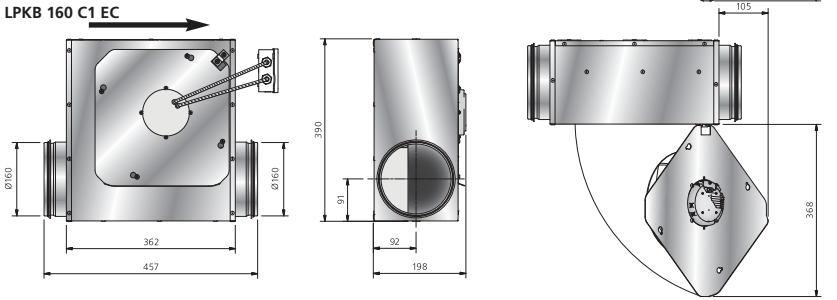


MÅTTSKISSER

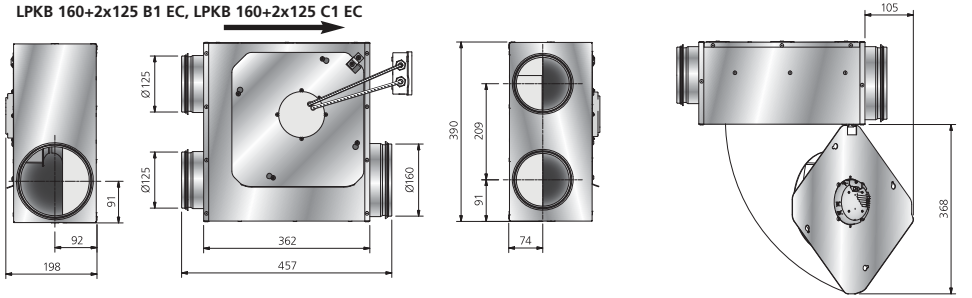
LPFB 160 B1, LPFB 160 B1-r, LPFB 160 C1, LPFB 160 C1-r



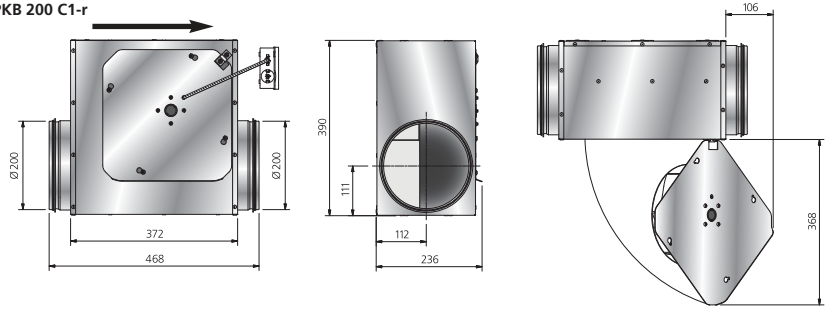
LPKB 160 B1 EC, LPKB 160 C1 EC



LPKB 160+2x125 B1 EC, LPKB 160+2x125 C1 EC

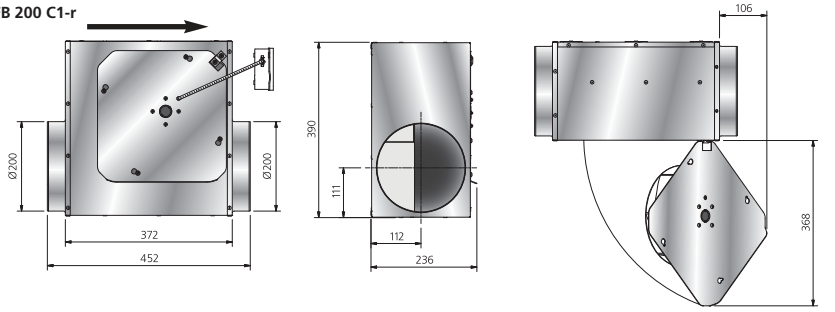


LPKB 200 C1, LPKB 200 C1-r

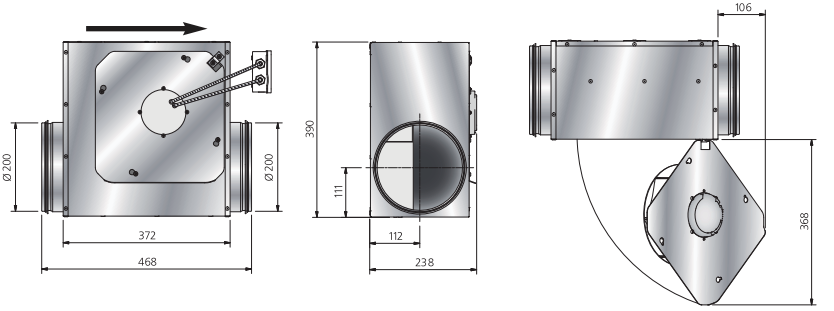


MÅTTSKISSER

LPFB 200 C1, LPFB 200 C1-r



LPKB 200 C1 EC



DRIFT

Före idrifttagande kontrollera:

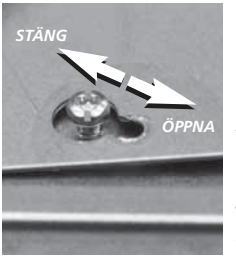
- att strömstyrkan inte överstiger den på etiketten angivna, med mer än 5%.
- att anslutningsspänningen ligger inom +6% till –10% av märkspänningen.
- att inga missljud hörs vid uppstart.

HANTERING

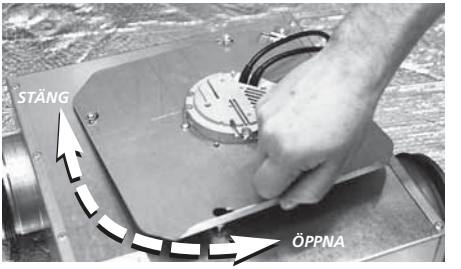
- Fläkten ska transporteras i emballage fram till installationsplatsen. Detta för att förhindra transportskador, repor och nedsmutsning.
- Beakta att fläkten kan ha vassa hörn och kanter.
- **OBS!** Styrenhetens hölje kan få temperaturer upp till 85°C (gäller EC-motor).
- **Väntetid på minst 3 minuter!** (gäller EC-motor) P.g.a interna kondensatorer i motorn finns risk för olycksfall även efter det att avstängning av enheten skett vid direkt beröring av strömförande delar eller på grund av delar som blivit strömförande på grund av fel. Styrenhetshöljet får endast tas bort eller öppnas när kraftledningen har varit avstängd i minst tre minuter.
- Undvik extrem värme eller kyla (temperaturområde för lagring och transport).
- Undvik långvarig förvaring; vi rekommenderar max ett år (konsultera tillverkaren före start vid längre förvaring).

UNDERHÅLL

- Innan service, underhåll eller reparation påbörjas måste fläkten göras spänningslös (allpolig brytning) och fläkthjulet ha stannat.
- Beakta fläktens vikt vid demontering eller vid öppnande av större fläktar för undvikande av kläm- och krosskador.
- Fläkten ska rengöras vid behov, dock minst 1 gång/år för att bibehålla kapaciteten och undvika obalans med onödiga lagerskador som följd.
- Fläktmotorns lager är underhållsfria och ska endast bytas vid behov.
- Vid rengöring av fläkten får högtryckstvätt eller starka lösningsmedel ej användas. Rengöring måste ske på ett sådant sätt att fläkthjulets balansvikter ej rubbas eller fläkthjulet skadas.
- Kontrollera att inga missljud hörs från fläkten.



Fläkten är enkel att öppna för rengöring och service med swing-out utförandet. Lossa skruvarna några varv, utan att ta ur dem. Vrid motorplattan åt höger så att skruvarna går igenom den större delen av nyckelhålen. Öppna motorplattan. Vid stängning, vrid motorplattan åt vänster så att skruvarna går i den mindre delen av nyckelhålen. Skruva åt.



FELSÖKNING

1. Kontrollera att det finns spänning till fläkten.
2. Bryt spänningen och kontrollera att fläkthjulet ej är blockerat.
3. Kontrollera termokontakt (gäller AC). Om denna löst ut bör orsaken till överhettning åtgärdas för att inte felet skall upprepas. För återställning av manuell termokontakt ska tillförd spänning brytas i ett par minuter, så att termokontakten hinner återgå. Större motorer än 1,6 A kan ha manuell återställning på motorn. För automatisk termokontakt sker återställning automatiskt efter att motorn svalnat.
4. Kontrollera att driftkondensatorn är ansluten (gäller AC), se kopplingsschema.
5. Om fläkten ändå inte fungerar bör första åtgärd vara att byta kondensator (gäller AC).
6. Om ingen av dessa åtgärder hjälper, kontakta din fläktleverantör.
7. Vid ev. reklamation skall fläkten vara rengjord, motorkabeln vara oskadad och en utförlig felbeskrivning bifogas.

GARANTI

Garantin gäller endast under förutsättning att fläkten använts enligt denna bruksanvisning och att regelbunden service utförts och dokumenterats. Garantgivaren ansvarar enbart för funktionen om godkända tillbehör används. Garantin omfattar inte fel på produkten som orsakats av tillbehör/utrustning av annat fabrikat.

EG-FÖRSÄKRAN OM ÖVERENSSTÄMMELSE

Vi intygar härmed att våra produkter uppfyller kraven i nedan angivna EU-direktiv och harmoniserande standarder.

Tillverkare: **AB C.A. ÖSTBERG**
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Tel nr 0226 - 860 00
Fax nr 0226 - 860 05
www.ostberg.com
info@ostberg.com
Org. nr 556301-2201

CE

Produkter: Kanalfläktar LPKB och LPFB

Lågspänningsdirektivet (LVD) 2006/95/EG
Harmoniserande standarder:
- EN 60335-1:2002 ”Elektriska hushållsapparater och liknande bruksföremål - Säkerhet - Del 1: Allmänna fordringar”
- EN 60335-2-80:2003 ”Elektriska hushållsapparater och liknande bruksföremål - Säkerhet - Del 2-8: Särskilda fordringar på fläktar”.

Direktivet för elektromagnetisk kompatibilitet (EMC) 2004/108/EG
Harmoniserande standarder:
- SS-EN 61000-6-1:2007 ”Elektromagnetisk kompatibilitet (EMC). Generella fordringar - Immunitet hos utrustning i bostäder, kontor, butiker och liknande miljöer”
- SS-EN 61000-6-2:2005 ”Elektromagnetisk kompatibilitet (EMC). Generella fordringar - Immunitet hos utrustning i industrimiljö”
- SS-EN 61000-6-3:2007 Elektromagnetisk kompatibilitet (EMC). Generella fordringar - Emission från utrustning i bostäder, kontor, butiker och liknande miljöer”
- SS-EN 61000-6-4:2007 Elektromagnetisk kompatibilitet (EMC). Generella fordringar - Emission från utrustning i industrimiljö”.

Maskindirektivet (MD) 2006/42/EG enligt bilaga 2A
Riskanalys är genomförd.
Installation ska ske i enlighet med bifogad bruksanvisning.

Avesta 2013-02-08

Stefan Viberg
Kvalitetschef

EC DECLARATION OF CONFORMITY

We hereby confirm that our products comply with the requirements in the following EU-directives and harmonised standards.

Manufacturer: **AB C.A. ÖSTBERG**
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Fax No +46 226 860 05
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info@ca-ostberg.se
VAT No SE556301220101

CE

Products: Duct fans LPKB, LPFB

Low Voltage Directive (LVD) 2006/95/EG
Harmonised standards:
- EN 60335-1:2002 "Household and similar electrical appliances - Part 1: General requirements"
- EN 60335-2-80:2003 "Household and similar electrical appliances - Part 2-80: Particular requirements for fans"

Directive for Electromagnetic Compatibility (EMC) 2004/108/EG
Harmonised standards:
- SS-EN 61000-6-1:2007 "Electromagnetic compatibility (EMC). Generic standards. Immunity for residential, commercial and light-industrial environments"
- SS-EN 61000-6-2:2005 "Electromagnetic compatibility (EMC). Generic standards - Immunity for industrial environments"
- SS-EN 61000-6-3:2007 "Electromagnetic compatibility (EMC). Generic standards. Emission standard for residential, commercial and light-industrial environments"
- SS-EN 61000-6-4:2007 "Electromagnetic compatibility (EMC). Generic standards - Emission standard for industrial environments"

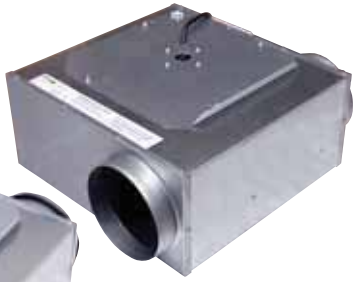
Machinery Directive (MD) 2006/42/EG as defined in appendix 2A
Risk analysis is performed.
Installation must be done in accordance with the attached "Directions for use".

Avesta 2013-02-08

Stefan Viberg
Quality Manager

This directions for use contains following products: LPKB och LPFB.

LPKB with one or two connections on the inlet side.



LPFB without rubber seals on duct connections.

DESCRIPTION

LPKB and LPFB are low profile duct fans with backward curved impellers and swing-out design. They are available with one or two connections on the inlet side.

The fans are equipped with an AC or EC external rotor induction motor with maintenance-free sealed ball-bearings.

The fan housing is manufactured from galvanised steel sheet.

LPKB and LPFB has the same benefits, but LPFB has no rubber seals on the duct connections.

APPLICATION

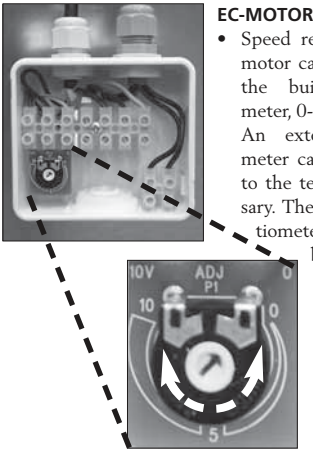
- LPKB and LPFB are accessible for the user, according to IEC 60335-2-40, to by themselves do the service and maintenance, according to this Directions for use. But before this work the unit must be currentless.
  With reservation according to IEC 60335-2-7.12 "This appliance is not intended for use by persons (including children) with reduced physical, sensory or metal capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety."
  "Children should be supervised to ensure that they do not play with the appliance."
- The fan is used for transportation of "clean" air, meaning not intended for fire-dangerous substances, explosives, grinding dust, soot, etc.
- The capacitor (only for AC motor) has finite lifetime and should be exchanged after 45.000 operation hours (about 5 years of operation) to secure maximum function. Defective capacitor can cause damage.
- To achieve maximum life time for installations in damp or cold environments, the fan should be operating continuously.
- The fan can be installed outside or in damp environments. Make sure that the fan house is equipped with drainage.
- The fan is intended to be used at the highest voltage and frequency that's stated on the label on the fan.
- The fan can be installed in any position.

INSTALLATION

- The fan must be installed according to the air direction label on the fan.
- The fan must be connected to duct or equipped with a safety grille.
- The fan should be installed in a safe way and make sure that no foreign objects are left behind.
- The fan should be installed in a way that makes service and maintenance easy. N.B.! Consider the weight and size of the fan.
- The fan should be installed in a way that vibrations not can be transfused to duct or building. To provide this, use for example a flange.
- Electrical installations must be made by an authorized electrician.
- Electrical installation must be connected to a locally situated isolator switch or by a lockable main switch.
- Control that the fan is installed and connected electrically in the right way, grounded and with motor protection.
- For single phase fans a residual current device is used (type A).
- Wiring diagrams for each product see page 32 and the Technical Data on page 33.

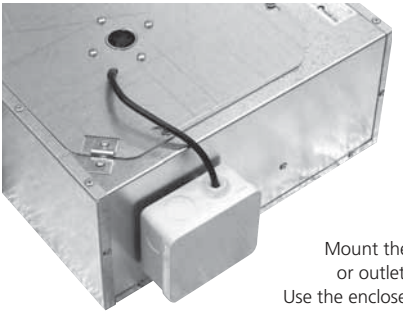
AC-MOTOR

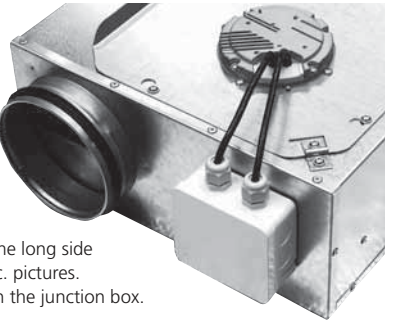
- For speed regulation of AC motor a transformer or thyristor can be connected.
- The AC motor has a built-in thermal contact.



EC-MOTOR

- Speed regulating of EC motor can be done with the built-in potentiometer, 0-10 V.
  An external potentiometer can be connected to the terminal if necessary. The internal potentiometer should then be disconnected.
- The EC motor has tachometer output one pulse per revolution.
- **EMC-COMPATIBLE INSTALLATION OF EXTERNAL CONTROL LINES:** The control cable may not be longer than 30 m. Screened control cables must be used when the cable length is longer than 20 m. When using a shielded cable connect the shielding to one side only, i.e. only to the device with the protective ground (keep cable short and with as little inductance as possible!). Pay attention to sufficient distance from power lines and motor wires to prevent interferences.
  Attention! Ensure correct polarity! Never apply line voltage to analog inputs!
- The EC motor has electronically thermal-/overvoltage protection.

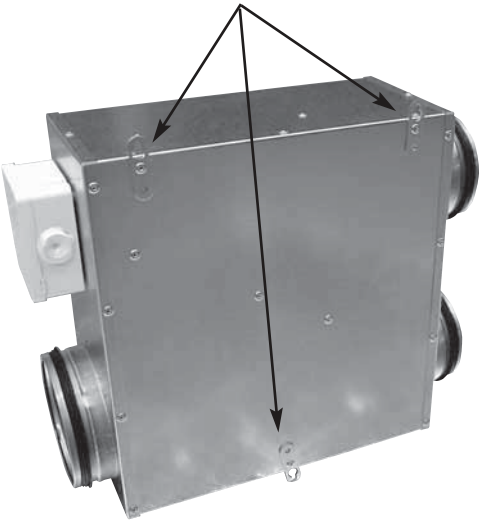




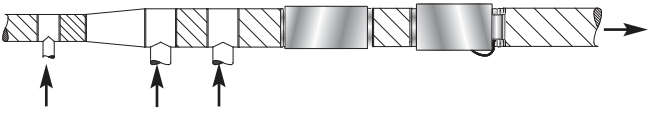
Mount the junction box on the long side
or outlet side of the fan acc. pictures.
Use the enclosed screws located in the junction box.

INSTALLATION INSTRUCTIONS

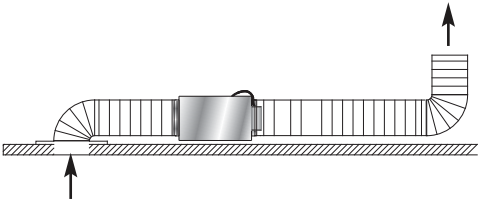
LPKB and LPFB can easily be mounted using the three brackets in any position.



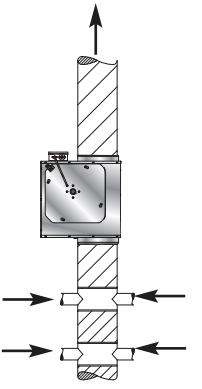
Installation instructions of exhaust systems for duct fans LPKB och LPFB.



Exhaust system



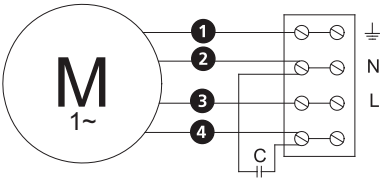
Exhaust system for ceiling



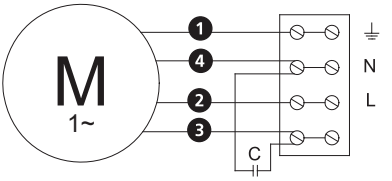
Exhaust system

WIRING DIAGRAMS

4040001
Single phase, 230V

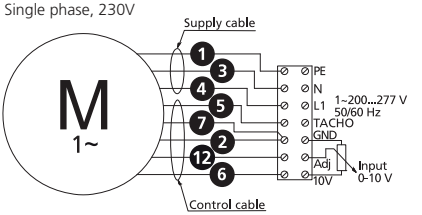


4040002
Single phase, 230 V



Ⓜ = Fan Motor
1 = Yellow/Green
2 = Black
3 = Blue
4 = Brown
5 = White
6 = Orange
7 = Grey
12 = Yellow

4040143
Single phase, 230V



TECHNICAL DATA

	Voltage V/Hz	Current A	Input W	Speed rpm	Weight kg	Wiring diagram	Capacitor µF	Insulation class, motor	Motor protection
LPKB 100+63 C1	230/50	0.26	30	2540	4.8	4040001	2	F	IP 44
LPKB 100+2x63 C1	230/50	0.25	58	2600	4.8	4040001	2	F	IP 44
LPKB 100+63 C1-r	230/50	0.19	42	1760	4,8	4040002	2	F	IP 44
LPKB 100+2x63 C1-r	230/50	0.18	39	1940	4.8	4040002	2	F	IP 44
LPKB 100 A1	230/50	0.20	43	1410	4.8	4040002	1	F	IP 44
LPKB 100+2x80 A1	"	"	"	"	"	"	"	"	"
LPFB 100 A1	"	"	"	"	"	"	"	"	"
LPKB 100 C1	230/50	0.25	58	2600	4.8	4040001	2	F	IP 44
LPKB 100+2x80 C1	"	"	"	"	"	"	"	"	"
LPFB 100 C1	"	"	"	"	"	"	"	"	"
LPKB 100 C1-r	230/50	0.18	39	1940	4.8	4040002	2	F	IP 44
LPKB 100+2x80 C1-r	"	"	"	"	"	"	"	"	"
LPFB 100 C1-r	"	"	"	"	"	"	"	"	"
LPKB 100 C1 EC	200-277/50/60	0.89	110	3770	4.8	4040143	-	F	IP 44
LPKB 100+2x80 C1 EC	"	"	"	"	"	"	"	"	"
LPKB 125 C1	230/50	0.26	59	2570	5.1	4040001	2	F	IP 44
LPKB 125+2x100 C1	"	"	"	"	"	"	"	"	"
LPFB 125 C1	"	"	"	"	"	"	"	"	"
LPKB 125 C1-r	230/50	0.18	41	1810	5.1	4040002	2	F	IP 44
LPKB 125+2x100 C1-r	"	"	"	"	"	"	"	"	"
LPFB 125 C1-r	"	"	"	"	"	"	"	"	"
LPKB 125 C1 EC	200-277/50/60	0.90	115	3780	5.0	4040143	-	F	IP 44
LPKB 125+2x100 C1 EC	"	"	"	"	"	"	"	"	"
LPKB 160 B1	230/50	0.26	61	2550	6.7	4040001	2	F	IP 44
LPKB 160+2x125 B1	"	"	"	"	"	"	"	"	"
LPFB 160 B1	"	"	"	"	"	"	"	"	"
LPKB 160 B1-r	230/50	0.19	42	1740	6.7	4040002	2	F	IP 44
LPKB 160+2x125 B1-r	"	"	"	"	"	"	"	"	"
LPFB 160 B1-r	"	"	"	"	"	"	"	"	"
LPKB 160 B1 EC	200-277/50/60	0.90	117	3640	6.7	4040143	-	F	IP 44
LPKB 160+2x125 B1 EC	"	"	"	"	"	"	"	"	"
LPKB 160 C1	230/50	0.46	106	2560	6.9	4040001	3	F	IP 44
LPKB 160+2x125 C1	"	"	"	"	"	"	"	"	"
LPFB 160 C1	"	"	"	"	"	"	"	"	"
LPKB 160 C1-r	230/50	0.29	66	1580	6.9	4040002	3	F	IP 44
LPKB 160+2x125 C1-r	"	"	"	"	"	"	"	"	"
LPFB 160 C1-r	"	"	"	"	"	"	"	"	"
LPKB 160 C1 EC	200-277/50/60	1.06	131	3220	6.7	4040143	-	F	IP 44
LPKB 160+2x125 C1 EC	"	"	"	"	"	"	"	"	"
LPKB 200 C1	230/50	0.67	153	2500	7.6	4040001	5	F	IP 44
LPFB 200 C1	"	"	"	"	"	"	"	"	"
LPKB 200 C1-r	230/50	0.46	103	1690	7.6	4040002	5	F	IP 44
LPFB 200 C1-r	"	"	"	"	"	"	"	"	"
LPKB 200 C1 EC	200-277/50/60	1.27	162	2870	7.4	4040143	-	F	IP 44

The sound data have been compiled by means of sound measurements methods as follows:
Pressure and drop: ISO 5801.
Determination of acoustic sound level in duct: EN ISO 5136.
Determination of acoustic sound level in reverberation room: EN ISO 3741.

DESIGNATIONS

$L_{wA}Tot$: Total A-weighted sound power level dB(A) (ref 10^{-12}W)= the sum of the sound power level in the octave ranges.

L_{wA}: A-weighted sound power level in octave range dB(A)(ref 10^{-12}W).

L_{pA}: A-weighted sound pressure level in dB(A) according to normed A-weightening correction and relating to an effective absorption area of 20 m^2 with half spherical translation at a distance of 3 metres.

SOUND DATA

LPKB 100+63 C1, LPKB 100+2x63 C1

230V 66 l/s 150 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	46	53	33	37	50	49	44	41	35	31
Inlet		68	53	60	61	64	57	55	49	44
Outlet		70	56	60	63	66	64	59	54	48
165V 56 l/s 115 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	43	50	30	34	47	45	40	37	32	30
Inlet		64	49	56	59	60	53	51	44	38
Outlet		67	53	58	62	62	60	55	50	42
135V 48 l/s 80 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	40	47	29	30	44	41	36	32	29	29
Inlet		60	45	52	56	56	49	46	37	30
Outlet		65	50	54	62	58	55	50	45	35
110V 34 l/s 50 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	33	40	24	27	34	37	29	29	28	29
Inlet		53	40	47	46	50	42	38	27	21
Outlet		56	45	50	47	52	48	43	34	26
80V 20 l/s 25 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	28	35	22	24	29	25	23	23	28	29
Inlet		43	32	37	37	39	30	21	9	11
Outlet		46	37	42	36	41	36	26	15	16

LPKB 100+63 C1-r, LPKB 100+2x63 C1-r

230V 31 l/s 150 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	38	45	29	32	40	39	36	36	30	30
Inlet		62	45	54	59	55	50	47	39	32
Outlet		64	52	57	60	55	53	49	42	34
195V 29 l/s 70 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	33	40	25	29	34	34	29	32	28	29
Inlet		53	41	47	46	50	43	38	28	22
Outlet		60	47	59	47	50	47	41	33	25
180V 24 l/s 55 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	30	37	25	25	31	32	27	27	28	29
Inlet		50	38	45	42	46	39	33	22	18
Outlet		52	43	48	41	46	42	35	25	21
165V 21 l/s 40 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	29	36	23	26	31	28	25	24	28	29
Inlet		47	34	42	39	42	35	28	15	15
Outlet		49	41	45	38	42	39	30	18	18
135V 16 l/s 25 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	27	34	23	21	26	23	23	23	28	29
Inlet		40	29	34	33	36	27	16	6	11
Outlet		43	36	40	32	36	31	18	8	14

r = Wiring diagram for reduced speed (rpm)

SOUND DATA

LPKB 100 A1, LPKB 100+2x80 A1, LPFB 100 A1

230V 23 l/s 90 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	33	40	26	29	35	35	31	29	28	29
Inlet		54	42	48	46	50	44	40	31	23
Outlet		56	47	50	51	49	47	41	33	25
210V 19 l/s 60 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	30	37	24	26	31	31	27	26	28	29
Inlet		49	37	44	41	45	39	32	21	18
Outlet		50	42	45	39	44	41	33	23	20
180V 15 l/s 40 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	28	35	23	22	28	26	25	23	28	29
Inlet		43	32	37	36	39	32	22	10	13
Outlet		45	37	40	34	38	34	23	12	15
165V 13 l/s 30 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	27	34	22	21	28	23	24	23	28	29
Inlet		40	29	34	34	36	29	17	7	11
Outlet		542	34	39	32	35	31	18	8	14
135V 9 l/s 20 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	26	33	22	19	25	20	23	23	27	28
Inlet		34	24	25	31	28	18	7	5	7
Outlet		35	30	29	28	28	21	9	5	11

LPKB 100 C1, LPKB 100+2x80 C1, LPFB 100 C1

230V 66 l/s 150 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	46	53	33	37	50	49	44	41	35	31
Inlet		68	53	60	61	64	57	55	49	44
Outlet		70	56	60	63	66	64	59	54	48
165V 56 l/s 115 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	43	50	30	34	47	45	40	37	32	30
Inlet		64	49	56	59	60	53	51	44	38
Outlet		67	53	58	62	62	60	55	50	42
135V 48 l/s 80 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	40	47	29	30	44	41	36	32	29	29
Inlet		60	45	52	56	56	49	46	37	30
Outlet		65	50	54	62	58	55	50	45	35
110V 34 l/s 50 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	33	40	24	27	34	37	29	29	28	29
Inlet		53	40	47	46	50	42	38	27	21
Outlet		56	45	50	47	52	48	43	34	26
80V 20 l/s 25 Pa	**L_{pA}**	**L_{wA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	28	35	22	24	29	25	23	23	28	29
Inlet		43	32	37	37	39	30	21	9	11
Outlet		46	37	42	36	41	36	26	15	16

SOUND DATA

LPKB 100 C1-r, LPKB 100+2x80 C1-r, LPFB 100 C1-r

230V 31 l/s 150 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	38	45	29	32	40	39	36	36	30	30
Inlet		62	45	54	59	55	50	47	39	32
Outlet		64	52	57	60	55	53	49	42	34
195V 29 l/s 70 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	33	40	25	29	34	34	29	32	28	29
Inlet		53	41	47	46	50	43	38	28	22
Outlet		60	47	59	47	50	47	41	33	25
180V 24 l/s 55 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	30	37	25	25	31	32	27	27	28	29
Inlet		50	38	45	42	46	39	33	22	18
Outlet		52	43	48	41	46	42	35	25	21
165V 21 l/s 40 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	29	36	23	26	31	28	25	24	28	29
Inlet		47	34	42	39	42	35	28	15	15
Outlet		49	41	45	38	42	39	30	18	18
135V 16 l/s 25 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	27	34	23	21	26	23	23	23	28	29
Inlet		40	29	34	33	36	27	16	6	11
Outlet		43	36	40	32	36	31	18	8	14

r = Wiring diagram for reduced speed (rpm)

LPKB 100 C1 EC, LPKB 100+2x80 C1 EC

10V 90 l/s 325 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	57	64	45	46	57	61	55	53	48	40
Inlet		77	61	66	68	75	68	67	61	55
Outlet		81	66	66	68	77	75	72	67	60
8,5V 80 l/s 260 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	54	61	37	48	55	58	51	50	45	37
Inlet		79	63	65	67	78	66	64	58	51
Outlet		79	64	63	66	75	73	69	64	56
7V 65 l/s 170 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	48	55	33	36	51	51	46	44	38	32
Inlet		69	51	59	62	66	60	58	51	43
Outlet		73	60	59	62	68	67	63	57	48
5,5V 50 l/s 105 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	44	51	29	34	47	47	44	37	32	30
Inlet		64	46	54	60	60	54	52	43	34
Outlet		67	52	53	61	63	60	56	49	38

SOUND DATA

LPKB 125 C1, LPKB 125+2x100 C1, LPFB 125 C1

230V 79 l/s 150 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	47	54	33	37	50	51	46	41	35	31
Inlet		69	51	60	63	66	57	54	51	46
Outlet		71	56	60	64	67	64	59	56	48
165V 67 l/s 110 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	43	50	28	34	46	46	41	37	31	29
Inlet		65	48	57	59	61	53	49	46	40
Outlet		68	52	57	64	63	59	54	51	42
135V 55 l/s 80 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	39	46	27	31	41	42	37	33	29	29
Inlet		61	44	52	55	57	48	45	40	33
Outlet		63	48	54	57	58	54	50	45	35
110V 43 l/s 45 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	33	40	24	30	34	36	30	27	28	29
Inlet		54	40	50	45	50	41	36	28	22
Outlet		56	43	50	47	51	47	41	33	25
80V 24 l/s 20 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	28	35	23	22	28	27	24	24	28	29
Inlet		43	30	38	36	40	28	19	9	12
Outlet		56	43	50	47	52	46	41	33	25

LPKB 125 C1-r, LPKB 125+2x100 C1-r, LPFB 125 C1-r

230V 49 l/s 100 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	38	45	26	32	40	40	35	31	28	29
Inlet		60	45	52	54	56	47	43	38	32
Outlet		61	48	52	57	56	52	47	42	33
200V 40 l/s 65 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	34	41	24	33	36	36	30	28	28	29
Inlet		54	40	49	47	51	41	37	29	24
Outlet		56	44	49	48	51	47	41	34	26
180V 31 l/s 45 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	30	37	24	26	30	31	27	25	28	29
Inlet		50	36	44	42	46	37	30	21	19
Outlet		52	39	47	43	46	42	34	26	21
165V 26 l/s 35 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	29	36	23	25	29	28	25	24	27	29
Inlet		47	33	41	39	43	33	25	15	16
Outlet		48	37	42	39	43	38	28	20	18
135V 21 l/s 20 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	27	34	23	22	25	23	23	23	27	29
Inlet		41	28	35	35	37	24	14	7	12
Outlet		44	32	42	34	36	29	16	9	13

r = Wiring diagram for reduced speed (rpm)

SOUND DATA

LPKB 125 C1 EC, LPKB 125+2x100 C1 EC

10V 113 l/s 300 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	58	65	41	48	55	63	57	54	47	39
Inlet		78	57	67	68	76	68	67	64	56
Outlet		82	66	68	69	78	76	72	69	61
8,5V 103 l/s 240 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	57	64	40	46	52	62	54	52	45	37
Inlet		78	56	65	66	77	66	64	61	53
Outlet		80	62	66	68	77	74	69	66	58
7V 81 l/s 160 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	50	57	32	39	51	53	49	46	38	32
Inlet		71	52	61	65	68	61	58	55	45
Outlet		74	60	62	64	69	67	63	60	50
5,5V 62 l/s 100 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	45	52	28	36	48	48	44	39	32	30
Inlet		66	47	55	60	62	54	51	46	36
Outlet		68	51	55	64	64	61	56	52	40

LPKB 160 B1, LPKB 160+2x125 B1, LPFB 160 B1

230V 83 l/s 170 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	46	53	32	39	48	50	41	39	34	31
Inlet		68	52	59	65	62	57	51	52	45
Outlet		70	57	59	65	66	60	56	55	47
165V 69 l/s 120 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	42	49	28	35	44	46	37	35	30	29
Inlet		65	48	53	62	58	52	46	45	38
Outlet		66	53	55	62	62	55	52	50	40
135V 58 l/s 80 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	37	44	26	31	39	41	32	29	28	29
Inlet		59	44	49	56	53	47	40	37	29
Outlet		61	49	51	56	56	49	46	42	32
110V 42 l/s 50 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	32	39	25	28	32	35	26	25	28	29
Inlet		52	38	45	47	47	40	32	27	18
Outlet		55	45	47	49	50	42	39	32	23
80V 28 l/s 20 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	27	34	22	22	26	25	23	23	27	29
Inlet		44	32	38	40	36	28	16	9	10
Outlet		44	35	39	39	38	30	20	13	13

SOUND DATA

LPKB 160 B1-r, LPKB 160+2x125 B1-r, LPFB 160 B1-r

230V 51 l/s 100 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	37	44	27	33	38	40	31	29	28	29
Inlet		59	45	50	56	53	47	40	38	30
Outlet		60	50	51	55	55	48	45	41	31
200V 40 l/s 65 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	32	39	24	30	33	35	27	27	28	29
Inlet		53	40	47	48	48	41	33	28	20
Outlet		55	48	47	48	50	42	38	32	23
180V 33 l/s 45 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	29	36	23	26	30	30	24	24	27	29
Inlet		49	37	44	44	43	36	26	20	15
Outlet		50	44	43	44	44	37	30	24	18
165V 28 l/s 35 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	28	35	23	26	28	27	23	23	27	29
Inlet		47	35	41	42	40	33	21	15	13
Outlet		47	41	41	41	41	34	26	19	16
135V 18 l/s 25 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	27	34	23	21	25	22	22	23	27	28
Inlet		41	31	37	37	34	25	12	7	9
Outlet		41	35	36	35	34	26	15	9	12

r = Wiring diagram for reduced speed (rpm)

LPKB 160 B1 EC, LPKB 160+2x125 B1 EC

10V 122 l/s 300 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	58	65	38	50	52	64	53	51	45	38
Inlet		78	62	67	70	74	70	63	64	56
Outlet		80	64	66	71	77	71	70	69	60
8V 101 l/s 220 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	55	62	39	48	52	61	50	48	42	35
Inlet		74	56	62	67	71	66	59	59	51
Outlet		77	61	63	68	73	68	66	64	55
7V 88 l/s 165 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	48	55	32	41	49	53	45	43	37	32
Inlet		70	53	60	65	65	62	55	55	45
Outlet		73	59	61	66	69	64	62	60	50
5,5V 69 l/s 100 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	44	51	28	36	45	48	40	36	31	30
Inlet		67	50	61	63	60	55	48	47	35
Outlet		67	53	58	62	63	57	55	52	39

SOUND DATA

LPKB 160 C1, LPKB 160+2x125 C1, LPFB 160 C1

230V 115 l/s 240 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	51	58	34	43	53	55	48	44	40	32
Inlet		74	53	61	69	71	64	56	57	46
Outlet		76	59	61	68	74	66	63	63	50
165V 86 l/s 170 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	47	54	30	40	49	51	43	40	34	29
Inlet		70	50	57	65	66	59	51	51	39
Outlet		71	56	57	65	68	61	58	57	43
135V 69 l/s 115 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	42	49	26	36	45	44	39	35	29	29
Inlet		64	47	54	61	59	53	45	43	30
Outlet		65	51	52	61	61	54	51	48	33
110V 53 l/s 70 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	36	43	23	35	38	38	34	29	27	29
Inlet		58	42	50	55	53	47	37	33	18
Outlet		59	46	49	55	54	48	44	39	23
80V 35 l/s 30 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	30	37	21	27	29	31	31	24	27	29
Inlet		48	36	41	41	43	38	23	15	9
Outlet		48	39	41	42	44	39	28	21	14

LPKB 160 C1-r, LPKB 160+2x125 C1-r, LPFB 160 C1-r

230V 58 l/s 120 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	40	47	26	37	44	42	38	33	29	29
Inlet		63	47	55	59	58	52	44	42	27
Outlet		63	49	54	59	59	53	49	46	30
200V 47 l/s 75 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	36	43	24	34	39	37	33	28	27	29
Inlet		58	42	51	54	52	46	36	32	17
Outlet		58	45	51	53	53	47	42	36	20
180V 39 l/s 55 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	34	41	23	32	36	34	32	26	27	29
Inlet		54	39	50	48	48	43	30	24	12
Outlet		54	42	49	48	48	43	35	29	15
165V 35 l/s 45 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	32	39	22	29	34	34	32	24	26	29
Inlet		52	38	48	45	46	40	26	19	10
Outlet		52	41	47	45	46	40	31	24	13
135V 23 l/s 30 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	29	36	23	27	30	29	27	23	26	29
Inlet		46	35	42	38	41	36	17	12	8
Outlet		46	37	43	39	40	34	21	15	11

r = Wiring diagram for reduced speed (rpm)

SOUND DATA

LPKB 160 C1 EC, LPKB 160+2x125 C1 EC

10V 154 l/s 300 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	57	64	37	49	57	62	54	53	48	38
Inlet		79	57	66	73	77	69	65	65	55
Outlet		82	63	67	74	78	72	73	71	60
8,5V 131 l/s 230 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	53	60	34	47	55	56	51	49	44	34
Inlet		75	57	63	71	71	66	62	61	50
Outlet		78	62	65	72	74	69	69	67	55
7V 110 l/s 145 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	49	56	29	41	50	53	46	44	36	30
Inlet		70	52	63	66	65	60	57	53	42
Outlet		73	57	62	67	68	63	64	59	46
5,5V 83 l/s 100 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	44	51	25	37	45	47	42	40	30	29
Inlet		66	48	56	61	61	56	52	46	34
Outlet		68	53	56	62	63	59	60	52	39

LPKB 200 C1, LPFB 200 C1

230V 180 l/s 250 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	54	61	32	46	58	56	49	46	41	38
Inlet		74	57	63	70	70	61	61	57	52
Outlet		78	62	64	73	74	67	67	62	57
165V 151 l/s 175 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	49	56	30	45	52	50	43	41	36	33
Inlet		72	53	60	70	64	55	57	52	46
Outlet		75	58	64	72	69	61	62	57	53
135V 124 l/s 110 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	45	52	27	45	48	46	40	37	33	31
Inlet		67	48	59	65	59	50	51	45	34
Outlet		69	53	63	65	63	55	57	52	41
110V 96 l/s 70 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	40	47	26	45	38	40	31	30	27	29
Inlet		60	45	58	53	51	43	40	34	22
Outlet		63	51	61	55	56	48	48	41	28
80V 62 l/s 30 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	34	41	28	40	30	28	24	23	27	29
Inlet		54	38	54	44	41	31	25	17	11
Outlet		58	40	58	45	45	37	31	22	16

SOUND DATA

LPKB 200 C1-r, LPFB 200 C1-r

230V 104 l/s 150 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	44	51	30	46	47	44	37	34	30	30
Inlet		65	49	57	62	58	50	50	42	33
Outlet		67	57	60	63	61	53	54	45	35
200V 76 l/s 100 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	42	49	23	47	39	39	32	30	28	29
Inlet		61	50	58	54	53	44	41	34	23
Outlet		64	55	61	54	54	46	45	36	25
180V 70 l/s 70 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	39	46	24	44	36	35	29	25	27	29
Inlet		57	45	55	49	48	39	34	27	16
Outlet		60	51	58	50	50	42	39	29	20
165V 63 l/s 55 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	35	42	28	40	34	33	27	24	27	29
Inlet		56	42	54	47	45	35	30	22	13
Outlet		59	49	57	48	47	39	34	26	20
135V 49 l/s 35 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	31	38	26	36	29	26	24	22	27	29
Inlet		54	40	53	41	39	27	19	14	12
Outlet		56	44	55	41	41	31	24	16	15

r = Wiring diagram for reduced speed (rpm)

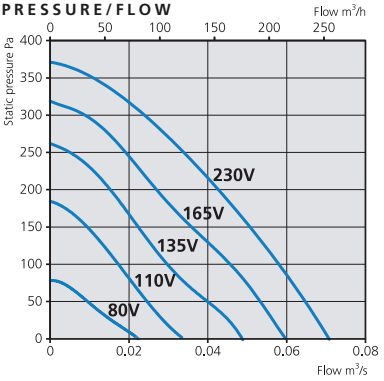
LPKB 200 C1 EC

10V 194 l/s 300 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	56	63	41	48	58	60	54	49	43	34
Inlet		79	62	68	74	75	67	67	62	54
Outlet		84	65	68	79	80	74	72	68	59
8V 173 l/s 230 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	54	61	35	46	58	56	49	46	39	32
Inlet		75	58	65	71	71	63	63	58	49
Outlet		80	62	66	74	76	70	69	64	55
7V 139 l/s 170 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	50	57	30	42	53	53	45	41	34	30
Inlet		72	55	61	69	67	59	58	53	42
Outlet		77	59	63	75	72	65	64	59	49
5,5V 104 l/s 95 Pa	**L_{pA}**	**L_{WA} tot dB (A)**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Environment	42	49	25	38	45	45	37	33	28	29
Inlet		66	51	56	62	61	51	50	42	31
Outlet		69	54	57	65	64	57	55	48	37

PRESSURE AND FLOW DIAGRAMS

LPKB 100+63 C1

PRESSURE/FLOW



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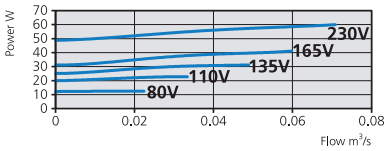
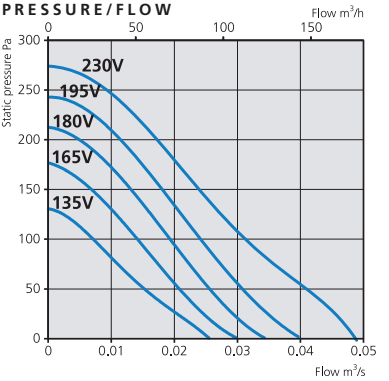


LPKB 100+63 C1-r

PRESSURE/FLOW



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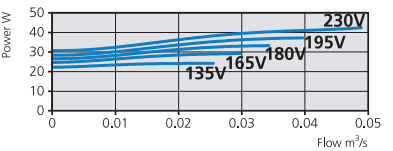
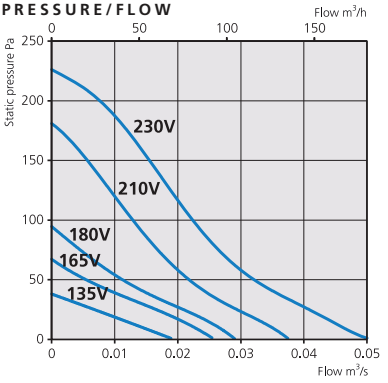


LPKB 100 A1, LPKB 100+2x80 A1, LPFB 100 A1

PRESSURE/FLOW



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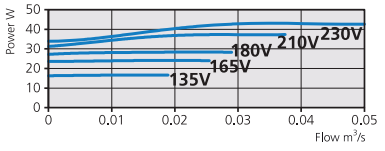
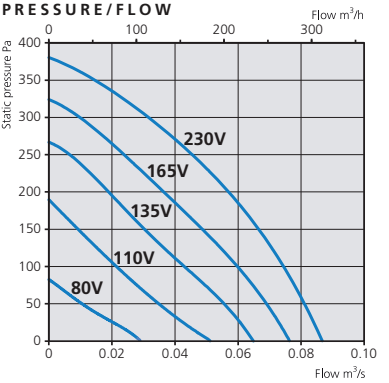


LPKB 100 C1, LPKB 100+2x63 C1, LPKB 100+2x80 C1, LPFB 100 C1

PRESSURE/FLOW



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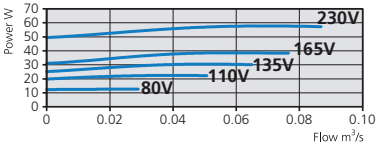
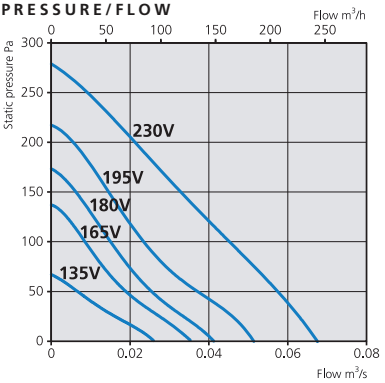


r = Wiring diagram for reduced speed (rpm)

PRESSURE AND FLOW DIAGRAMS

LPKB 100 C1-r, LPKB 100+2x63 C1-r, LPKB 100+2x80 C1-r, LPFB 100 C1-r

PRESSURE/FLOW



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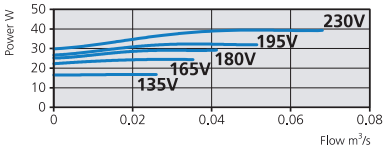
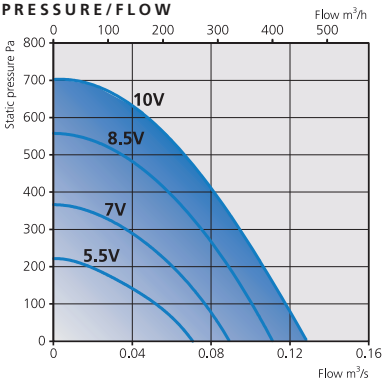


LPKB 100 C1 EC, LPKB 100+2x80 C1 EC

PRESSURE/FLOW



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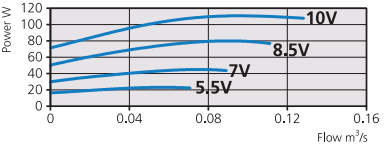
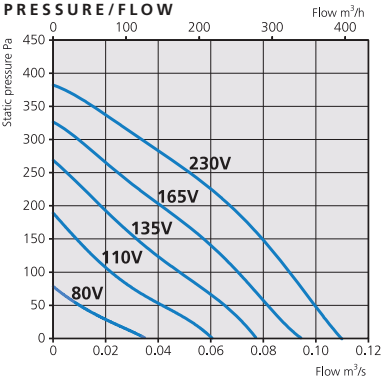


LPKB 125 C1, LPKB 125+2x100 C1, LPFB 125 C1

PRESSURE/FLOW



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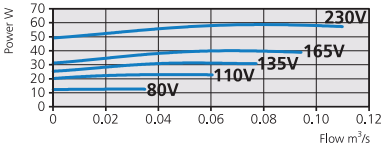
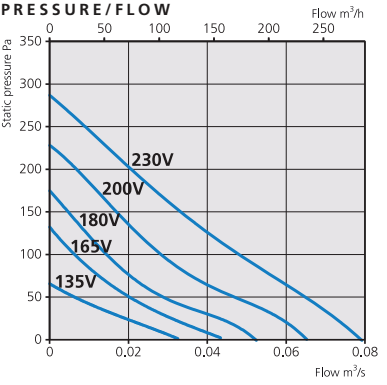


LPKB 125 C1-r, LPKB 125+2x100 C1-r, LPFB 125 C1-r

PRESSURE/FLOW



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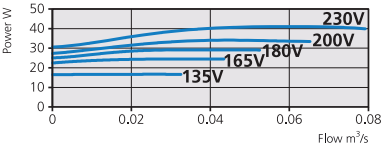
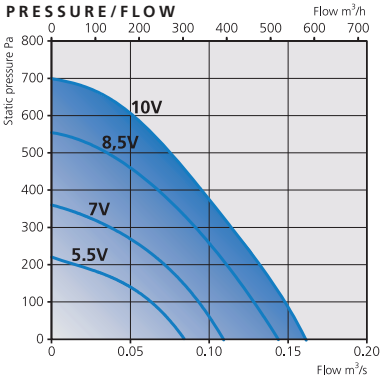


r = Wiring diagram for reduced speed (rpm)

PRESSURE AND FLOW DIAGRAMS

LPKB 125 C1 EC, LPKB 125+2x100 C1 EC

PRESSURE/FLOW



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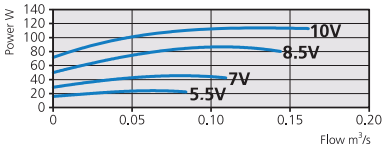
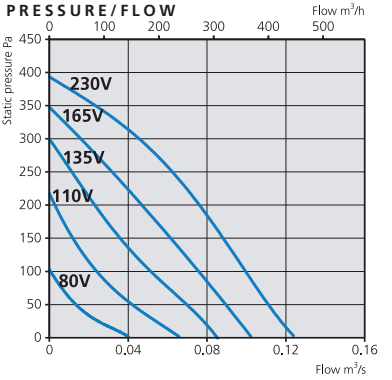


LPKB 160 B1, LPKB 160+2x125 B1, LPFB 160 B1

PRESSURE/FLOW



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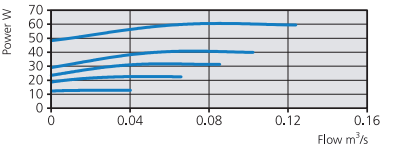
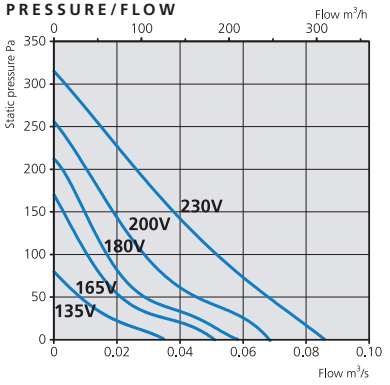


LPKB 160 B1-r, LPKB 160+2x125 B1-r, LPFB 160 B1-r

PRESSURE/FLOW



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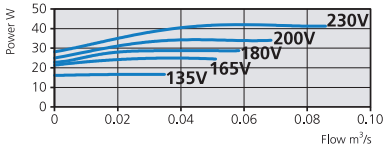
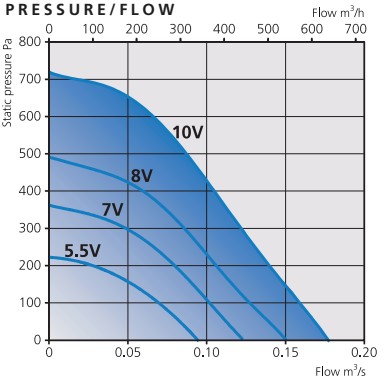


LPKB 160 B1 EC, LPKB 160+2x125 B1 EC

PRESSURE/FLOW



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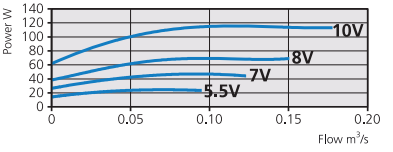
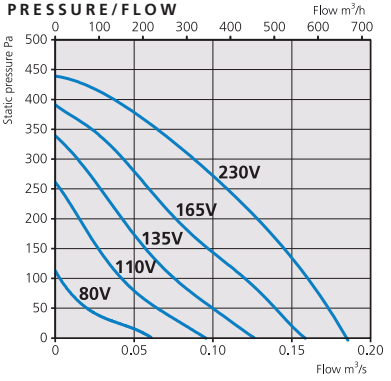


r = Wiring diagram for reduced speed (rpm)

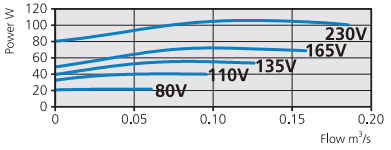
PRESSURE AND FLOW DIAGRAMS

LPKB 160 C1, LPKB 160+2x125 C1, LPFB 160 C1

PRESSURE/FLOW

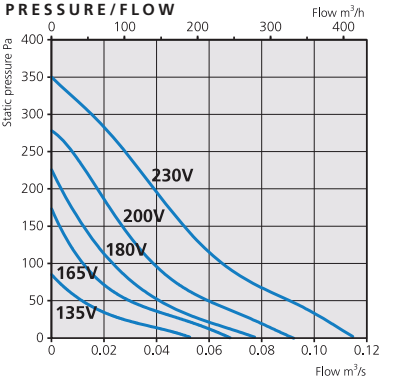


INPUT/FLOW

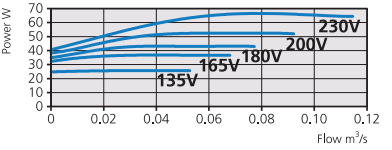


LPKB 160 C1-r, LPKB 160+2x125 C1-r, LPFB 160 C1-r

PRESSURE/FLOW

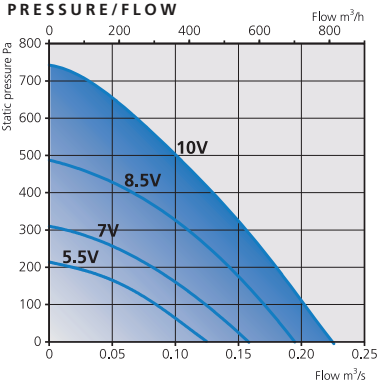


INPUT/FLOW

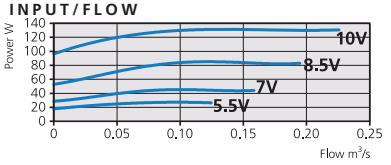


LPKB 160 C1 EC, LPKB 160+2x125 C1 EC

PRESSURE/FLOW

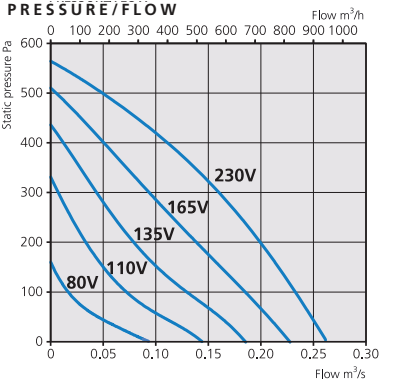


INPUT/FLOW

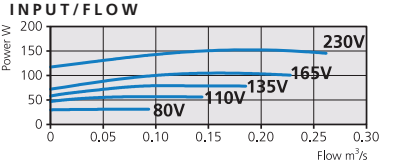


LPKB 200 C1, LPFB 200 C1

PRESSURE/FLOW



INPUT/FLOW

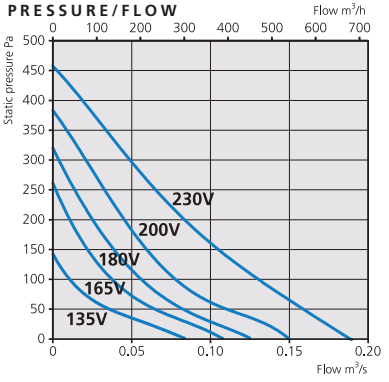


r = Wiring diagram for reduced speed (rpm)

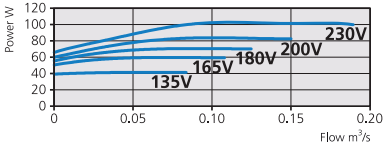
PRESSURE AND FLOW DIAGRAMS

LPKB 200 C1-r, LPFB 200 C1-r

PRESSURE/FLOW

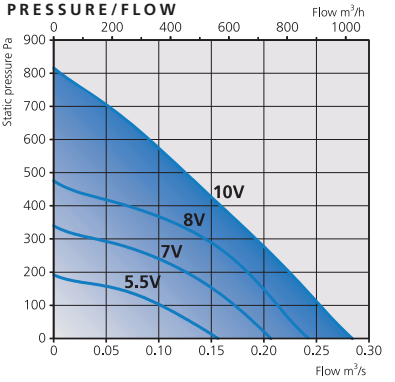


INPUT/FLOW

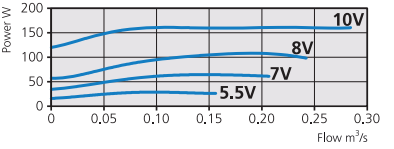


LPKB 200 C1 EC

PRESSURE/FLOW



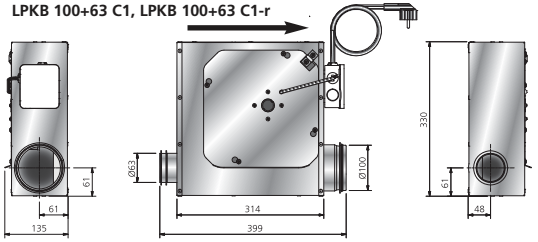
INPUT/FLOW

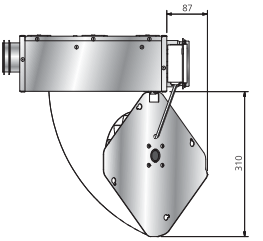


r = Wiring diagram for reduced speed (rpm)

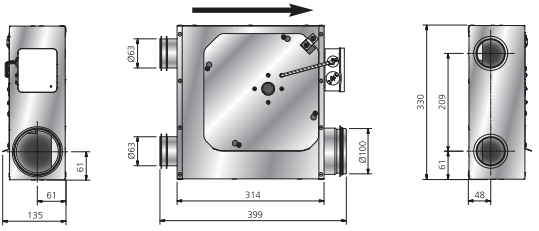
DIMENSIONS

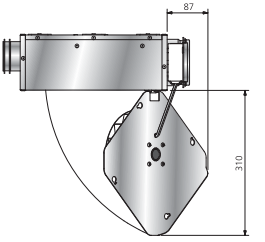
LPKB 100+63 C1, LPKB 100+63 C1-r



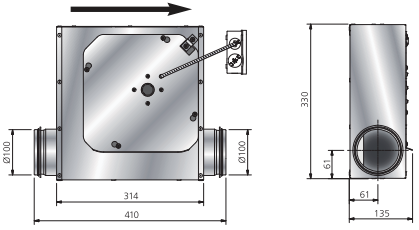


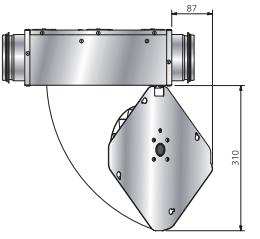
LPKB 100+2x63 C1, LPKB 100+2x63 C1-r



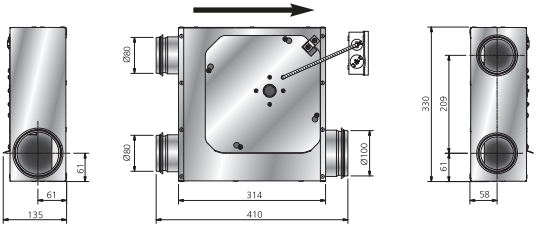


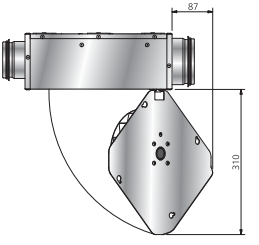
LPKB 100 A1, LPKB 100 C1, LPKB 100 C1-r



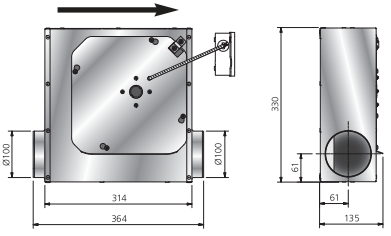


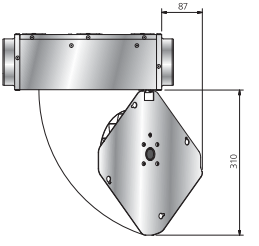
LPKB 100+2x80 A1, LPKB 100+2x80 C1, LPKB 100+2x80 C1-r





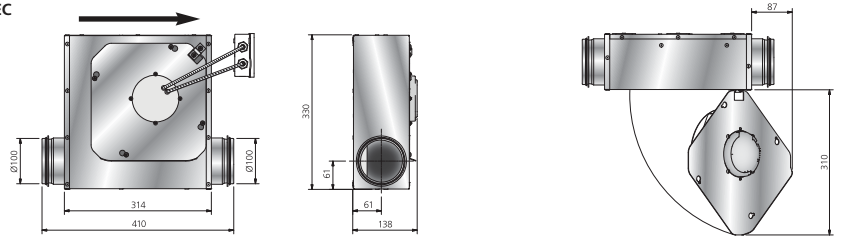
LPFB 100 A1, LPFB 100 C1, LPFB 100 C1-r



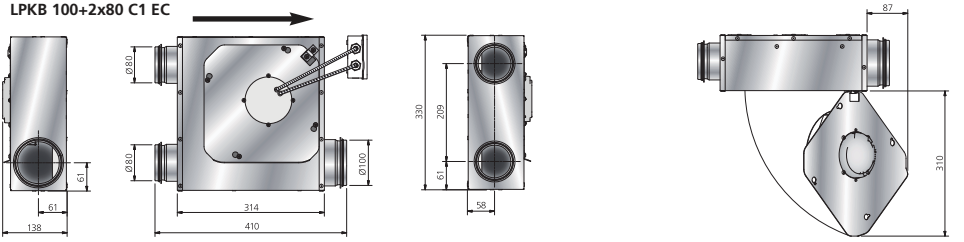


DIMENSIONS

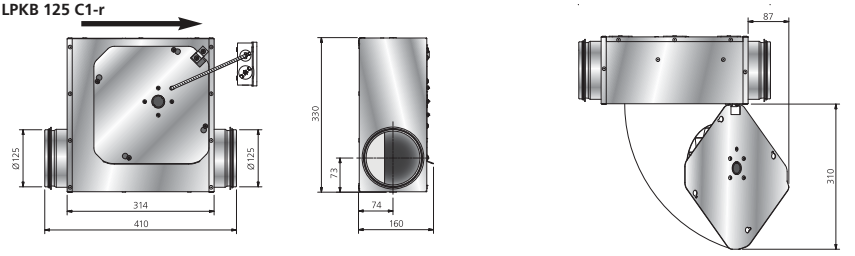
LPKB 100 C1 EC



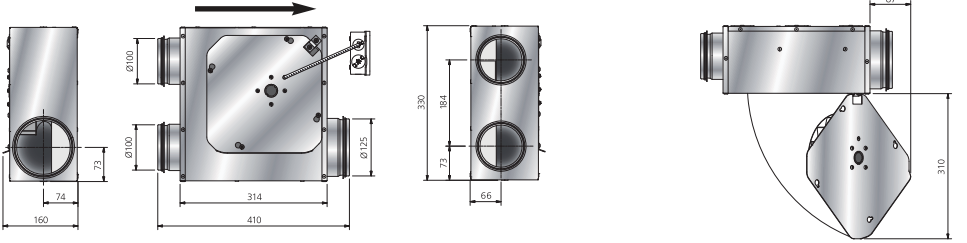
LPKB 100+2x80 C1 EC



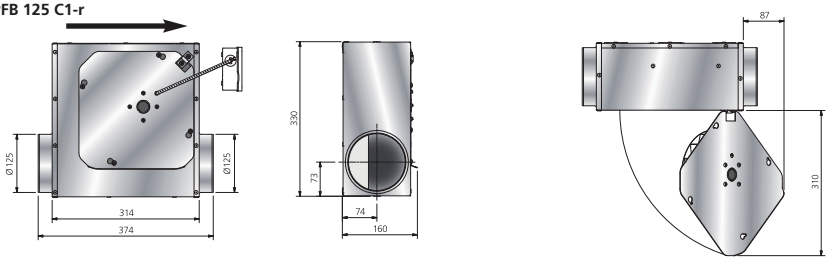
LPKB 125 C1, LPKB 125 C1-r



LPKB 125+2x100 C1, LPKB 125+2x100 C1-r

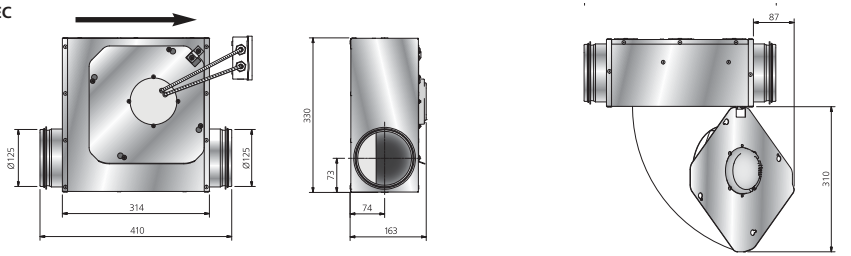


LPFB 125 C1, LPFB 125 C1-r



DIMENSIONS

LPKB 125 C1 EC



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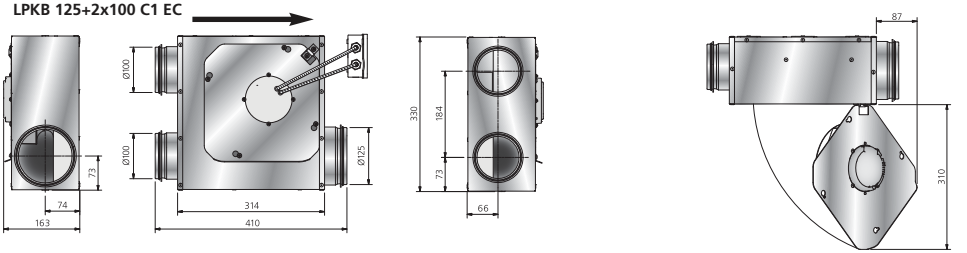
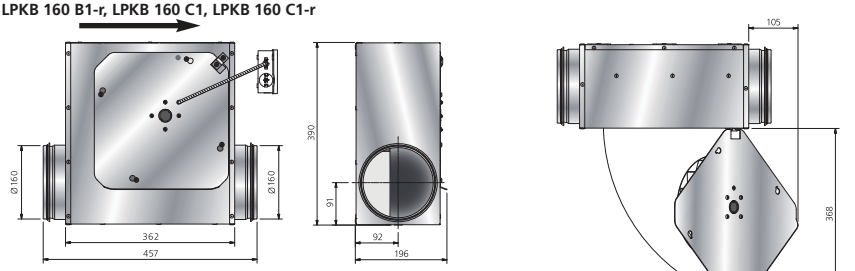
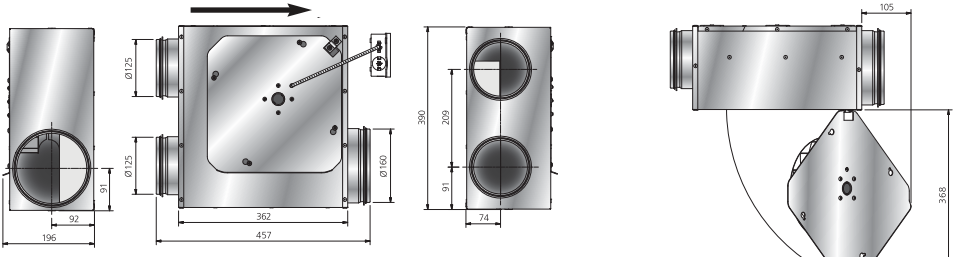


LPKB 160 B1, LPKB 160 B1-r, LPKB 160 C1, LPKB 160 C1-r

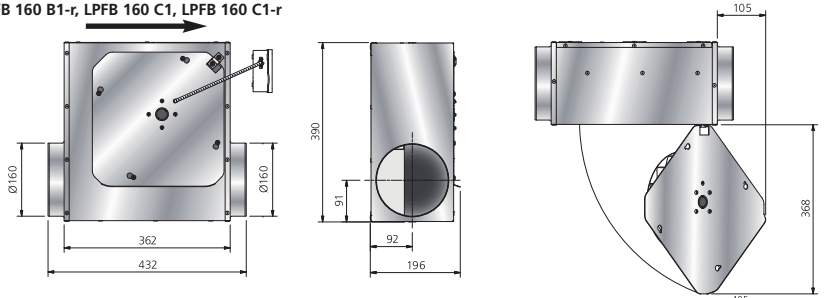


LPKB 160+2x125 B1, LPKB 160+2x125 B1-r, LPKB 160+2x125 C1, LPKB 160+2x125 C1-r

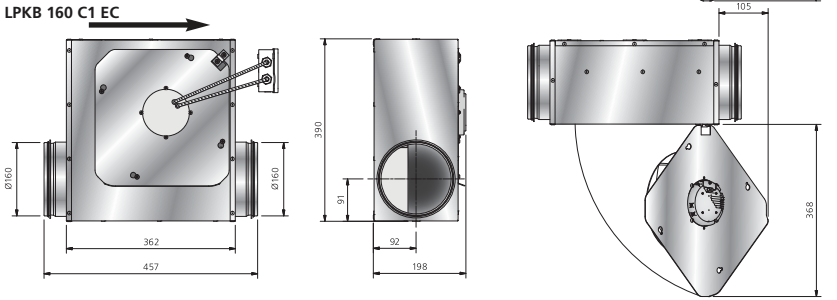


DIMENSIONS

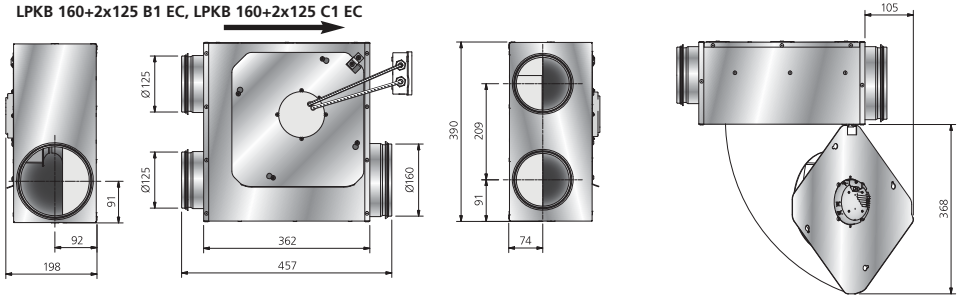
LPFB 160 B1, LPFB 160 B1-r, LPFB 160 C1, LPFB 160 C1-r



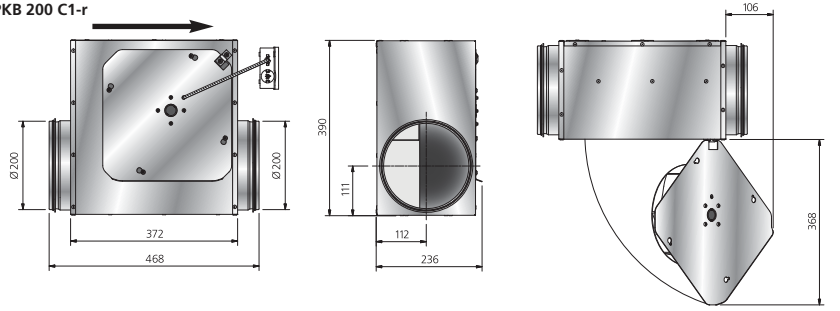
LPKB 160 B1 EC, LPKB 160 C1 EC



LPKB 160+2x125 B1 EC, LPKB 160+2x125 C1 EC

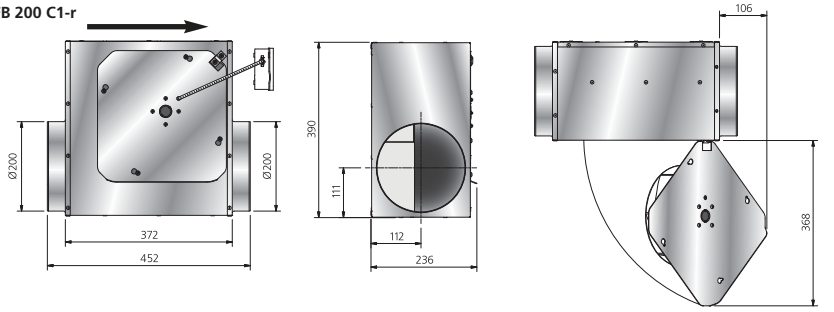


LPKB 200 C1, LPKB 200 C1-r

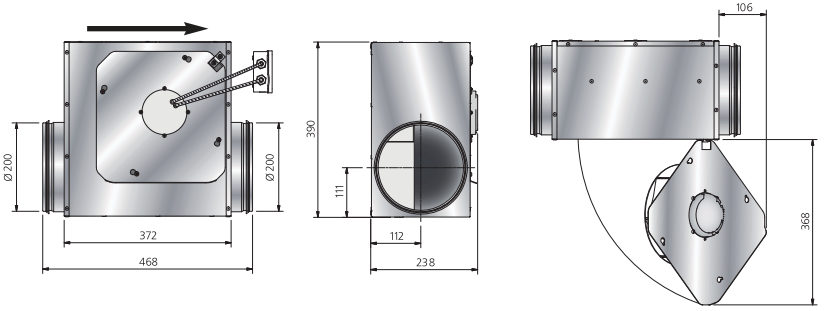


DIMENSIONS

LPFB 200 C1, LPFB 200 C1-r



LPKB 200 C1 EC



OPERATION

Before starting, make sure that:

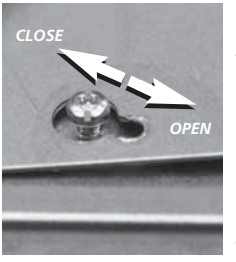
- the current does not exceed more than +5% of what is stated on the label.
- the connecting voltage is in between +6% to –10% of the rated voltage.
- no noise appears when starting the fan.

HOW TO HANDLE

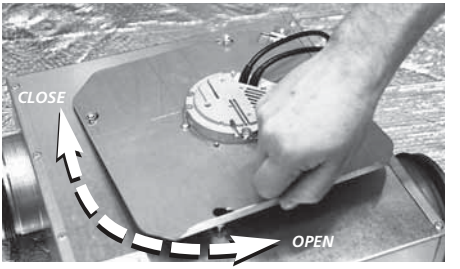
- The fan must be transported in its packing until installation. This prevents transport damages, scratches and the fan from getting dirty.
- Attention, look out for sharp edges and corners.
- **Attention!** Temperatures up to 85°C can be present on the controller housing (only for EC motor).
- **Waiting period of at least 3 minutes!** (only for EC motor) Because of internal capacitors, danger of death exists even after switching off the device through directly touching the energized parts or due to parts that have become energized due to faults. The controller housing may only be removed or opened when the power line has been switched off and a period of three minutes has elapsed since switching it off.
- Avoid extreme heat or cold (temperature range for storage and transport.
- Avoid prolonged storage; we recommend a maximum of one year (consult the manufacturer before starting if stored for longer).

MAINTENANCE

- Before service, maintenance or repair begins, the fan must be tension free and the impeller must have stopped.
- Consider the weight of the fan when removing or opening larger fans to avoid jamming and contusions.
- The fan must be cleaned when needed, at least once per year to maintain the capacity and to avoid unbalance which may cause unnecessary damages on the bearings.
- The fan bearings are maintenance-free and should be renewed only when necessary.
- When cleaning the fan, pressure wash or strong dissolvent must not be used. Cleaning should be done without dislodging or damaging the impeller.
- Make sure that there is no noise from the fan.



The fan is easy to open for cleaning and service with the swing-out design.
Loosen the screws a few turns, without removing them.
Turn the motor bracket to the right so the screws can go through the key holes. Open the motor bracket.
When closing, turn the motor bracket to the left so the screws go into the smaller part of the keyholes.
Tighten the screws.



FAULT DETECTION

1. Make sure that there is power to the fan.
2. Cut the power and verify that the impeller is not blocked.
3. Check the thermal contact (for AC). If it is disconnected the cause of overheating must be taken care of, not to be repeated. To restore the manual thermal contact, cut the power for a couple of minutes. Larger motors than 1,6 A may have manual resetting on the motor. If it has automatic thermal contact the resetting will be done automatically when the motor has cooled.
4. Make sure that the capacitor is connected according to the wiring diagram (for AC).
5. If the fan still does not work, the first thing to do is to change the capacitor (for AC).
6. If nothing of this works, contact your fan supplier.
7. If the fan is returned to the supplier, it must be cleaned, the motor cable undamaged and a detailed nonconformity report enclosed.

WARRANTY

The warranty is only valid under condition that the fan is used according to this "Directions for use" and a regular maintenance has been made and record. The warrantor is responsible only for the operation if approved accessories are used. The warranty does not cover product failures caused by accessories/equipment from other manufacturers.

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