

VENTILATION SYSTEMS PRODUCT CATALOGUE

FOR COAL ,POTASH AND
ORE MINING,

FOR RAILWAY TUNNELS,
METRO AND ROAD TUNNELS

FOR HYDROPOWER PLANTS,
SPECIAL BUILDINGS, CAVERN SYSTEMS



Korfmann
LUFTECHNIK GMBH



WHERE QUALITY
MEETS TRADITION

INTRODUCTION ABOUT US

KORFMANN LUFTECHNIK GmbH

Your specialist for leading ventilation technology for economical use in mining and tunnelling.

Korfmann Maschinenfabrik was established in 1880 in Witten – the birthplace of mining in the Ruhr area. Since 2001, the company has been operating under the name Korfmann Lufttechnik GmbH. Together with the affiliated company CFT GmbH Compact Filter Technic they have specialised in the design, construction, manufacture and installation of fans and ventilation systems for use on the surface and below underground.

But that's not all: Korfmann Lufttechnik GmbH develops individual, special ventilation systems, for example for fire brigades, wind tunnels or numerous tunnelling machines. The company also offers outstanding solutions for the increasingly important topics of energy and sound insulation.

The company's many years of experience and high level of expertise are in demand and required in a wide range of applications: Whether mechanical heading in tunnelling, drilling and blasting in mining or renovating tunnel systems by means of push ventilation – the services and solutions from Korfmann Lufttechnik GmbH offer a breeze of fresh air

and guarantee a smooth project process.

We will support you in your mining and tunnelling projects – with customised planning and design of ventilation systems, complete ventilation system construction including peripheral systems and commissioning.

But plant engineering and construction is not all: Maintenance and servicing by specially trained technicians are also part of our range of services as well as training and courses on numerous topics, enabling us to pass on our knowledge to your employees.

CFT and Korfmann: Two partners combine their expertise

Since 2021, when Korfmann GmbH joined the CFH Group, all sales activities in the field of ventilation have been carried out via CFT GmbH Compact Filter Technic. All fans have been manufactured exclusively by CFT GmbH since 2001 at CFT and now at the new joint headquarters in Marl. Both partners can therefore look back on many years of trusting cooperation and look forward to a successful future together.



CFH Group headquarters in Marl with more than 7,500 m² of production space – including the world's largest fan chamber test bench.



ABOUT THE CATALOGUE

How to use the catalogue/info about content

What is included in the catalogue? Standard versions of the axial series. Many other fan variants and services are available on request.

What families of characteristics are used in the catalogue? We use 50 Hz networks for a better overview. Other network types change the type designation and characteristic curves (not included in catalogue — on request only).

What families of characteristics are listed? Only individual representations are provided in the catalogue. Please enquire about parallel or series connections.

What are the possible drive types? Electric, hydraulic and pneumatic drive types are possible.

Are low pressure fans available? Available for every type of fan. Significantly reduces motor power.

What about reversible fans? Full reversibility of the air flow possible, but not included in the catalogue.

To what extent can the fan types be modified? Each fan type can be individually adapted to customer requirements (terminal box position, mounting arrangement, etc.).

Can the fans and accessories be freely combined? The systems are modular in design and can be flexibly combined. Advantages: interchangeable, easier transport, re-usability, simple assembly, good parts overview.

Technical note

- Each fan is subjected to a final test run according to DIN EN ISO 5801/2017, which is documented in test reports as per ISO 9001/2015
- The exact useful efficiency can be provided in the individual datasheet on request. The specified efficiency is explained here.
- The motor energy efficiency class is at least IE2. A different class can be offered on request.
- Our fans are energy efficient according to directive 2009/125/EC

Further product offerings by Korfmann and our direct partners in technical coordination:

- Dedusting
- Cooling
- Heating
- Controlling
- Radial fans
- Jet fans
- Air jets



Explosion protection according to: 2014/34/ (ATEX), TRZU 012/2011, NEC 500/505 and others on request



APPLICATIONS



Mining



Tunnelling



Push ventilation



Drilling/blast



TBM/Roadheader



Main fans



Duct fans/special
ventilation fans



Deduster/filter



Heating/cooling
units



Special machinery

Full usability



Limited usability



Explosion protection

TYPES AND PRODUCT SERIES



AL / dAL



ES / ESN / dESN



GAL / dGAL



KORAX / AGE / DV
SL



Accessories



CONTENTS

Page		Diameter	Power	max. power	V min.	V max.	P max.	Drive type
		(mm)	(kw)	(kw)	(m³/s)	(m³/s)	(Pa)	E = electrical Hy = hydraulic P = pneumatic
10	AL7 / dAL7	700	3	3	4,2	6	370	E
10	AL8 / dAL8	800	5,5	15	6	15,8	1140	E
10	AL10 / dAL10	1000	30	30	15	26	1300	E
12	AL12 / dAL12	1200	45	75	20	43,5	1800	E
12	AL14 / dAL14	1400	90	110	30	53	2400	E
12	AL16 / dAL16	1600	90	160	35	74	2750	E
12	AL17 / dAL17	1700	160	250	40	106	3250	E
12	AL18 / dAL18	1800	250	630	50	150	5200	E
14	AL20 / dAL20 bis AL42 / dAL42	2000 - 4200	110	4000	80	700	~6000	E
22 - 25	ES3 / ESN3 / dESN3	300	0,8	0,8	0,5	0,8	400	E, Hy
22 - 25	ES4 / ESN4 / dESN4	400	1,5	3	1,2	3,1	730	E, Hy
22 - 25	ES5 / ESN5 / dESN5	500	4	7,5	2,3	4,0	1210	E, Hy
22 - 25	ES6 / ESN6 / dESN6	600	7,5	15	3,8	7,6	2340	E, Hy
22 - 25	ES7 / ESN7 / dESN7	700	22	30	5,9	11,3	2780	E
22 - 25	ES8 / ESN8 / dESN8	800	30	45	9	16,7	3050	E
22 - 25	ES9 / ESN9 / dESN9	900	30	75	6	22,2	3700	E
26	EST4	400	1,5	1,5	1,2	2,2	700	E & P
26	EST5	500	4,5	4,5	2,3	4,2	1250	E & P
26	EST6	600	15	15	4,2	7,6	2340	E & P
26	EST7	700	35	35	6,7	11,3	2780	E & P
26	EST9	900	50	50	10	18,8	3050	E & P
32	GAL3 / dGAL3	300	2 x 1,5	2 x 1,5	1,0	1,4	1200	E, Hy
32	GAL4 / dGAL4	400	2 x 3,0	2 x 3,0	1,5	2,7	2250	E, Hy
32	GAL5 / dGAL5	500	2 x 5,5	2 x 7,5	2,0	4,5	4200	E, Hy
32	GAL6 / dGAL6	600	2 x 11	2 x 15	3,3	6,8	5500	E, Hy
32	GAL7 / dGAL7	700	2 x 22	2 x 30	5,5	11	5800	E
32	GAL9 / dGAL9	900	2 x 55	2x 55	11	21	6600	E
34	GAL12 / dGAL12	1200	2 x 45	2 x 55	18	37,5	4200	E
34	GAL14 / dGAL14	1400	2 x 90	2 x 110	27	50	5500	E
40	Korax7	700	11	11	0,4	4,1	2600	E
40	Korax8	800	18,5	18,5	0,6	5,8	3050	E
40	Korax9	900	18,5	30	0,85	7,0	4550	E
42	AGE4	400	1	1	0,5	1,6	540	E
42	AGE5	500	2,2	4,5	0,6	4,8	780	E
42	AGE6	600	4,5	6	2,7	6,7	910	E
42	AGE7	700	3	3	4,5	6,8	450	E
42	AGE8	800	5,5	5,5	6,7	10,8	620	E
44	DV3	300	-	-	0,75	1,6	1250	P
44	DV4	400	-	-	1,05	2,8	1270	P
44	DV5	500	-	-	1,92	4,73	970	P
44	DV6	600	-	-	2,4	6,0	1060	P
44	DV9	900	-	-	6,9	13,3	1670	P
46	SL3	300	-	-	0,17	1,0	400	P
46	SL4	400	-	-	0,42	1,7	340	P
50-51	Fan options							
52	Accessories from page							



	Mining 	Tunnelling 	Jet-ventilation 	Drill/Blast 	TBM/Roadheader 	Main fans 	Duct fans/special ventilation fans 	Deduster/filter 	Heating/cooling units 	Special machinery 	
	X	X	X	X	X		[X]		X	X	AL7 / dAL7
	X	X	X	X	X		[X]		X	X	AL8 / dAL8
	X	X	X	X	X		[X]		X	X	AL10 / dAL10
	X	X	X	X	X		X	[X]	X	X	AL12 / dAL12
	X	X	X	X	X	[X]	X	[X]	X	X	AL14 / dAL14
	X	X	X	X	X	X	X	[X]	X	X	AL16 / dAL16
	X	X	X	X	X	X	X	[X]	X	X	AL17 / dAL17
	X	X	X	X	X	X	X	[X]	X	X	AL18 / dAL18
	X	X	[X]	[X]		X	[X]		X	[X]	AL20 / dAL20 bis AL42 / dAL42
	X	X		X	X		[X]	X	X	X	ES3 / ESN3 / dESN3
	X	X		X	X		[X]	X	X	X	ES4 / ESN4 / dESN4
	X	X		X	X		X	X	X	X	ES5 / ESN5 / dESN5
	X	X		X	X		X	X	X	X	ES6 / ESN6 / dESN6
	X	X	X	X	X		X	X	X	X	ES7 / ESN7 / dESN7
	X	X	X	X	X		X	X	X	X	ES8 / ESN8 / dESN8
	X	X	X	X	X		X	X	X	X	ES9 / ESN9 / dESN9
	X			X	X		X	X	X	X	EST4
	X			X	X		X	X	X	X	EST5
	X			X	X		X	X	X	X	EST6
	X			X	X		X	X	X	X	EST7
	X			X	X		X	X	X	X	EST9
	X	X		X	X		X	X	X	X	GAL3 / dGAL3
	X	X		X	X		X	X	X	X	GAL4 / dGAL4
	X	X		X	X		X	X	X	X	GAL5 / dGAL5
	X	X		X	X		X	X	X	X	GAL6 / dGAL6
	X	X		X	X		X	X	X	X	GAL7 / dGAL7
	X	X		X	X		X	X	X	X	GAL9 / dGAL9
	X	X		X	X		X	X	X	X	GAL12 / dGAL12
	X	X		X	X		X	X	X	X	GAL14 / dGAL14
	X	X		[X]	X		X	X	X	X	Korax7
	X	X		[X]	X		X	X	X	X	Korax8
	X	X		[X]	X		X	X	X	X	Korax9
			X				[X]			X	AGE4
			X				[X]			X	AGE5
			X				[X]			X	AGE6
			X				[X]			X	AGE7
			X				[X]			X	AGE8
	X	[X]		[X]	X		[X]		X	X	DV3
	X	[X]		[X]	X		[X]		X	X	DV4
	X	[X]		[X]	X		[X]		X	X	DV5
	X	[X]		[X]	X		[X]		X	X	DV6
											DV9
	X				X					X	SL3
	X				X					X	SL4

X = unlimited
[x] = limited



Korfmann

FRESH AIR
FOR YOU

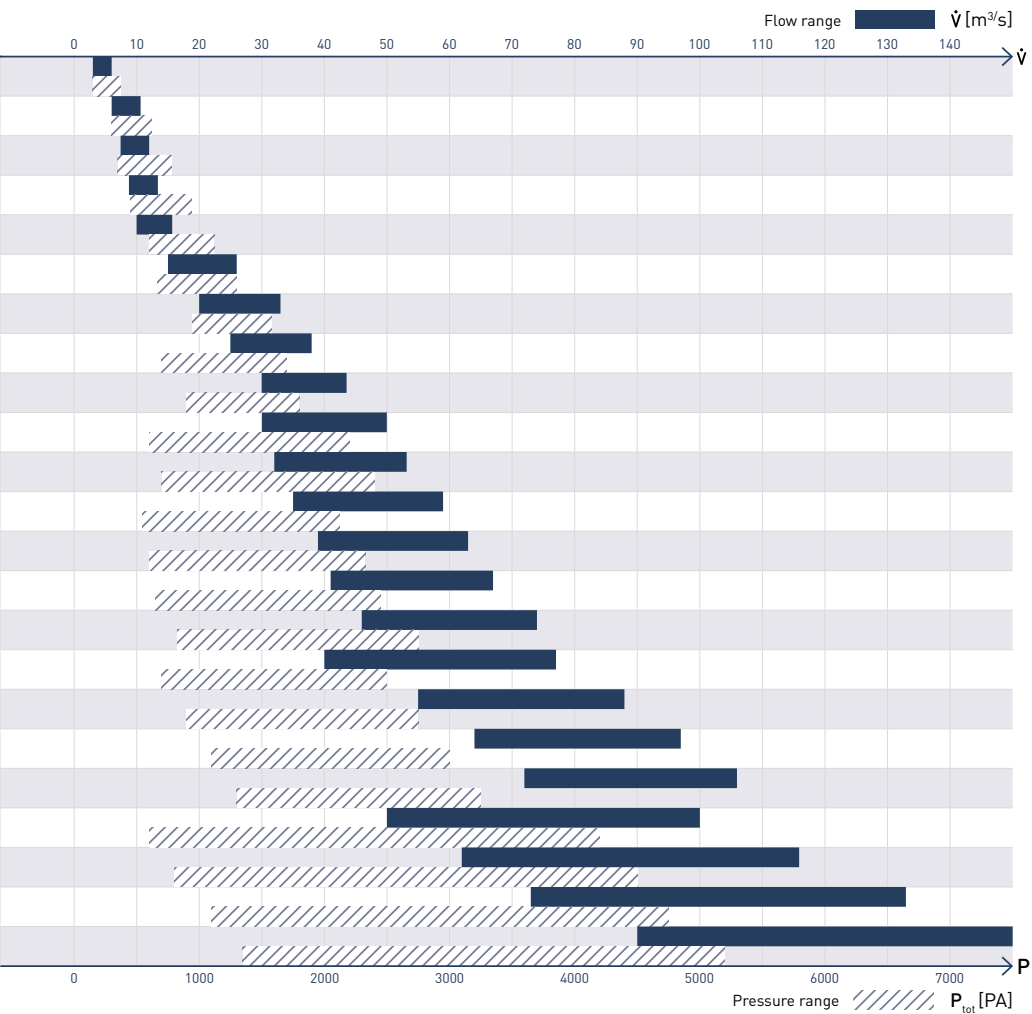


PRODUCT LINE AL/DAL

AXIAL FANS OVERVIEW AL/dAL

Type: Standard designation/explosion protection

Type: Standard designation/explosion protection			Diameter		Power		$\dot{V}_{min}$		$P_{max. @ \dot{V}_{min}}$		$\dot{V}_{max.}$		$P_{min. @ \dot{V}_{max.}}$	
			(mm)		(kw)		(m³/s)		(Pa)		(m³/s)		(Pa)	
STANDARD	AL7-30	dAL7-30	700	3	4,2	370	6	150						
	AL8-55	dAL8-55	800	5,5	6	620	10,8	300						
	AL8-75	dAL8-75		7,5	7,2	780	12	350						
	AL8-110	dAL8-110		11	8,5	940	13,4	450						
	AL8-150	dAL8-150		15	10	1140	15,8	600						
	AL10-300	dAL10-300	1000	30	15	1300	26	660						
	AL12-450	dAL12-450	1200	45	20	1540	33	520						
	AL12-550	dAL12-550		55	25	1700	38	700						
	AL12-750	dAL12-750	1400	75	30	1800	43,5	900						
	AL14-900	dAL14-900		90	30	2200	50	600						
	AL14-1100	dAL14-1100	110	32	2400	53	700							
	AL16-900	dAL16-900	1600	90	35	2150	59	550						
	AL16-1100	dAL16-1100		110	39	2350	63	600						
	AL16-1320	dAL16-1320		132	41	2450	67	650						
	AL16-1600	dAL16-1600	1700	160	46	2750	74	820						
	AL17-1600	dAL17-1600		160	40	2500	77	700						
	AL17-2000	dAL17-2000		200	55	2750	88	900						
	AL17-2500	dAL17-2500		250	64	3000	97	1100						
	AL17-3150	dAL17-3150	1800	315	72	3250	106	1300						
	AL18-3150	dAL18-3150		315	50	4200	100	600						
AL18-4500	dAL18-4500	450		62	4500	116	800							
AL18-5000	dAL18-5000	500		73	4750	133	1100							
AL18-6300	dAL18-6300		630	90	5200	150	1350							
AL20 - AL42 / large fan	dAL20-dAL42	Overview page 16 up to approx. 700 m³/s to 6000 PA												



AXIAL FANS

AL / dAL



AL7-30 to AL10-300

TYPE

AL7-30 to AL10-300
Diameter: 700 to 1000 mm

PERFORMANCE RANGE

Volumetric flow up to 26 m³/s (1560 m³/min)
Total pressure increase up to 1300 Pascal
Motor shaft output from 3.0 to 30.0 kW

DESIGN

Axial-flow impeller as cast part from EN AB 43000, with guide device, profiled impeller blades with no edges in the flow surface, sturdy steel housing, foot mounting.

CONTROL

Direct or star-delta starting
Optional: pole-changeable, speed-regulated (FU)

DRIVE

- Voltage ranges 230 - 1000 Volt
Three-phase AC squirrel-cage motors S1 in special design
- Protection class $\geq$ IP 55; insulation class F, tropicalised, permanently lubricated
- Energy efficiency class $\geq$ IE2
- Terminal box position: top
- PTC thermistor

COATING

Primer with top coat, alkyd resin Silac, total layer thickness min. 180 μ m
Standard colour: Pure white (RAL9010)

OPTIONS

Sealed motor, dust disks, hard coated impeller, special coating, vibration dampers, stall point monitoring, impact protection, VFD compatibility, cold environment, motor monitoring, incr. efficiency class, vibration sensors, volume flow, pressure difference, adjustable blades

TECHNICAL EXECUTION ACCORDING TO

Machinery Directive: EU Directive 2006/42/EC
ErP ecodesign: Directive 2009/125/EC
Test bench run according to DIN EN ISO 5801/2017

VERSION WITH EXPLOSION PROTECTION



Protection class: Fire-damp proof*, explosion-proof*

TYPE: dAL7-30 to dAL10-300

Optional: Bifurcated axial fans

Spark protection

ACCORDING TO: Directive 2014/34/EU

*also available according to international explosion protection regulations





AL7-30 to AL10-300

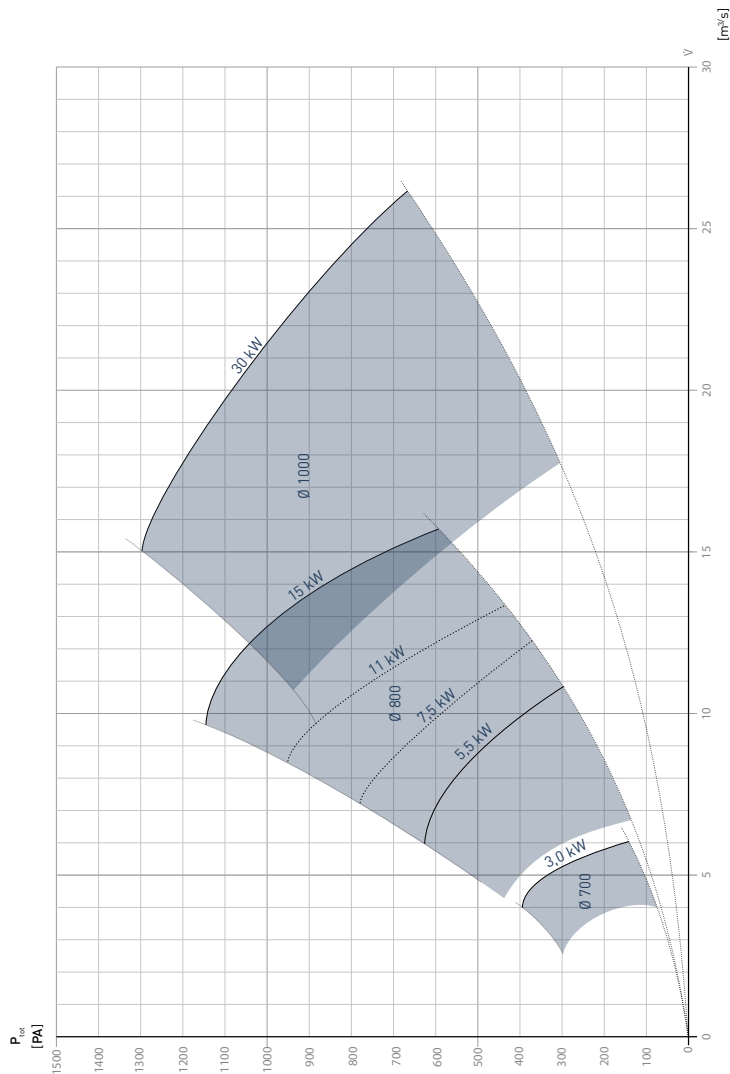
Rotational speed: 1500 upm

Shaded area represents dia. performance range

Characteristics valid for air density 1.2 kg/m³

AL10-300 | Ø 1000 | 30 kW

AL7-30	Ø 700	3.0 kW
AL8-55	Ø 800	5.5 kW
AL8-75	Ø 800	7.5 kW
AL8-110	Ø 800	11 kW
AL8-150	Ø 800	15 kW



AXIAL FANS

AL / dAL



AL12-450 bis AL18-6300

TYPE

AL12-450 to AL18-6300
Diameter: 1200 to 1800 mm

PERFORMANCE RANGE

Volumetric flow up to 150 m³/s [9000 m³/min]
Total pressure increase up to 5200 Pascal
Motor shaft output from 45 to 630 kW

DESIGN

Axial-flow impeller as cast part from EN AB 43000, with guide vanes, profiled impeller blades with edges in the flow surface, sturdy steel housing, foot mounting.

CONTROL

Direct or star-delta starting
Optional: pole-changeable, variable speed (FU), soft start

DRIVE

- Voltage ranges 400 - 6600 Volt
Three-phase AC squirrel-cage motors S1 in special design
- Protection class $\geq$ IP 55; insulation class F, tropicalised
- Energy efficiency class $\geq$ IE2
- Terminal box position: lateral 45° or on top
- PTC thermistor

COATING

Primer with top coat, alkyd resin Silac, total layer thickness min. 180 µm
Standard colour: Pure white (RAL9010)

OPTIONS

Sealed motor, dust disks, hard coated impeller, special coating, vibration dampers, stall-point monitoring, impact protection, VFD compatibility, cold environment, motor monitoring, incr. efficiency class, vibration sensors, volume flow, pressure difference, adjustable blades

TECHNICAL EXECUTION ACCORDING TO

Machinery Directive: EU Directive 2006/42/EC
ErP ecodesign: Directive 2009/125/EC
Test bench run according to DIN EN ISO 5801/2017

VERSION WITH EXPLOSION PROTECTION



Protection class: Fire-damp proof*, explosion-proof*

TYPE: dAL12-450 to dAL18-6300
Optional: Bifurcated axial fan
Spark protection

ACCORDING TO: Directive 2014/34/EU

*also available according to international explosion protection regulations



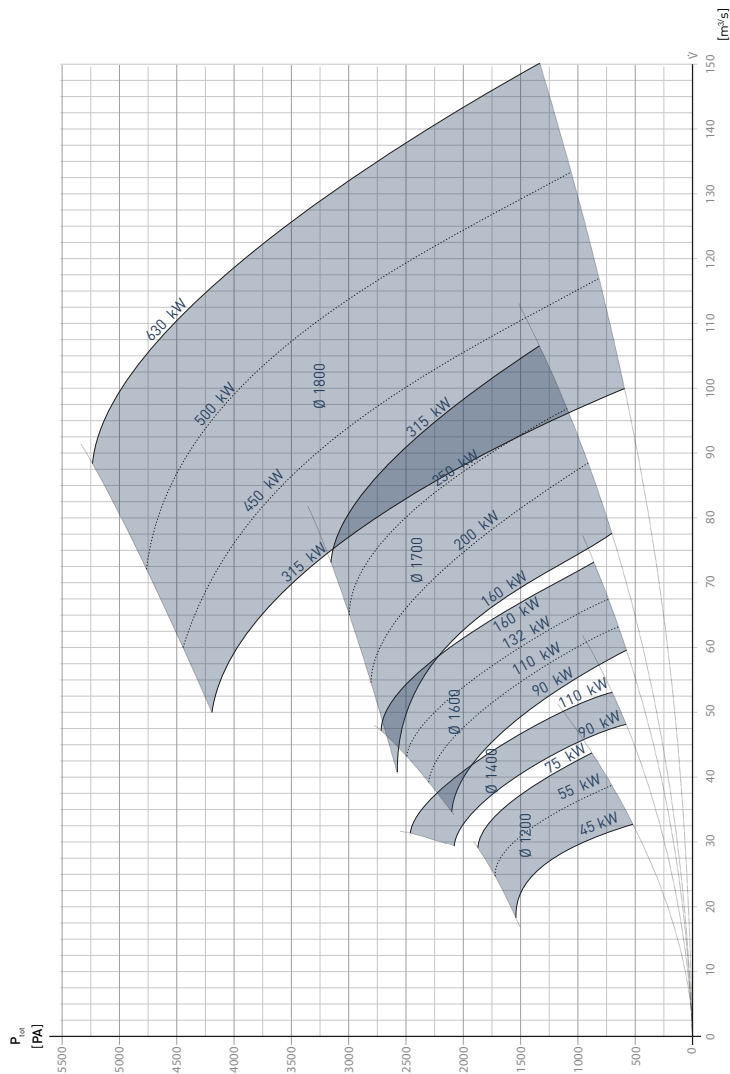


AL12-450 to AL18-6300

Rotational speed: 1500 upm

Shaded area represents dia. performance range
Characteristics valid for air density 1.2 kg/m³

AL12-450	Ø 1200	45 kW	AL16-900	Ø 1600	90 kW	AL17-1600	Ø 1700	160 kW	AL18-3150	Ø 1800	315 kW
AL12-500	Ø 1200	55 kW	AL16-1100	Ø 1600	110 kW	AL17-2000	Ø 1700	200 kW	AL18-4500	Ø 1800	450 kW
AL12-750	Ø 1200	75 kW	AL16-1320	Ø 1600	132 kW	AL17-2500	Ø 1700	250 kW	AL18-5000	Ø 1800	500 kW
AL14-900	Ø 1400	90 kW	AL16-1600	Ø 1600	160 kW	AL17-3150	Ø 1700	315 kW	AL18-6300	Ø 1800	630 kW
AL14-1110	Ø 1400	110 kW									



AXIAL FANS

AL / dAL



LARGE FAN – AL20 to AL42

TYPE

AL20 to AL42; axial fan
Diameter: 2000 to 4200 mm

PERFORMANCE RANGE

Volumetric flow up to approx. 700 m³/s [42,000 m³/min]
Total pressure increase up to approx. 8000 Pascal
(multi-stage)
Motor shaft output up to approx. 4000 kW

DESIGN

Axial-flow impeller as cast part from EN AB 43000, with individually adjustable profiled impeller blades with no edges in the flow surface, with guide vanes, sturdy steel housing, foot mounting

CONTROL

Direct start, variable speed (FU) with softstarter or frequency converter

DRIVE

Voltage ranges 400-10,000 Volt

COATING

Primer with top coat, alkyd resin Silac,
total layer thickness min. 180 µm
Standard colour: Pure white (RAL9010)

OPTIONS

Sealed motor, dust disks, hard coated impeller, special coating, vibration dampers, stall-point monitoring, VFD compatibility,
cold environment, motor monitoring, incr. efficiency class, vibration sensors, volume flow, pressure difference and gas monitoring, adjustable blades

TECHNICAL EXECUTION ACCORDING TO

Machinery Directive: EU Directive 2006/42/EC
ErP ecodesign: Directive 2009/125/EC
Test bench run according to DIN EN ISO 5801/2017

VERSION WITH EXPLOSION PROTECTION



Protection class: Fire-damp proof*, explosion-proof*

TYPE: dAL20 to dAL42

Optional: Motor outside the airflow

Spark-protection, thrust collar made of silumin or brass

ACCORDING TO: Directive 2014/34/EU

*also available according to international explosion protection regulations



MAIN MINE FAN SYSTEMS



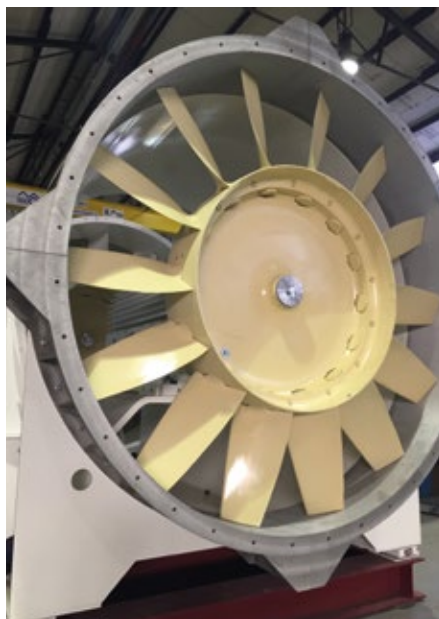
Our customised engineering services cover a wide range of services:

- Establishing the specifications
- Design of the systems
- Overall project planning
- Commissioning
- Aerodynamic performance test
- Vibration analysis
- Noise testing
- Fine balancing on site
- Maintenance/maintenance support

We offer turnkey services for all devices.

We plan according to your specifications and requirements:

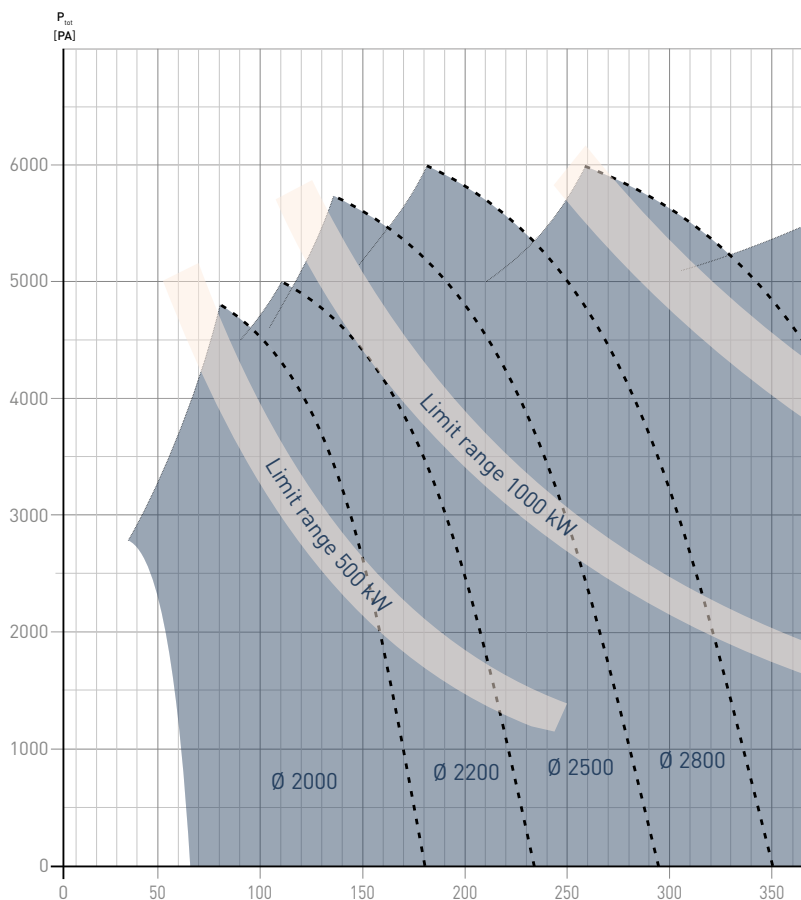
- Production
- System design
- Drives and power supply
- Trace heating and cooling
- Control and visualisation
- Comprehensive instrumentation and monitoring



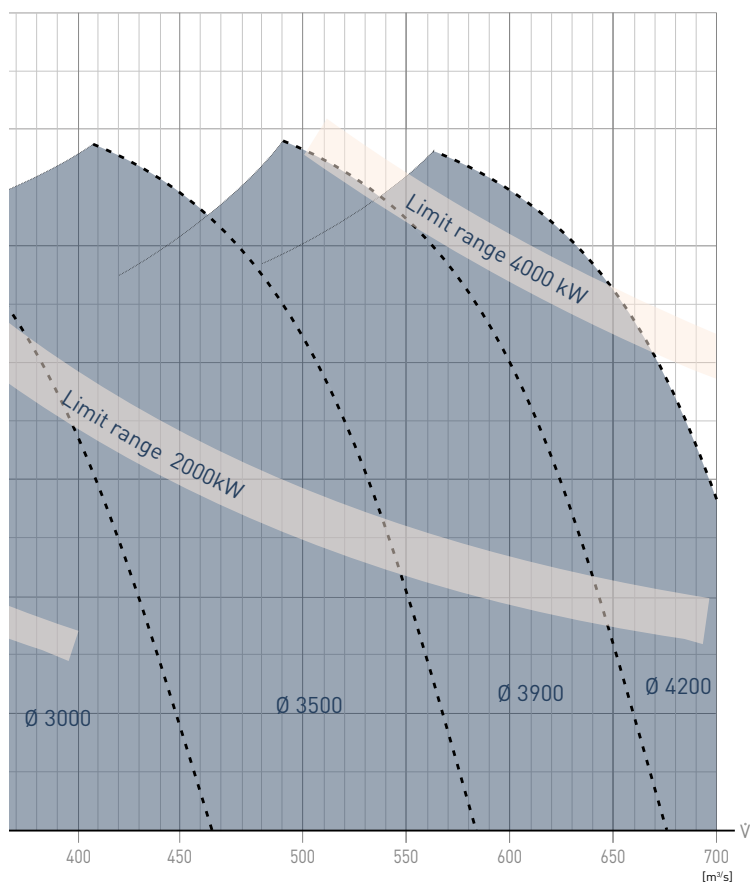
AXIAL FANS AL / dAL

AL20-AL42 LARGE FANS

OVERVIEW OF EFFICIENCY RATIOS – DIAMETER VS PERFORMANCE



Characteristics valid for air density 1.2 kg/m^3



Körfmann

A BREEZE OF FRESH AIR
FOR YOUR PROJECT

Körfmann



PRODUCT LINE ESN/DESN/ES/EST

ESN/DESN/ES/EST

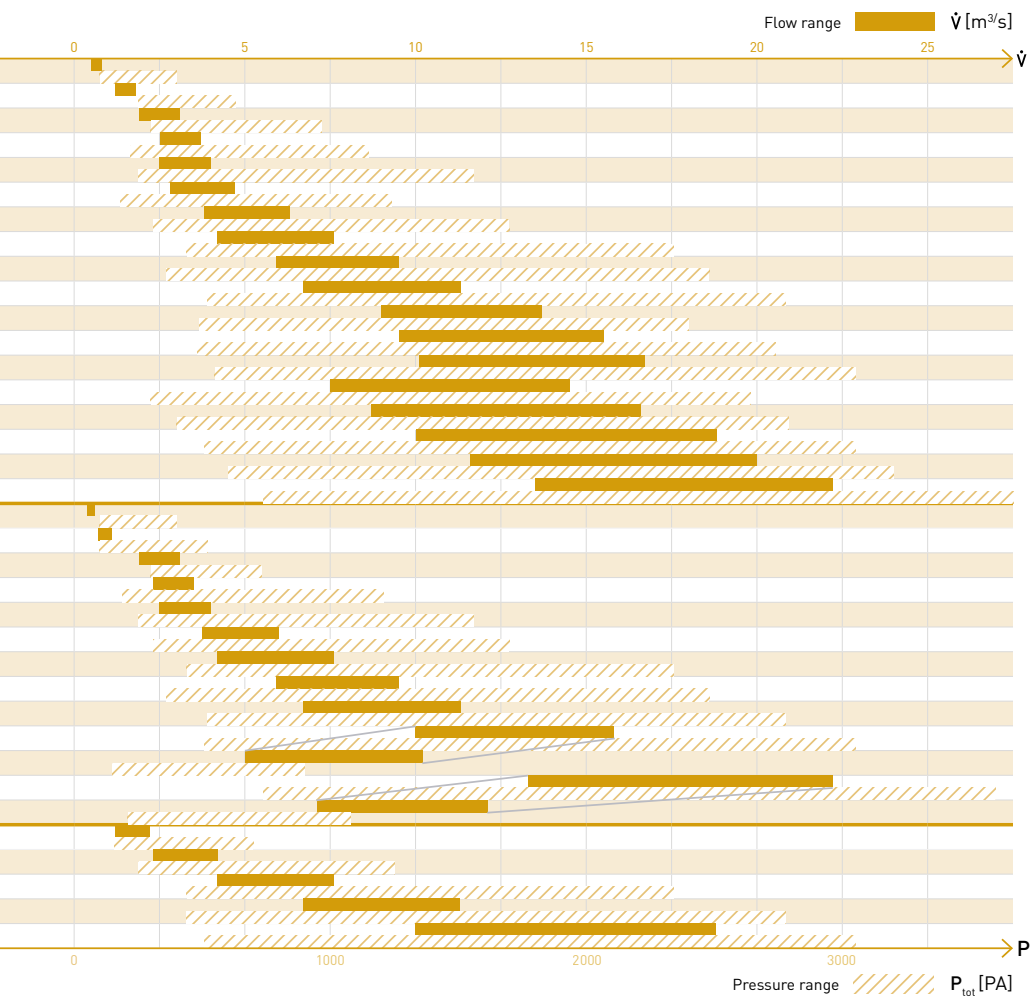
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AXIAL FANS

OVERVIEW ESN/dESN/ES/EST

Type: Standard designation/explosion protection

			Diameter	Power	$\dot{V}_{min.}$	$P_{max.} @ \dot{V}_{min.}$	$\dot{V}_{max.}$	$P_{min.} @ \dot{V}_{max.}$
			(mm)	(kw)	(m³/s)	(Pa)	(m³/s)	(Pa)
STANDARD	ESN3-8	dESN3-8	300	0,75	0,5	400	0,8	100
	ESN4-15	dESN4-15	400	1,5	1,2	630	1,8	250
	ESN4-30	dESN4-30		3,0	1,9	750	3,1	300
	ESN5-55	dESN5-55	500	5,5	2,5	1150	3,7	220
	ESN5-75	dESN5-75		7,5	2,5	1560	4	250
	ESN6-75	dESN6-75	600	7,5	2,8	1240	4,7	180
	ESN6-110	dESN6-110		11	3,8	1700	6,3	310
	ESN6-150	dESN6-150		15	4,2	2340	7,6	440
	ESN7-220	dESN7-220	700	22	5,9	2480	9,5	360
	ESN7-300	dESN7-300		30	6,7	2780	11,3	520
	ESN8-300	dESN8-300	800	30	9	2400	13,7	490
	ESN8-370	dESN8-370		37	9,5	2740	15,5	480
	ESN8-450	dESN8-450		45	10,1	3050	16,7	550
	ESN9-300	dESN9-300	900	30	7,5	2640	14,5	300
	ESN9-370	dESN9-370		37	8,7	2790	16,6	400
	ESN9-450	dESN9-450		45	10	3050	18,8	510
	ESN9-550	dESN9-550		55	11,6	3200	20	600
	ESN9-750	dESN9-750		75	13,5	3700	22,2	740
FIRE DAMP PROTECTION	ES3-8		300	0,8	0,5	400	0,8	100
	ES3,5-11		350	1,1	0,7	520	1,1	100
	ES4-30		400	3	1,9	730	3,1	300
	ES5-40		500	4	2,3	1210	3,5	190
	ES5-75			7,5	2,5	1560	4	250
	ES6-110		600	11	3,8	1700	6,3	310
	ES6-150			15	4,2	2340	7,6	440
	ES7-220		700	22	5,9	2480	9,5	360
	ES7-300			30	6,7	2780	11,3	520
	ES9-500		900	50	10	3050	16,8	510
	ES9-500/80 PU STAGE			8	5	900	10,2	150
	ES9-700			70	13,3	3600	22,2	740
	ES9-700/110 PU STAGE			11	7,1	1080	12,1	210
	EST4-15		400	1,5	1,2	700	2,2	160
	EST5-45		500	4,5	2,3	1250	4,2	250
	EST6-150		600	15	4,2	2340	7,6	440
	EST7-350		700	35	6,7	2780	11,3	520
	EST9-500		900	50	10	3050	18,8	510



AXIAL FANS ESN/dESN / ES / EST

Körfm

ESN/dESN/ES/EST



ESN3-8 to ESN9-750

TYPE

ESN3-8 to ESN9-750; axial fan
Diameter: 300 to 900 mm

PERFORMANCE RANGE

Volumetric flow up to 22 m³/s [1320/min]
Total pressure increase up to 3700 Pascal
Motor shaft output from 0.8 to 75.0 kW

DESIGN

Axial-flow impeller as cast part from EN AB 43000 with guide vanes, profiled impeller blades with no edges in the flow surface, sturdy steel housing, foot mounting

CONTROL

Direct or star-delta starting
Optional: pole-changeable, speed-regulated [FU]

DRIVE

- Voltage ranges 400 - 1000 Volt
Three-phase AC - squirrel-cage motors S1 in special design
- Protection class $\geq$ IP 55; insulation class F, tropicalised
- Energy efficiency class $\geq$ IE2
- Terminal box position: top
- PTC thermistor
- Optional: Hydraulic drive sizes from $\varnothing$ 300 mm to $\varnothing$ 600 mm

COATING

Primer with top coat, alkyd resin Silac, total layer thickness min. 180 μ m
Standard colour: Pure white (RAL9010)

OPTIONS

Sealed motor, dust disks, hard coated impeller, special coating, vibration dampers, stall-point monitoring, impact protection, VFD compatibility, cold environment, motor monitoring, incr. efficiency class, vibration sensors, volume flow, pressure difference, adjustable blades

TECHNICAL EXECUTION ACCORDING TO

Machinery Directive: EU Directive 2006/42/EC
ErP ecodesign: Directive 2009/125/EC
Test bench run according to DIN EN ISO 5801/2017

VERSION WITH EXPLOSION PROTECTION



Protection class: explosion-proof*

TYPE: dESN3-8 to dESN9-750
Optional: Design as pocket fan
Spark-protected design

ACCORDING TO: Directive 2014/34/EU

*also available according to international explosion protection regulations





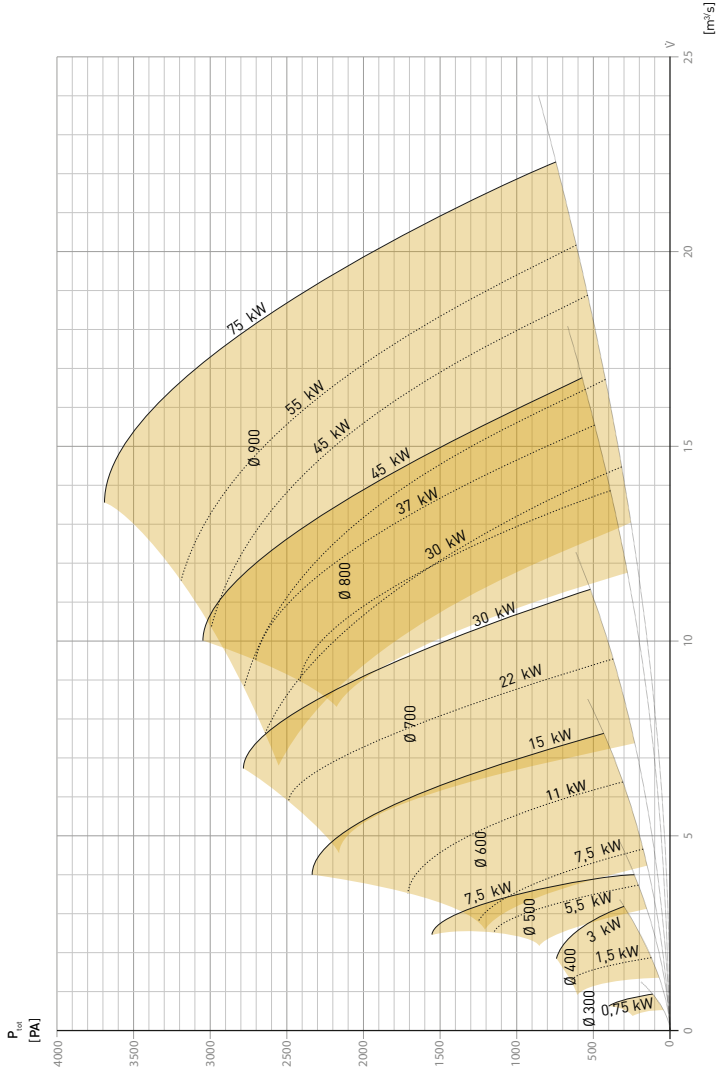
ESN3-8 to ESN9-750

Rotational speed: 3000 RPM

Shaded area represents dia. performance range

Characteristics valid for air density 1.2 kg/m³

ESN3-8	Ø 300	0,75 kW	ESN6-75	Ø 600	7,5 kW	ESN8-300	Ø 800	30 kW	ESN9-370	Ø 900	37 kW
ESN4-15	Ø 400	1,50 kW	ESN6-110	Ø 600	11 kW	ESN8-370	Ø 800	37 kW	ESN9-450	Ø 900	45 kW
ESN4-30	Ø 400	3,00 kW	ESN6-150	Ø 600	15 kW	ESN8-450	Ø 800	45 kW	ESN9-550	Ø 900	55 kW
ESN5-55	Ø 500	5,50 kW	ESN7-220	Ø 700	22 kW	ESN9-300	Ø 900	30 kW	ESN9-750	Ø 900	75 kW
ESN5-75	Ø 500	7,50 kW	ESN7-300	Ø 700	30 kW						



AXIAL FANS ESN/dESN / ES / EST

Körfm

ESN/dESN/ES/EST



ES3-8 to ES9-700



TYPE

ES3-8 to ES9-700
Flame-proof axial fan
Diameter: 300 to 900 mm

PERFORMANCE RANGE

Volumetric flow up to 22 m³/s (1320 m³/min)
Total pressure increase up to 3700 Pascal
Motor shaft output from 0.8 to 70.0 kW

DESIGN

Axial-flow impeller as cast part from EN AB 43000, spark protected. Thrust collar made of EN AB 43000 or brass, with guide vanes, profiled blades with no edges in the flow surface, sturdy steel housing, foot mounting.
Including: Sealed motor

CONTROL

Direct starting
Optional: star-delta, pole-changeable,
variable speed

DRIVE

- Voltage ranges 400 - 1140 Volt
Three-phase AC - squirrel-cage motors S1
in special design
- Flame-proof enclosure protection
„d“ or „de“ according to DIN EN 60079-1
- Protection class $\geq$ IP 55; insulation class F, tropicalised
- Energy efficiency class $\geq$ IE2
- Terminal box position: top
- PTC thermistor
- Optional: Hydraulic drive sizes from
 $\varnothing$ 300 mm to $\varnothing$ 600 mm

COATING

Primer with top coat, alkylid resin Silac,
total layer thickness min. 180 μ m
Standard colour: Pure white (RAL9010)

OPTIONS

Sealed motor, dust disks, hard coated wheel, special coating, vibration dampers, stall-point monitoring, impact protection, VFD compatibility compatible, cold environment, motor monitoring, incr. efficiency class, vibrations sensors, volume flow, pressure difference and gas monitoring, adjustable blades, bifurcated fan, voltage switchable or solderable
Variant as bifurcated fan

Hint: PU version with two motor power stages.

Example: ES9-700/110 means first stage 11 kW,
main stage 70 kW (characteristic curves for both stages
included in scope of delivery)

TECHNICAL EXECUTION ACCORDING TO

Machinery Directive: Directive 2006/42/EC
ErP ecodesign Directive 2009/125/EC
Explosion protection according to guideline 2014/34/EU
Test bench run according to DIN EN ISO 5801/2017





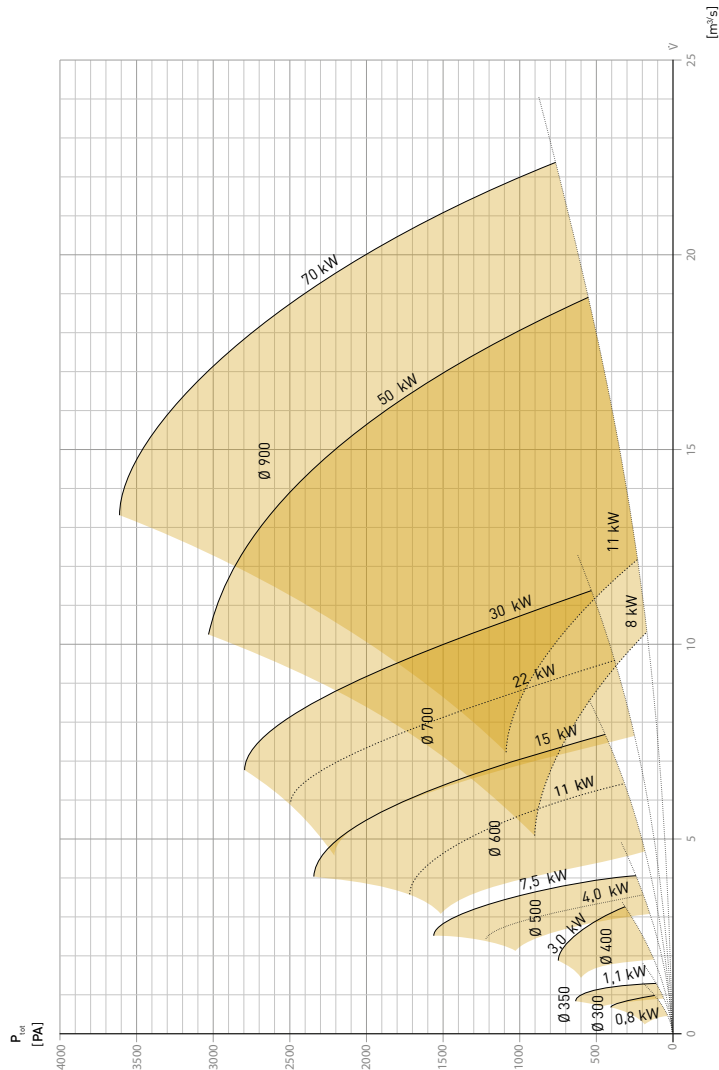
TYPE SERIES ES

Rotational speed: 3000 rpm

Shaded area represents dia. performance range

Characteristics valid for air density 1.2 kg/m³

ES3-8	Ø 300	0,75 kW	ES4-110	Ø 600	11 kW	ES9-500	Ø 900	50 kW
ES3,5-11	Ø 350	1,1 kW	ES6-150	Ø 600	15 kW	ES9-500/80	Ø 900	50/8 kW
ES4-30	Ø 400	3,0 kW	ES7-220	Ø 700	22 kW	ES9-700	Ø 900	70 kW
ES5-40	Ø 500	4,0 kW	ES7-300	Ø 700	30 kW	ES9-700/110	Ø 900	70/11 kW
ES5-75	Ø 500	7,5 kW						



AXIAL FANS ESN/dESN / ES / EST

Köfma

ESN/dESN/ES/EST



EST 4-15 to EST 9-500



TYPE

EST4-15 to EST9-500
Axial fan flame-proof, with turbine
Drive switchable between electric and compressed air
(combination fan).
Diameter: 400 to 900 mm

PERFORMANCE RANGE

Volumetric flow up to 19 m³/s (1140 m³/min)
Total pressure increase up to 3000 Pascal
Motor shaft output from 1.5 to 50.0 kW

DESIGN

Axial-flow impeller as cast part made of EN AB 43000
with smallest blades on the outer ring, turbine nozzle for
compressed air drive. Thrust collar made of EN AB 43000
spark protected. With guide vanes, profiled rotor blades with
no edges in the flow surface, sturdy steel housing,
foot mounting.
Including: Sealed motor, impact protection

CONTROL

Direct, star-delta or stepless via compressed air

DRIVE

- Voltage ranges 400 - 1140 Volt
Three-phase AC - squirrel-cage motors S1
in special design
- Flame-proof enclosure protection
„d“ or „de“ according to DIN EN 60079-1
- Protection class >= IP 55; insulation class F, tropicalised,
permanently lubricated
- Energy efficiency class >= IE2
Terminal box position: top
- Operating pressure with compressed air drive: 4-6 bar

COATING

Primer with top coat, alkyd resin Silac,
total layer thickness min. 180 µm
Standard colour: Pure white (RAL9010)

OPTIONS

Dust disks, hard-coated impeller, special coating, vibration
dampers, VFD compatibility, cold environment, motor
monitoring, vibration sensors, volume flow, pressure
difference, adjustable blades, bifurcated fan

TECHNICAL EXECUTION ACCORDING TO

Machinery Directive: Directive 2006/42/EC
ErP ecodesign Directive 2009/125/EC
Explosion protection according to guideline 2014/34/EU
Test bench run according to DIN EN ISO 5801/2017



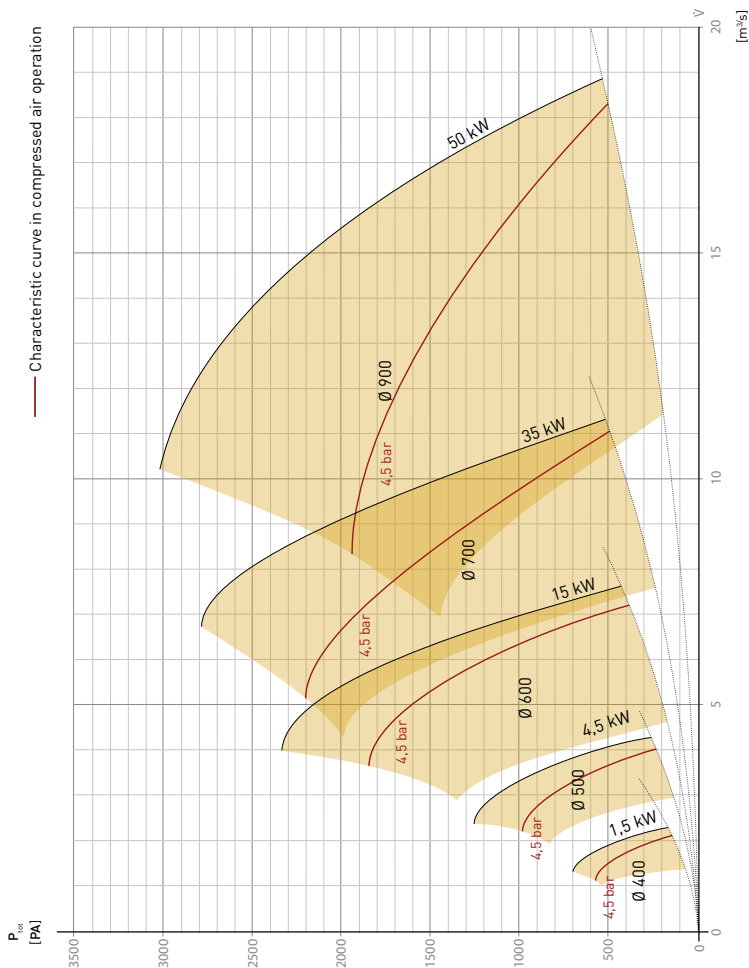


TYPE SERIES EST 4-15 to EST 9-500

Rotational speed: 3000 rpm
incl. additional pneumatic drive

Output curve for 4.5 bar
Shaded area represents dia. performance range
Characteristics valid for air density 1.2 kg/m³

EST4-15	Ø 400	1.5 kW	EST7-350	Ø 700	35.0 kW
EST5-45	Ø 500	4.5 kW	EST9-500	Ø 900	50.0 kW
EST6-150	Ø 600	15.0 kW			

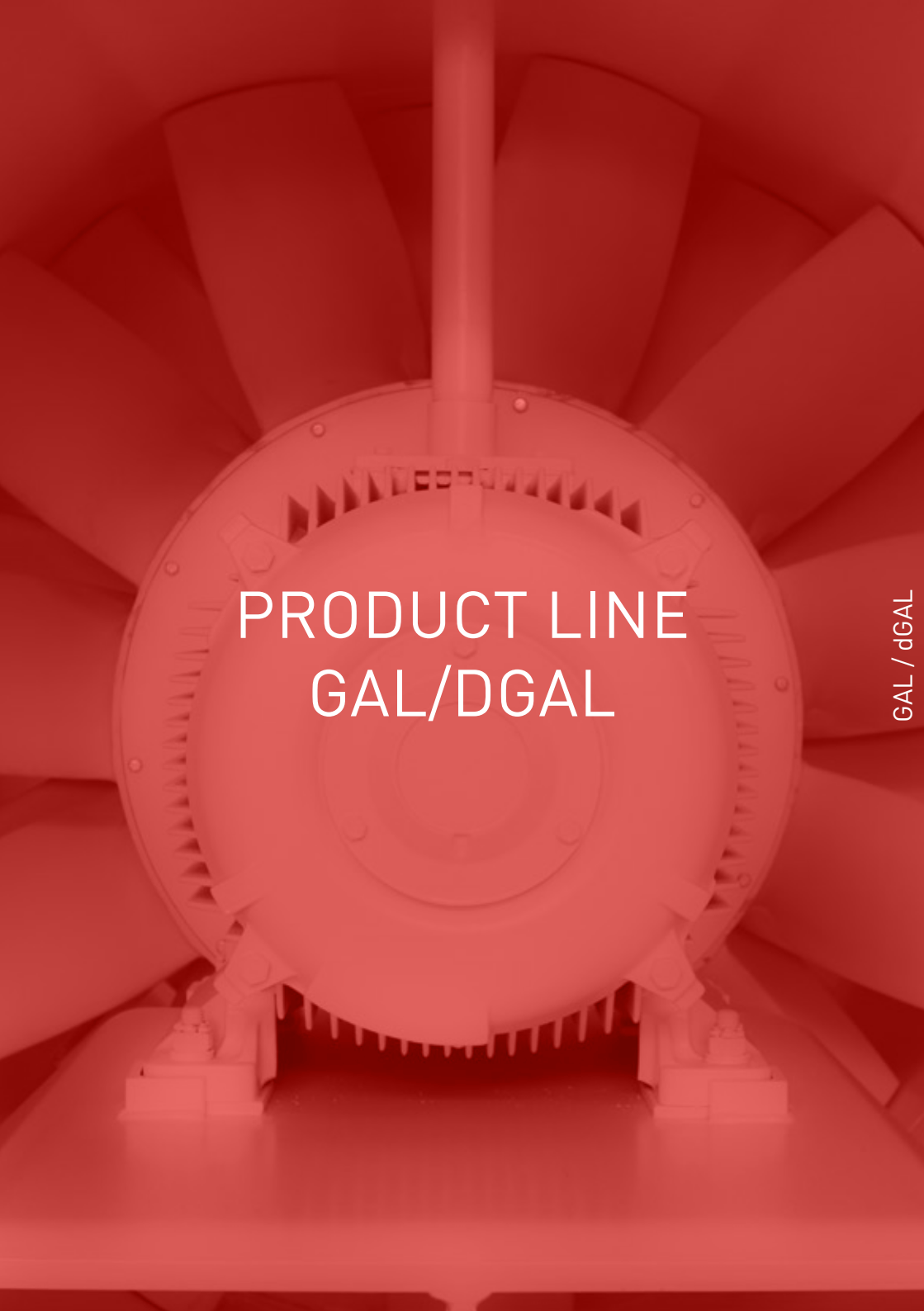




Körfeinmann

WORK HARD
BREATHE EASY

GAL / dGAL



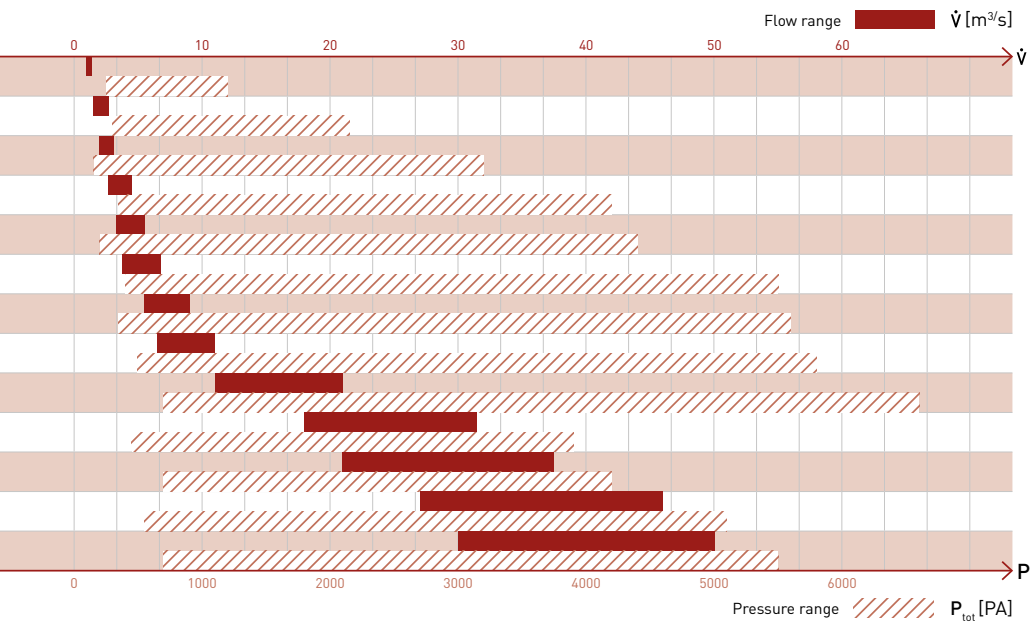
PRODUCT LINE GAL/DGAL

GAL / dGAL

AXIAL FANS OVERVIEW GAL/dGAL

Type: Standard designation/explosion protection

				Diameter	Power	$\dot{V}_{min.}$	$P_{max. @ \dot{V}_{min.}}$	$\dot{V}_{max.}$	$P_{min. @ \dot{V}_{max.}}$
				(mm)	(kw)	(m³/s)	(Pa)	(m³/s)	(Pa)
STANDARD	GAL3-15/15	 FIREDAMP PROTECTION	dGAL3-15/15	300	2 x 1,5	1,0	1200	1,4	250
	GAL4-30/30		dGAL4-30/30	400	2 x 3,0	1,5	2250	2,7	300
	GAL5-55/55		dGAL5-55/55	500	2 x 5,5	2,0	3200	3,1	150
	GAL5-75/75		dGAL5-75/75		2 x 7,5	2,7	4200	4,5	350
	GAL6-110/110		dGAL6-110/110	600	2 x 11	3,3	4400	5,5	200
	GAL6-150/150		dGAL6-150/150		2 x 15	3,8	5500	6,8	400
	GAL7-220/220		dGAL7-220/220	700	2 x 22	5,5	5600	9,0	350
	GAL7-300/300		dGAL7-300/300		2 x 30	6,4	5800	11	500
	GAL9-550/550		dGAL9-550/550	900	2 x 55	11	6600	21	700
	GAL12-450/450	 EXPLOSION PROTECTION	dGAL12-450/450	1200	2 x 45	18	3900	31,5	450
	GAL12-550/500		dGAL12-550/500		2 x 55	21	4200	37,5	700
	GAL14-900/900		dGAL14-900/900	1400	2 x 90	27	5100	46	550
	GAL14-1100/1100		dGAL14-1100/1100		2 x 110	30	5500	50	700



GAL / dGAL



AXIAL FANS GAL / dGAL



GAL3-15/15 to GAL14-1100/1100

TYPE

GAL3-15/15 to GAL14-1100/1100
Two-stage counter-rotating axial fan
Diameter: 300 to 1400 mm

PERFORMANCE RANGE

Volumetric flow up to 50 m³/s (3000 m³/min)
Total pressure increase up to 6500 Pascal
Motor shaft output from 2 x 1.5 to 2 x 110 kW

DESIGN

Double-stage axial fan in counter-rotating design, axial impellers cast from EN AB 43000, profiled blades with no edges in the flow surface, sturdy steel housing, foot mounting

CONTROL

Direct or star-delta starting
Optional: speed-regulated, soft start, pole-changeable

DRIVE

- Voltage ranges 400 - 1000 Volt
Three-phase AC squirrel-cage motors S1
in special design
- Protection class $\geq$ IP 55; insulation class F, tropicalised
- Energy efficiency class $\geq$ IE2
- Terminal box position: top, side 45° or inside
- PTC thermistor
- Optional: Hydraulic drive sizes from
 $\varnothing$ 300 mm to $\varnothing$ 600 mm

COATING

Priming with top coat, alkyd resin Silac,
total layer thickness min. 180 μ m
Standard colour: Pure white (RAL9010)

OPTIONS

Sealed motor, dust disks, hard coated impeller, special coating, vibration dampers, impact protection, VFD compatibility, cold environment, motor monitoring, incr. efficiency class, vibration sensors, volume flow, pressure difference, adjustable blades, bifurcated

TECHNICAL EXECUTION ACCORDING TO

Machinery Directive: EU Directive 2006/42/EC
ErP ecodesign: Directive 2009/125/EC
Test bench run according to DIN EN ISO 5801/2017

VERSION WITH EXPLOSION PROTECTION



Protection class: Fire-damp proof*, explosion-proof*

TYPE: dGAL3-15/150 to dGAL14-1100/1100

Spark-protected design

ACCORDING TO: Directive 2014/34/EU

*also available according to international explosion protection regulations





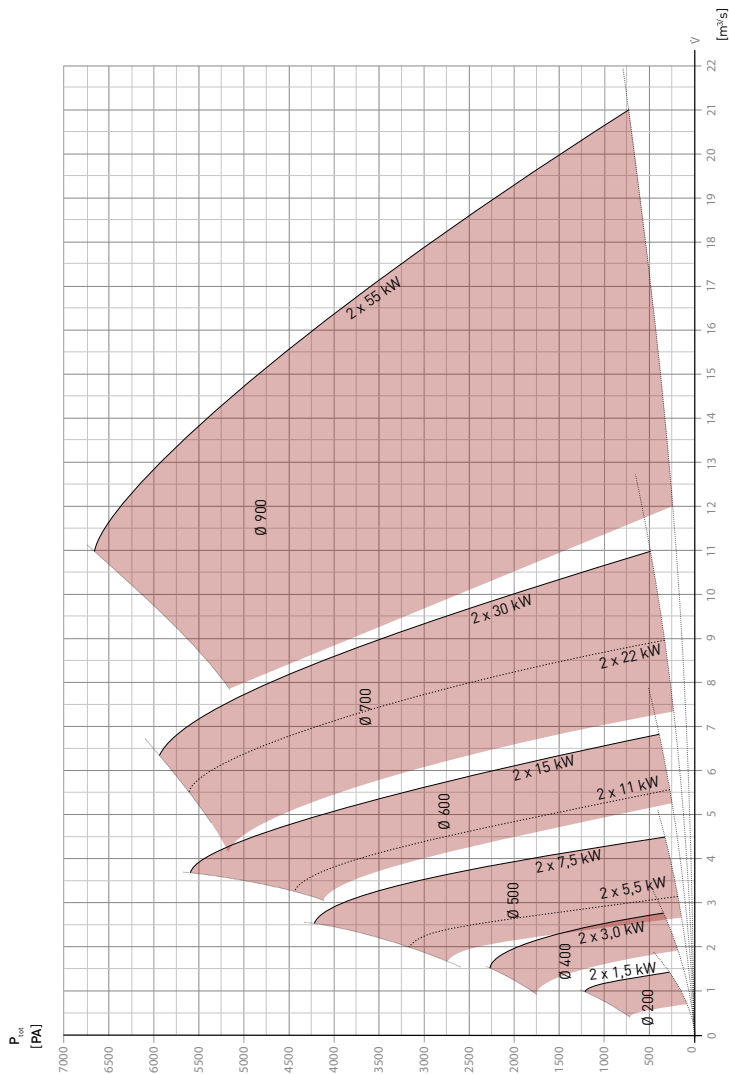
GAL3-15/15 to GAL7-300/300

Rotational speed: 3000 rpm

Shaded area represents dia. performance range

Characteristics valid for air density 1.2 kg/m³

GAL3-15/15	300 mm	2 x 1.5 kW	GAL6-110/110	600 mm	2 x 11 kW
GAL4-30/30	400 mm	2 x 3.0 kW	GAL6-150/150	600 mm	2 x 15 kW
GAL5-55/55	500 mm	2 x 5.5 kW	GAL7-220/220	700 mm	2 x 22 kW
GAL5-75/75	500 mm	2 x 7.5 kW	GAL7-300/300	700 mm	2 x 30 kW



AXIAL FANS GAL / dGAL

GAL12-450/450 to GAL14-1100/1100

Rotational speed: 1500 upm
Colour gamut corresponds to Ø energy spectrum
Characteristics valid for air density 1.2 kg/m³

GAL12-450/450
GAL12-550/550

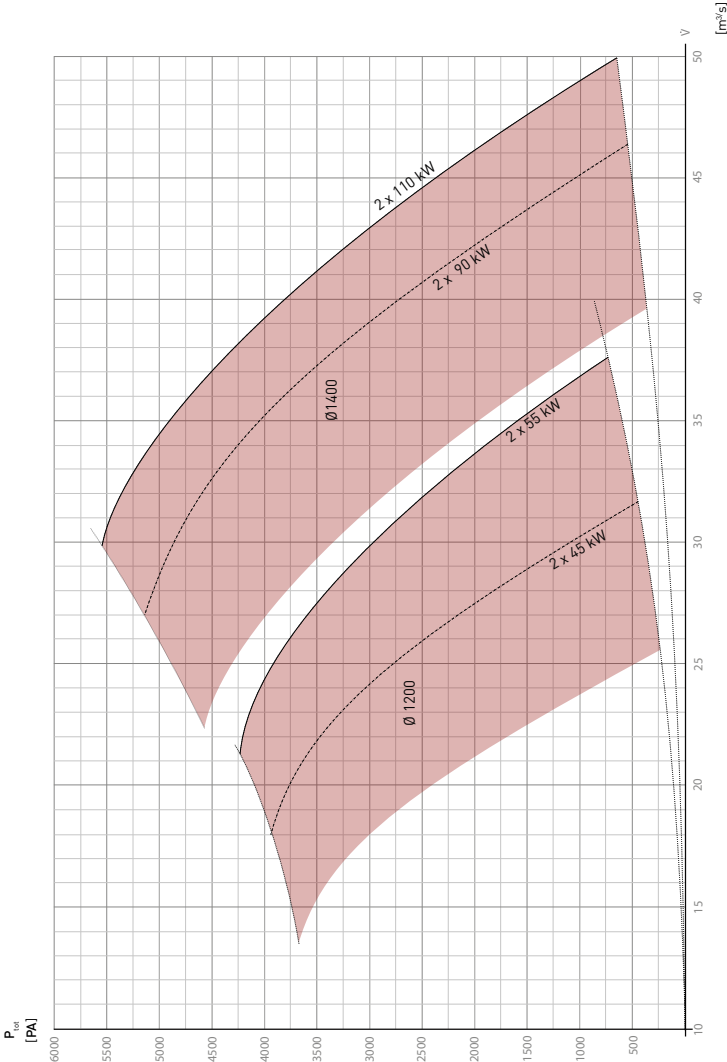
Ø 1200
Ø 1200

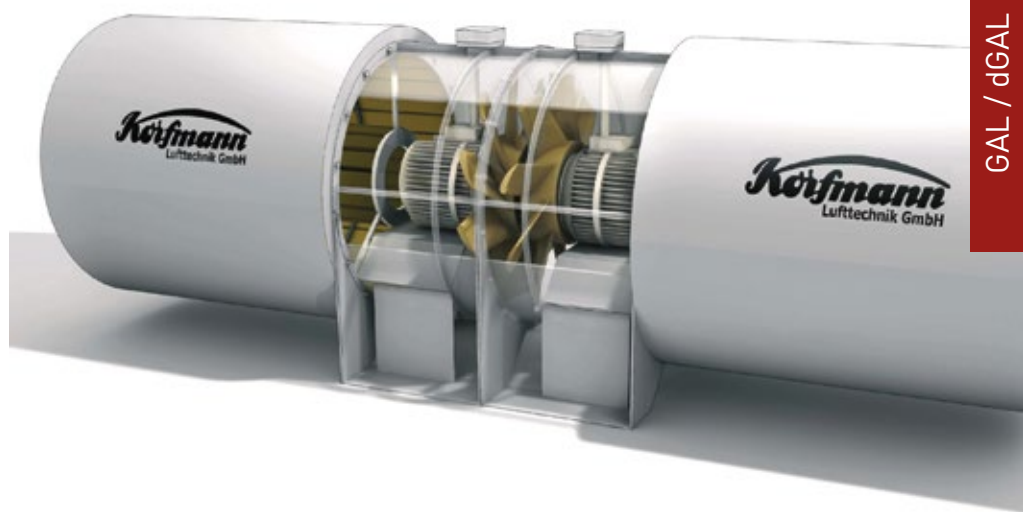
2 x 45 kW
2 x 55 kW

GAL14-900/900
GAL14-1100/1100

Ø 1400
Ø 1400

2 x 90 kW
2 x 110 kW





GAL / dGAL



Korfmann

WE ARE BRINGING WIND
TO YOUR SAILS

KORAX/AGE/DV/SL

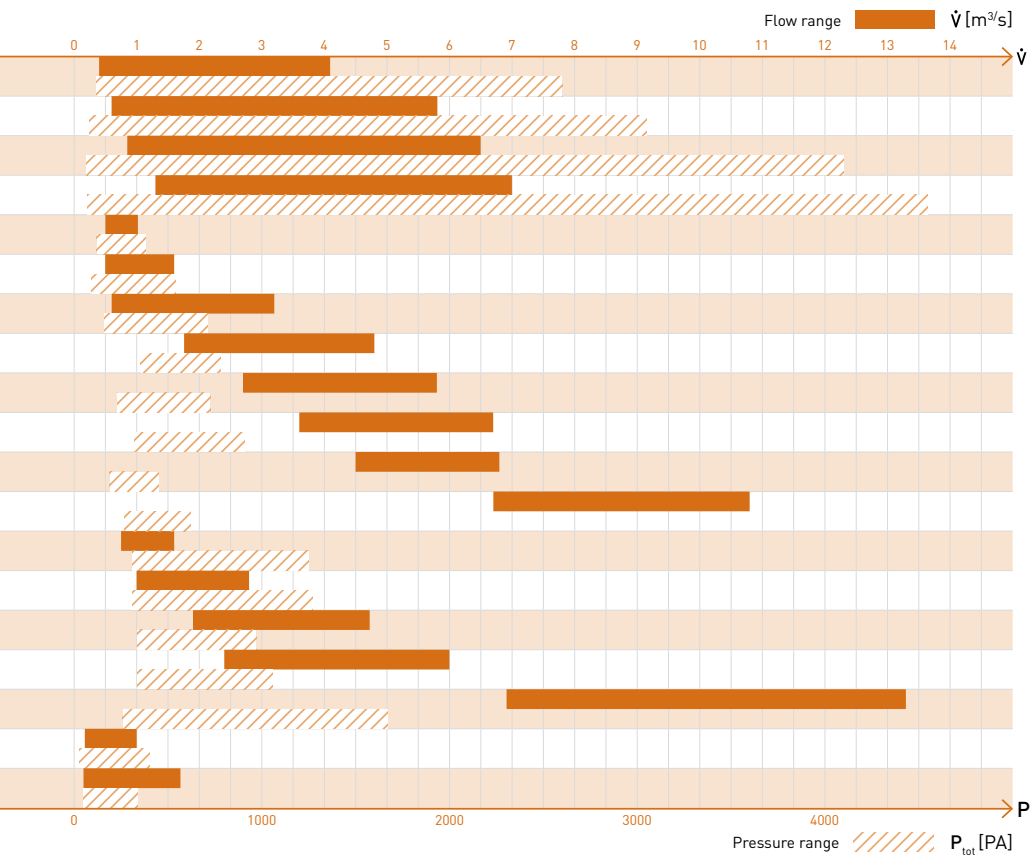
PRODUCT LINE
SL
DV
AGE
KORAX

KORAX/AGE/DV/SL

AXIAL FANS OVERVIEW KORAX AGE DV SL

KORAX and AGE with electric drive
SL and DV with compressed air drive

			Diameter (mm)	Power (kw)	$\dot{V}_{min.}$ (m³/s)	$P_{max. @ \dot{V}_{min.}}$ (Pa)	$\dot{V}_{max.}$ (m³/s)	$P_{min. @ \dot{V}_{max.}}$ (Pa)
STANDARD		KORAX7-110	700	11,0	0,4	2600	4,1	70
		KORAX8-185	800	18,5	0,6	3050	5,8	80
		KORAX9-185	900	18,5	0,85	4100	6,5	65
		KORAX9-300		30,0	1,3	4550	7,0	70
	EXPLOSION PROTECTION 	AGE3-8	300	0,8	0,5	380	1,05	120
		AGE4-10	400	1,0	0,5	540	1,6	90
		AGE5-22	500	2,2	0,6	710	3,2	160
		AGE5-45		4,5	1,75	780	4,8	350
		AGE6-45	600	4,5	2,7	725	5,8	230
		AGE6-60		6,0	3,6	910	6,7	320
		AGE7-30	700	3,0	4,5	450	6,8	190
		AGE8-55	800	5,5	6,7	620	10,8	270
FIREDAMP PROTECTION 	EXPLOSION PROTECTION 	DV3	300	-	0,75	1250	1,6	310
		DV4	400	-	1,05	1270	2,8	310
		DV5	500	-	1,92	970	4,73	340
		DV6	600	-	2,4	1060	6,0	340
		DV9	900	-	6,9	1670	13,3	260
		SL3	300	-	0,17	400	1,0	30
		SL4	400	-	0,42	340	1,7	50





KORAX7-110 to KORAX9-300

TYPE

KORAX7-110 to KORAX9-300
Radial axial fan
Diameter: 700 to 900 mm

PERFORMANCE RANGE

Volumetric flow up to 7 m³/s (420 m³/min)
Total pressure increase up to 4550 Pascal
Motor shaft output from 11.0 to 30.0 kW

DESIGN

Radial impeller made of steel with axial outlet through guide vanes, sturdy steel housing, foot mounting

CONTROL

Direct or star-delta starting
Optional: variable speed (FU)

DRIVE

- Voltage ranges 230-1000 Volt
- Three-phase AC – squirrel-cage motors S1 in special design
- Protection class $\geq$ IP 55; insulation class F, tropicalised, permanently lubricated
- Energy efficiency class $\geq$ IE2
Terminal box position: top
PTC thermistor

COATING

Primer with top coat, alkyd resin Silac,
total layer thickness min. 180 μ m
Standard colour: Pure white (RAL9010)

OPTIONS

Sealed motor, special coating, vibration dampers, VFD compatibility, cold environment, motor monitoring, incr. efficiency class, vibration sensors, volume flow, pressure difference

TECHNICAL EXECUTION ACCORDING TO

Machinery Directive: EU Directive 2006/42/EC
ErP ecodesign: Directive 2009/125/EG
Test bench run based on DIN EN ISO 5801/2017

VARIANTE IN EXPLOSIONSSCHUTZ



Protection class: Fire-damp proof*, explosion-proof*

TYPE: KORAX7-110 to KORAX9-300

ACCORDING TO: Directive 2014/34/EU

*also available according to international explosion protection regulations

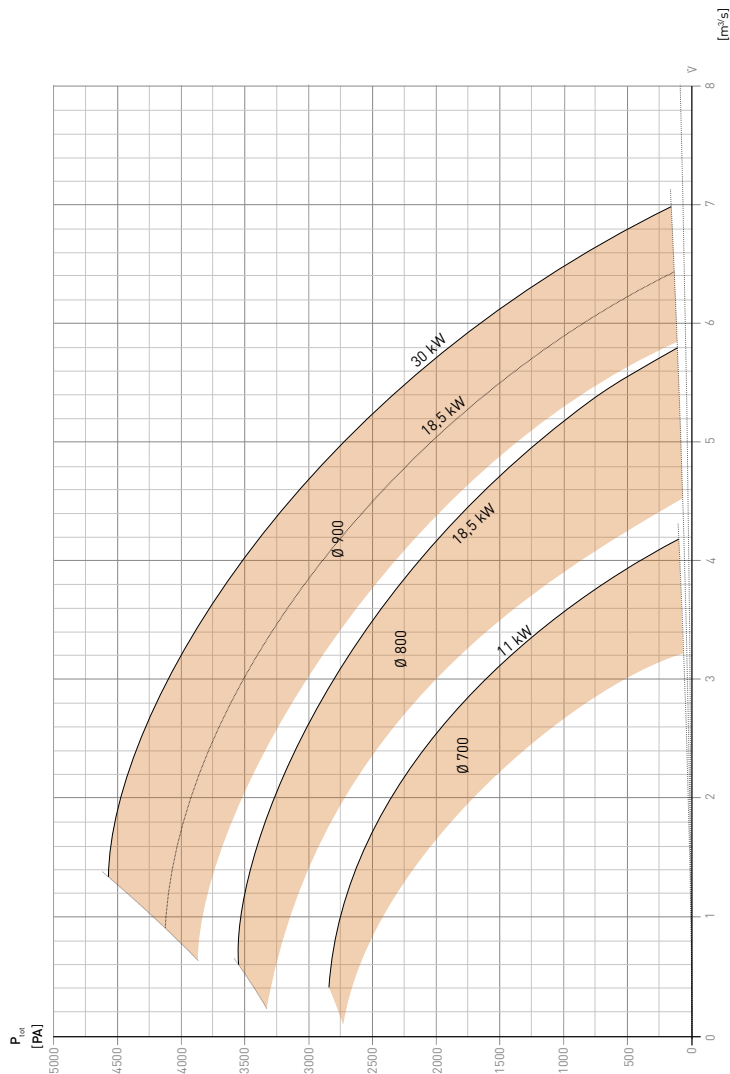




KORAX7-110 to KORAX9-300

KORAX7-100	Ø 700	11 kW
KORAX8-185	Ø 800	18.5 kW
KORAX9-185	Ø 900	18.5 kW
KORAX9-300	Ø 900	30 kW

Rotational speed: 3000 rpm
Shaded area represents dia. performance range
Characteristics valid for air density 1.2 kg/m³





AGE3-8 to AGE8-55

TYPE

AGE3-8 to AGE8-55; axial fan
Diameter: 300 to 800 mm

PERFORMANCE RANGE

Volumetric flow up to 10 m³/s (600 m³/min)
Total pressure increase up to 910 Pascal
Motor shaft output from 0.8 to 5.5 kW

DESIGN

Axial-flow impeller as cast part from EN AB 43000, with guide vanes, profiled impeller blades with no edges in the flow surface, sturdy steel housing, foot mounting, optionally with rollers and/or folding handles for easy transport.

CONTROL

Direct or star-delta starting
Optional: variable speed (FU)

DRIVE

- Voltage ranges 230-1000 Volt
- Three-phase AC – squirrel-cage motors S1 in special design
- Protection class $\geq$ IP 55; insulation class F, tropicalised, permanently lubricated
- Energy efficiency class $\geq$ IE2
- Terminal box position: top
- PTC thermistor

COATING

Primer with top coat, alkyd resin Silac, total layer thickness min. 180 µm
Standard colour: Pure white (RAL9010)

OPTIONS

Sealed motor, dust disks, hard coated impeller, special coating, vibration dampers, VFD compatibility, cold environment, motor monitoring, incr. efficiency class, vibrations sensors, adjustable blades

TECHNICAL EXECUTION ACCORDING TO

Machinery Directive: EU Directive 2006/42/EC
ErP eco-design: Directive 2009/125/EC
Test bench run according to DIN EN ISO 5801/2017

VERSION WITH EXPLOSION PROTECTION



Protection class: explosion-proof

TYPE: dAGE 3-8 to dAGE8-55

Spark-protected design

ACCORDING TO: Directive 2014/34/EU



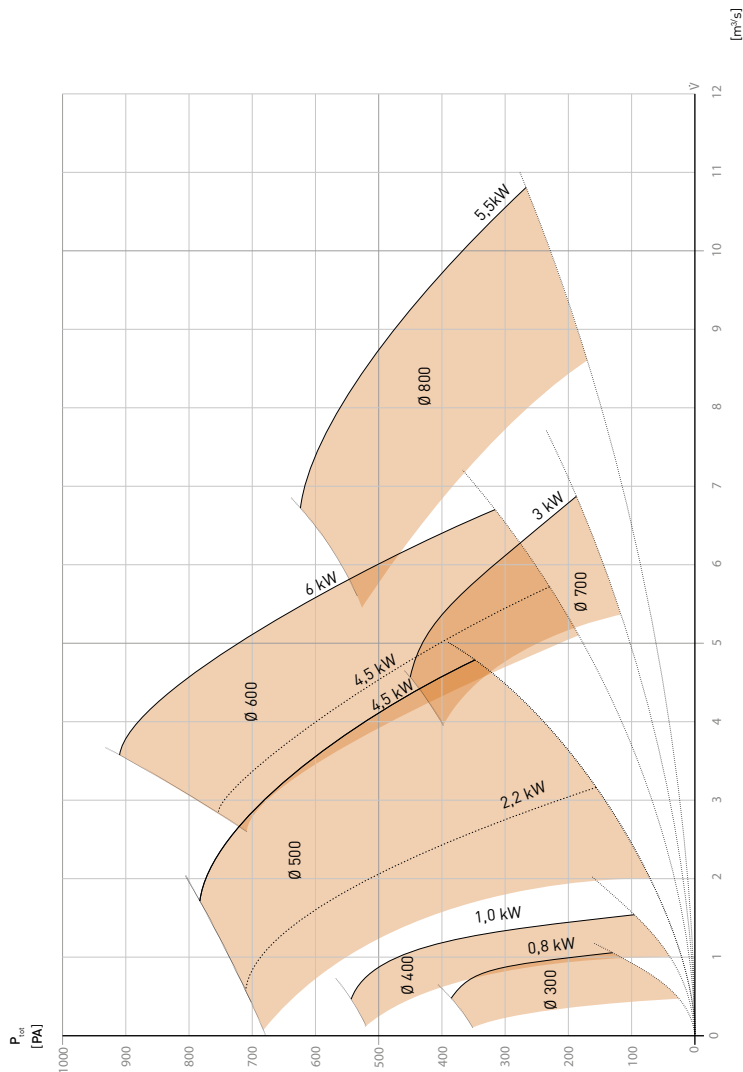


AGE3-8 to AGE8-55

Rotational speed: 3000 rpm / 300-600 mm Ø
1500 rpm / 700-800 mm Ø

Shaded area represents dia. performance range
Characteristics valid for air density 1.2 kg/m³

AGE3-8	Ø 300	0,8 kW	AGE6-45	Ø 600	4,5 kW
AGE4-10	Ø 400	1 kW	AGE6-60	Ø 600	6 kW
AGE5-22	Ø 500	2,2 kW	AGE7-30	Ø 700	3 kW
AGE5-45	Ø 500	4,5 kW	AGE8-55	Ø 800	5,5 kW





DV3 to DV9

TYPE

DV3 to DV9
Compressed air - axial ventilator explosion- and firedamp-proof
Compressed air drive
Diameter: 300 to 600 mm

PERFORMANCE RANGE

Volumetric flow up to 800 m³/min
Total pressure increase up to 1670 Pascal
Nominal drive pressure 4 bar

DESIGN

Axial-flow impeller as cast part from EN AB 43000, with miniature blading on the outer ring. Turbine nozzle for compressed air drive. Thrust collar made of EN AB 43000, spark protected. With guide vanes, profiled rotor blades with no edges in the flow surface, sturdy steel housing, foot mounting.

CONTROL

Infinitely variable by regulation of the compressed air

DRIVE

- Compressed air driven balanced pressure turbine at the impeller circumference
- Operating pressure 4-6 bar

COATING

Primer with top coat, alkyd resin Silac,
total layer thickness min. 180 µm
Standard colour: Pure white (RAL9010)

OPTIONS

Dust disks, special coating

TECHNICAL EXECUTION ACCORDING TO

Machinery Directive: EU Directive 2006/42/EC
ErP ecodesign: Directive 2009/125/EG
Test bench run based on DIN EN ISO 5801/2017





DV3-9

Air consumption [m³/min]

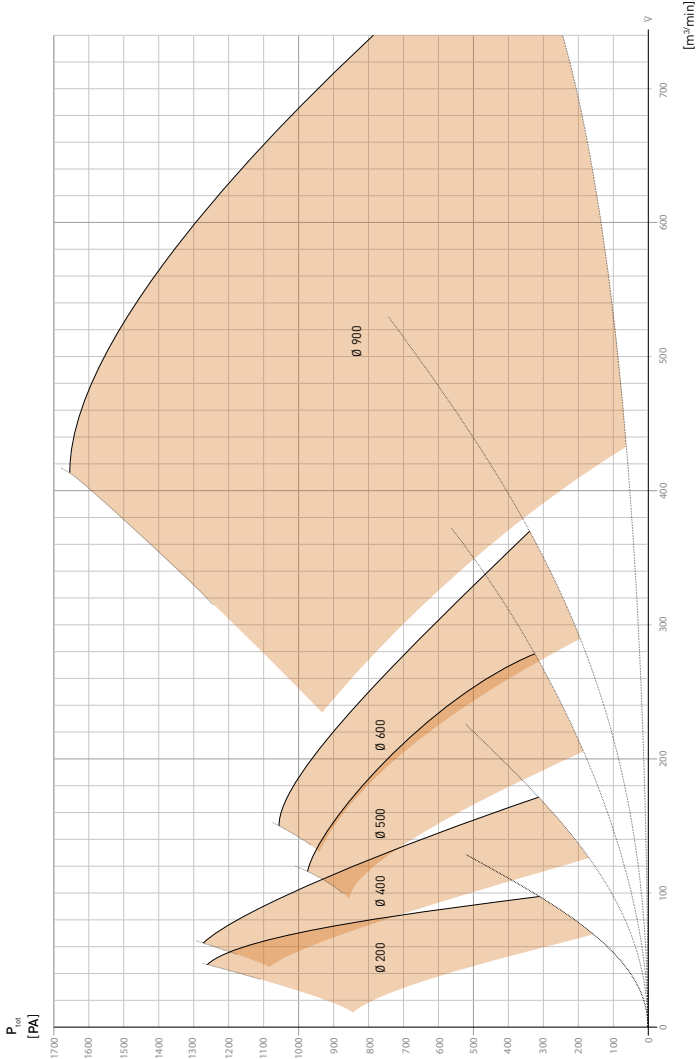
DV3	Ø 300	1,63 m³
DV4	Ø 400	2,38 m³
DV5	Ø 500	3,17 m³
DV6	Ø 600	4,24 m³
DV9	Ø 900	8,60 m³

Air density $\rho = 1,2 \text{ kg/m}^3$

Driving pressure ~ 4bar

Shaded area represents dia. performance range

Characteristics valid for air density $1,2 \text{ kg/m}^3$





SL3 to SL4



TYPE

SL3 to SL4

Compressed air - economy fan, explosion-proof or firedamp-proof

Compressed air drive

Diameter: 300 to 400 mm

PERFORMANCE RANGE

Volumetric flow up to 100 m³/min

Total pressure increase up to 430 Pascal

Nominal drive pressure 4 bar

DESIGN

Axial-flow impeller as cast part from EN AB 43000, with miniature blading on the outer ring. Turbine nozzle for compressed air drive. Thrust collar made of EN AB 43000, spark protected. Profiled blades with no edges in the flow surface, sturdy steel housing.

CONTROL

Infinitely variable by regulation of the compressed air

DRIVE

- Compressed air driven balanced pressure turbine at the impeller circumference
- Operating pressure 4-6 bar

COATING

Primer with top coat, alkyd resin Silac, total layer thickness min. 180 µm
Standard colour: Pure white (RAL9010)

OPTIONS

Special coating

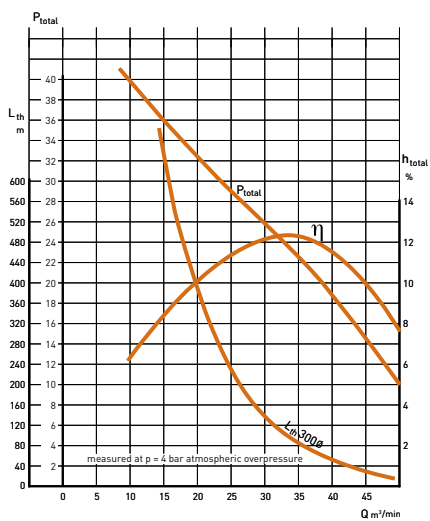
TECHNICAL EXECUTION ACCORDING TO

Machinery Directive: Directive 2006/42/EC

Ex-protection according to directive 2014/34/EU

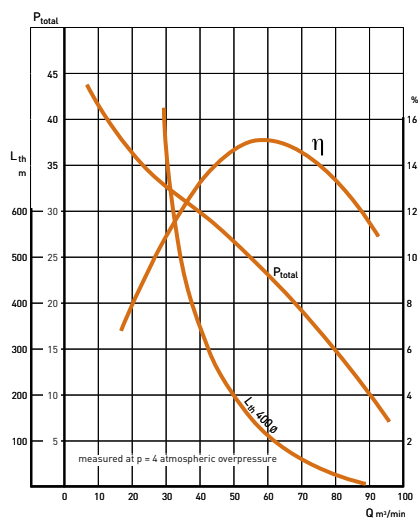
Test bench run based on DIN EN ISO 5801/2017





Compressed air, economy fan; type SL 3

Nominal diameter = 300 mm; Air consumption $q_a = 0.4 \text{ m}^3/\text{min}$



Compressed air, economy fan; type SL 4

Nominal diameter = 400 mm; Air consumption $q_a = 0.56 \text{ m}^3/\text{min}$



Körfinann

WE CAN DO ANYTHING!
BUT YOU DON'T HAVE TO
TAKE IT



MODULAR ACCESSORIES

ADDITIONAL OPTIONS FANS

OPTIONS/EXTENSIONS/FANS

Environment options — Tough environmental conditions (dust etc.)

SEALED MOTOR

Recommended for    

Upgraded motor in increased protection class incl. additional protective measures

DUST DISKS

Recommended for    

Capped impeller ensures edge-free surfaces against dust deposits

HARD-COATED IMPELLER

Recommended for 

Surface-treated impeller for increased material durability

SPECIAL COATING

Special coating depending on application profile (marine coating etc.)

Stability options — Durability and stability

VIBRATION DAMPER

Recommended for 

Decoupling of device vibrations from the connecting structure

ANTI-STALL MONITORING

Recommended for 

Stall-point monitoring by means of instrumentation and evaluation device, for safe and damage-free fan operation

IMPACT PROTECTION

Additional bracket to protect the motor terminal box in mining conditions



Motor options — Motor and electrical operation

FREQUENCY CONVERTER COMPATIBILITY

Recommended for  

Upgraded motor in increased protection class incl. additional protective measures

COLD ENVIRONMENT

Recommended for 

Preparation by installation of stand-by heater, special grease etc. at low ambient temperatures

MOTOR MONITORING

Recommended for 

Additional internal sensors and probes for monitoring motor parameters

INCREASED EFFICIENCY CLASS

Energy efficiency rating of the motor increased to a higher classification

Sensor options — Sensor system and monitoring

See also measurement technology

VIBRATION MONITORING

Recommended for 

Monitoring of machine vibration on bearings and/or housings

VOLUMETRIC FLOW MONITORING

Recommended for  

Measurement of relevant parameters to determine volume or mass flow

PRESSURE MONITORING

Recommended for  

Differential measurement for determining total or operating pressures

GAS MONITORING

Gas detection sensors for various substances for further processing in monitoring and control systems.



TABLE OF CONTENTS ACCESSORIES

Seite		 Mining	 Tunnelling	 Jet-ventilation	 Drill/Blast	 TBM/Roadheader	 Main fans	 Duct fans/special ventilation fans	 Deduster/filter	 Heating/cooling units	 Special machinery
53	Plant construction										
54	AS	X	X	X	X	X	X	X	X	X	X
54	ÜF/P	X	X	X	X	X	X	X	X	X	X
55	ED	X	X	X	X	X	X	X	X	X	X
55	Frame	X	X	X	X	X	X	X	X	X	X
56	ASP	X	X	[X]	X	X	X	X	X	X	X
57	LVS	X	X			X		X			X
58	Sound insulation										
59	Acoustics										
60	SDS	X	X	X	X	X	X	X	X	X	X
60	SDSI	X	X	X	X	X	X	X	X	X	X
61	SDM	X	X	X	X	X	X	X	X	X	X
62	NS		X			[X]	[X]	X		X	X
63	KSD	X	X		[X]		X	X	X	X	X
63	SH	X	X	X	X	X	X	X	X	X	X
64	LUM	X	X	X	X	X	X	X	X	X	X
64	PSD	X	X	X	X	X	X	X	X	X	X
65	CS	[X]	X		[X]			X	X	X	X
66	Ventilation concept										
67	Measurements										
68	Vibration measurement										
69	Measurement technology V+P										
70	Control technology										
71	PU combination	X	X	X	X	X	[X]	X	X	X	X
71	Star delta	X	X	X	X	X	[X]	X	X	X	X
72	TSA softstarter	[X]	X	X	X	X	X	X	X	X	X
73	FU and FU/UB	[X]	X	X	[X]	[X]	[X]	X	X	X	X
74	FU outdoor	[X]	X	X	X	X	X	X	X	X	X
75	FU cabinet	[X]	X	X	[X]	X	X	X	X	X	X
76	Higher-level control	X	X	X	X	X	X	X	X	X	X
77	Air guard										

CUSTOMER-ORIENTED SOLUTIONS FOR EVERYTHING RELATED TO VENTILATION SYSTEMS

Korfmann ventilation system are modular.

Accessories can be combined according to the application.

KORFMANN – MODULAR CONCEPT

- Flexible use
- Individually exchangeable
- Low transport costs
- High reusability
- Simple assembly

COMPREHENSIVE ENGINEERING

- Static and dynamic loads
- Energy optimisation
- Logistics planning
- Sound insulation optimisation
- Plant expansion

SIMULATION

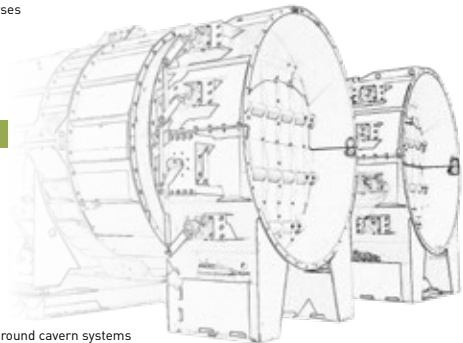
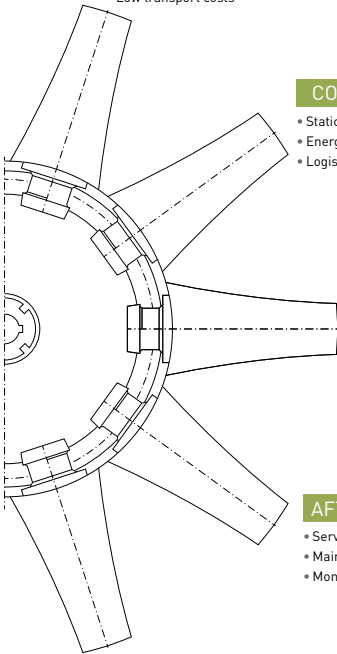
- Flow simulations
- Strength analyses
- Vibration simulations
- Noise analyses

AFTER SALES

- Services
- Maintenance
- Monitoring

EXPERIENCE

- Special plant construction for ventilation technology
- Mechanical engineering
- Underground cavern systems
- Mining
- Tunnelling



AS AND ÜF/P



AS duct adapter

TYPE

AS3 to AS42; adapter
Diameter: 300 to 4200 mm

TECHNICAL EXECUTION ACCORDING TO

Flange pattern according to DIN 21603

DESIGN/APPLICATION

Steel component with connecting flange for all fan types for direct connection of ducts or compensators

COATING

Primer with top coat, alkyd resin Silac,
total layer thickness min. 180 µm,
Standard colour: Pure white [RAL9010]

OPTIONS

Adaptation of special compensators, special flange,
Split design



ÜF/P transition piece

TYPE

ÜF3/P4 to ÜF30/P35; flange transition piece - duct
Diameter: 300 to 3500mm

TECHNICAL EXECUTION ACCORDING TO

Flange pattern according to DIN 21603

DESIGN/APPLICATION

Steel component with connecting flange for all fan types for direct connection of ducts of larger diameter compensators

COATING

Primer with top coat, alkyd resin Silac,
total layer thickness min. 180 µm,
Standard colour: Pure white [RAL9010]

OPTIONS

Adaptation of special compensators, special flange,
flange/flange design for further module types: [ÜF/F],
split design



EN AND FRAME



ED – Inlet bell

TYPE

ED 3 – ED 42; inlet bell
Diameter: 300 to 4200 mm

TECHNICAL EXECUTION ACCORDING TO

Flange pattern according to DIN 21603

DESIGN/APPLICATION

Semi-circular or conical steel component with connecting flange for all fan types to optimise the air flow on the intake side including mesh guard.

COATING

Primer with top coat, alkyd resin Silac,
total layer thickness min. 180 µm,
Standard colour: Pure white [RAL9010]

OPTIONS

Measuring inlet nozzle module „MED“ with measuring ring line for volume flow determination, split design



Frame - carriage/foundation frame

TYPE

Skids/base frames
All sizes

OPTIONS

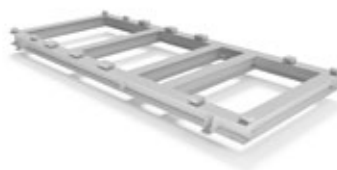
Split design; shear-resistant vibration dampers for decoupling the active parts. Load-bearing supports and anchoring fixtures to the foundation

DESIGN/APPLICATION

Substructure frame as skid or foundation frame for full-area mounting and alignment of the entire structure. Designed as transport carriage for underground use or as foundation frame for permanent installations

COATING

Primer with top coat, alkyd resin Silac,
total layer thickness min. 180 µm,
Standard colour: Pure white [RAL9010]





ASP butterfly valve

TYPE

ASP 3 – ASP 42; butterfly valve
Diameter: 300 to 4200 mm

DESIGN/APPLICATION

Steel tube design with flange on both sides. Internal, single or multi-axis horizontally mounted flap, rib-reinforced. In mining version. For ventilation systems in parallel operation. Can be used as throttle valve and bypass valve

COATING

Primer with top coat, alkyd resin Silac,
total layer thickness min. 180 µm,
Standard colour: Pure white (RAL9010)

OPTIONS

- Designed as mechanical damper – manually adjustable (type: ASP M)
- Designed as automatic damper – incl. servo motor and gear (type: ASP A)
- Designed as automatic damper – adjustable via pneumatic lifting cylinder (type: ASP AP)
Designed for explosion-protected areas (type: dASP...)

TECHNICAL EXECUTION ACCORDING TO

Machinery Directive; 2006/42/EC





LVS duct storage cassette

TYPE

LVS 5 – LVS 35; air duct accumulator
Diameter: 500 to 3500 mm

DESIGN/APPLICATION

Steel tube with core. Front unit for accommodation of duct sections. Storage for up to 250 m flexible duct. Consisting of exchangeable cassette and outlet diffuser.

COATING

Primer with top coat, alkyd resin Silac,
total layer thickness min. 180 µm,
Standard colour: Pure white (RAL9010)

OPTIONS

Rope pulley with holder, special diffusers, split and oval versions, special designs, exchangeable cassette, pre-storable cassettes, brake



SOUND INSULATION

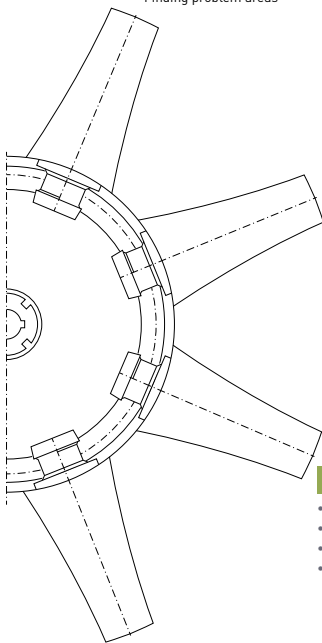
FOR THE ENVIRONMENT AND OUR FELLOW HUMANS.

Solutions for any application

Compliance with project-related noise emission values

ACOUSTIC PLANNING

- Analysis of the environment
- Finding problem areas
- Preliminary analyses of emissions
- Noise appraisals



ACOUSTIC DESIGN

- Design of necessary sound insulation measures
- Consideration of tonal additions
- Frequency considerations
- Sound insulation solutions
- Optimisation of device attenuation
- Optimisation of locations

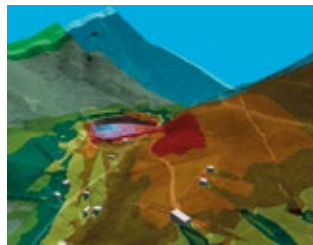
NOISE-LEVEL MEASUREMENT

- Measurements of the environment
- Measurements on machines
- Measurement of insertion attenuation
- Octave and third-octave band analyses

DESIGN

- Reusable components
- Comprehensive combination options
- High insertion attenuations
- Sound insulation flow-optimised
- Compact design
- Low maintenance costs

Actual condition



Optimisation



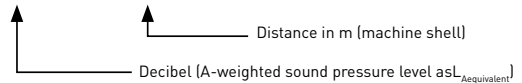
Project-specific requirements

Tailored design

Customer requirement

Definition as „NOISE KIT” – customer information

NOISE KIT NK ___ dB(A) - ___ m



Example: NK 80 dB(A) – 10m

Means target definition:
80 dB(A) sound pressure level at 10 m distance
from the machine under free field conditions!

Example: NK 55dB(A)-50m für ein AL16



INLET: 3 X SDSI
AL16 at approx. 35 Hz/1000 RPM
OUTLET: 3 X SDSI + duct



INLET: 1 X SDSI + KSC10
AL16 + soundproof container 20"
OUTLET: 4 X SDSI + duct



INLET: 4 X SDSI
AL16 + soundproof container 20"
OUTLET: 3 X SDSI + steel pipe



INLET: 1 X SDSI + KSC10
AL16 + soundproof container 20"
OUTLET: 1 X SDSI + NS +
ventilation duct

SDS AND SDSI



SDS – Silencers

TYPE

SDS 3 – 30;
Diameter: 300 to 3000mm

DESIGN/APPLICATION

Pipe silencers to minimise noise emissions. Multiple combinations. Designed as pipe silencers with connecting flanges on both sides and composite brackets. Mining version with internal, anti-static, replaceable damping elements. Size adapted to underground material transport

INSERTION LOSS

8 – 15 dB

COATING

Priming with top coat, alkyd resin Silac, total layer thickness min. 180µm, Standard colour: Pure white (RAL9010)

OPTIONS

Short version type: SDSk with adapted lengths for transport in narrow shafts



SDSI – Sound Silencers (rigid with inner core)

TYPE

SDSI 7 – 30;
Diameter: 300 to 3000mm

DESIGN/APPLICATION

Pipe silencers to minimise noise emissions. Multiple combinations. Designed as pipe silencers fabricated from steel with additional inner core for increased insertion loss, connecting flanges on both sides and composite brackets. Mining version with internal, antistatic, replaceable damping elements. Size adapted to underground material transport.

INSERTION ATTENUATION

10 – 20 dB

COATING

Primer with top coat, alkyd resin Silac, total layer thickness min. 180µm, Standard colour: Pure white (RAL9010)

OPTIONS

Short version type: SDSIk with adapted lengths for transport in narrow shafts





SDM – Modular silencers

TYPE

SDM 3 - 25;
Diameter: 300 to 2500mm

DESIGN/APPLICATION

Pipe silencers to minimise noise emissions. Multiple combinations. Designed as pipe silencers, connecting flange on both sides and composite brackets.

- Designed for tunnel construction with mineral wool insulation under perforated sheet
- Available in module lengths of 0.5 m; 1 m and 2 m

INSERTION ATTENUATION

8 – 15 dB

COATING

Primer with top coat, alkyd resin Silac, total layer thickness min. 180 microns, standard colour: Pure white (RAL9010)

OPTIONS

Split design





Körfmann
INNOVATION



NS – Noise shield silencers

TYPE

NS 14 – 24;
Diameter: 1400 to 2400mm

DESIGN/APPLICATION

Pipe silencers to minimise noise emissions in special design. Three-part special module with increased insertion loss values in the low-frequency range. Suction-side and pressure-side variants.

INSERTION ATTENUATION

15 – 22 dB

COATING

Primer with top coat, alkyd resin Silac,
total layer thickness min. 180µm,
Standard colour: Pure white (RAL9010)

OPTIONS

Various lengths of the intermediate module to achieve of the total insertion loss.



KSD AND SH

KSD – Baffle silencers

TYPE _____

KSD

Size depending on application

DESIGN/APPLICATION _____

Fixed, specified sound attenuation. Designed using baffles for absorption of noise. Square steel frame. Baffles made of perforated sheet metal with inner lining and glass fleece as trickle protection. Absorption material: Mineral wool (non-combustible according to DIN 4102)

Silencer directly connected or as peripheral unit in the air line. For increased insertion attenuation above the levels of pipe silencers.

INSERTION LOSS _____

According to design

(Recommended for requirements > 25 dB)



COATING _____

Galvanised or painted according to application

OPTIONS _____

Combined mobile design in a container/split design (see also sound attenuator type CS)



SH – Acoustic enclosure

TYPE _____

SH 3 -14;

For fan sizes 300 mm to 1400 mm

DESIGN/APPLICATION _____

Acoustic enclosure as a complete enclosure for the fan and adjacent flow components. Fixed specific sound attenuation in sandwich construction with galvanised sheet metal. Multi-part design depending on application.

INSERTION LOSS _____

up to ~25 dB

COATING _____

Galvanised

OPTIONS _____

Custom-made with cut-outs



LUM AND PSD



LUM silencers, fan enclosure

TYPE _____

LUM 3 - 18

Diameter: 300 to 1800mm

DESIGN/APPLICATION _____

Flexible lagging made of antistatic duct materials, filled with special mineral wool insulation, one- or two-piece. For direct enclosure of the fan housing.

INSERTION LOSS _____

3 - 5 dB

COATING _____

Coating of air duct material

OPTIONS _____

Custom-made with cut-outs; steel housing design, Anti-static



PSD silencers, sound deflector panel

TYPE _____

PSD 3 - 18

For fan sizes 300 mm to 1800mm

DESIGN/APPLICATION _____

Sound attenuation as a fixed insulating panel made of sheet steel with mineral wool insulation. Suction side on spacer bolts to reduce axial noise emissions.

INSERTION ATTENUATION _____

10 - 15 dB

COATING _____

Primer with top coat, alkyd resin Silac, total layer thickness min. 180µm, Standard colour: Pure white (RAL9010)

OPTIONS _____

Intake-side mesh guard



CS – Container silencers

TYPE

CS 10 - CS 40

DESIGN/APPLICATION

Fully lined lined container. Sound proofing with insulating material under galvanised perforated steel plating. Designed As a complete housing for axial fans, insertion loss according to design. Depending on requirements with integrated baffle silencers. Designs ranging from the front baffle in a 10" container to a 40" integral container.

COATING

Primer with top coat, alkyd resin Silac,
total layer thickness min. 180 µm,
Standard colour: Pure white (RAL9010)

OPTIONS

Multi-purpose doors, control panel niches, power socket mounting plates, guide rails, stud walls, sound deflector panel, bends up to 180°, fan connection



VENTILATION CONCEPTS

CONVINCING TECHNOLOGY

Assessment of ventilation requirement

Project-related optimised ventilation schemes

Ongoing communication with universities and authorities

Knowledge of current occupational health regulations

NEEDS ASSESSMENT

- Up-to-date occupational health
- Applicable OSH legislation
- High level of experience

DETERMINATION OF THE FAN SPECIFICATIONS

- Optimised selection
- Consideration of customer equipment
- Process oriented requirements

MORE COMPLEX PROJECTS

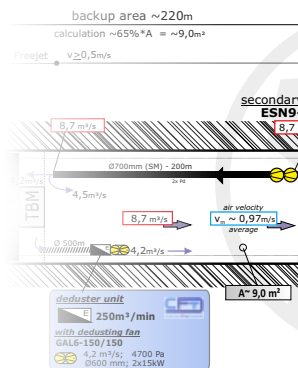
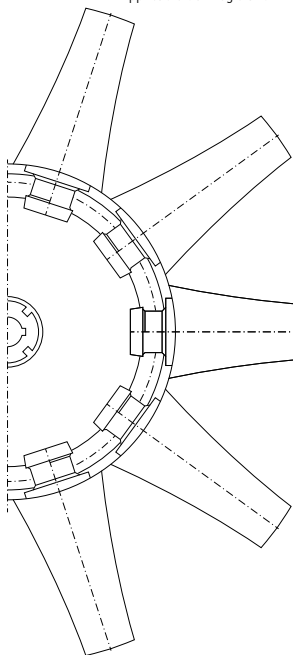
- Development of project solutions
- Practical concepts
- Energy efficiency considerations
- Case analyses
- Alternatives

SERVICES

- Optimised concepts
- Adaptation in case of project changes and development
- Ongoing project support
- Presentation of expected changes
- Process optimisation

INTERDISCIPLINARY

- Practical experience from thousands of projects
- Wide range of ventilation expertise
- Conformity with statutory requirements



TRUST IS GOOD – CONTROL IS BETTER!

Consulting for suitable measurement technology

Selection of targeted measurement technology for project monitoring

Fully automatic measurements

Integration in process analyses and comprehensive control mechanisms

Qualified measurements by experienced technicians

Professional fact finding

CROSS-PROJECT

- Complete system monitoring
- Status monitoring
- Measurement analyses for the optimisation of processes and applications
- Concept planning of evaluation control systems with visualisation

VOLUMETRIC FLOW MEASUREMENTS

- Measurement in duct runs
- Measurement in open sections
- Measurements in special components
- Mass flow determination

PRESSURE MEASUREMENTS

- Determination in air duct sections
- Determination in open sections
- Total pressure increases main fan
- Thrust measurement
- Consideration of air pressure

VIBRATION MEASUREMENTS

- Sensors of various types
- Motor analyses
- Inherent frequencies analyses
- Tracking analyses
- Fine balancing

NOISE-LEVEL MEASUREMENT

- Measurements of the surroundings
- Measurements on machines
- Measurement of insertion attenuation
- Octave and third-octave band analyses



VIBRATION MEASUREMENT

VIBRATION MEASUREMENT

TYPE

Intelligent systems for vibration monitoring and diagnosis of systems and machines.

DESIGN

From simple vibration transducers to acceleration sensors with connected diagnostic electronics for FFT analysis.

USER BENEFITS

- Actual recording based on status
- Early detection of machine damage
- Reliable permanent vibration monitoring according to DIN ISO 10816
- Machine-integrated system monitoring
- Visualisation and storage of measured data
- Evaluation/analysis of data
- Data transmission for remote monitoring
- Integration of measured data into a higher-level control system
- Defined limit value setting with alarm and switch-off functions

OPTIONS

- Motor analyses, bearing inspection and actual value recording
- Resonance frequencies analysis
- Overrun analysis
- Fine balancing in installed condition
- Sum and frequency spectrum analyses of simple or higher order

SYSTEMS/SENSORS

- Acceleration sensors
- Vibration sensors and transmitters of various types and Ex versions
- Evaluation units with FFT visualisation
- Diagnostic electronics



VOLUME AND PRESSURE MEASUREMENT

Various methods for measurement of volumetric flow and pressure in open cross-sectional profiles, duct runs, at the fan and in special components. In addition to these options, mass flow and thrust can also be integrated into existing system, taking the air pressure into account.

VOLUMETRIC FLOW MEASUREMENT FOR FLEXIBLE AND RIGID DUCTS AND FANS

Measuring device: Multifunction transmitter for differential pressure measurement

In addition, one of the following options is required (selection depending on application):

- Prandtl tube
- Measuring lances in the defined pipe section or duct
- Differential pressure sensor duct (type: WDL)
- Measuring inlet nozzle (type: MED)

VOLUMETRIC FLOW MEASUREMENT TYPE IN OPEN PROFILES

Various anemometers (e.g. impeller anemometers, heat wire anemometers)

PRESSURE MEASUREMENT TYPE IN DUCTS, AIR DUCTS AND FANS

Measuring devices:

- Multifunction transmitter for differential pressure measurement
- Differential pressure manometer

In addition, one of the following options is required (selection depending on application):

- Ring pipelines
- Silencers measuring modules for static pressure or total pressure increase at the fan
- Measuring nipple for static pressure measurement



TYPE OF AIR PRESSURE GAUGE

- Absolute pressure meter

VISUALISATION AND FURTHER PROCESSING OF THE MEASURED VALUES

- Display of measured values on measuring instrument
- Signal transmission (analogue or digital signals) to higher-level system
- Display of measured values to control room
- Installation of a needs-based control
- Warning against exceeding or falling short of setpoints.

STORAGE OF MEASURED VALUES

- Storage of the values by means of data logger
- Storage of values by overriding system

ADVANTAGES

- Proof of compliance with regulations
- Development of the system traceable



WHERE ENERGY FLOWS - OUR FOCUS GOES

Extensive expertise

Optimised drive solutions

DRIVE SOLUTIONS

- Direct starting
- Star-delta contactors
- Pole-switching combinations
- Softstarter
- Frequency converters
- Customer-oriented

SWITCHGEAR PRODUCTION

- Different grid voltages
- Different network frequencies
- Robust metal housing
- Main switch, potentiometer etc.
- Bypass, emergency stop etc.
- Explosion-proof

PROCESS OPTIMISATION

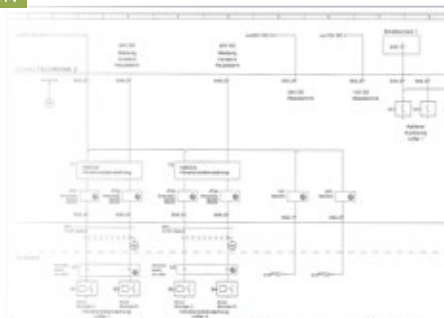
- Software for optimising the motor control
- Visualisation
- Touch panel, remote controls
- Siemens, B+R, Alan Bradley etc.
- Target value dependent controls

COMMUNICATION

- Wi-Fi
- Various bus systems
- Fibre optic technology
- Bluetooth
- GSM operation

EXPERTISE

- Complete drive solutions
- Control algorithms
- Power electronics
- Motor development



PU COMBINATION AND STAR TRIANGLE



PU pole-switching combination

TYPE

Pole-switching combination 15 kW to 250 kW in switchgear panel

DESIGN

Pole switching contactor combination in switchgear panel, protection class IP54, dimensions depending on size, voltage and power levels

USER BENEFITS

Pole-switching combination for current and starting torque reduction when switching on by using several power stages (min. two speeds). Controlled start-up.

ELECTRICAL DATA

Mains voltage (+10%/-15%),

Mains voltage: 380 to 690 V

Mains frequency: 50/60 Hz

Ambient temperature: 0° to + 40°C

EQUIPMENT

- Circuit-breaker with emergency stop function
- Ventilated compartment
- PTC thermistor evaluation PTC
- Start/stop button

OPTIONS

Remote controls

Further options and control cabinet equipment according to agreement

TECHNICAL EXECUTION (EUROPE) ACCORDING TO

EMC Directive 2004/108/EEC

Low Voltage Directive 2006/95/EC

WEEE Directive 2002/96/EC



Star-delta contactor combination – Controller

TYPE

Star-delta contactor 15 kW to 250 kW in switchgear panel

DESIGN

Contactor combination in switchgear panel, protection class IP54, Dimensions depending on size, voltage and output

USER BENEFITS

Starter for current and starting torque reduction when switching on. Controlled start-up.

ELECTRICAL DATA

Mains voltage (+10%/-15%),

Mains voltage: 380 to 690 V

Mains frequency: 50/60 Hz

Ambient temperature: 0° to + 40°C

EQUIPMENT

- Circuit-breaker with emergency stop function
- Ventilated compartment
- PTC thermistor evaluation PTC
- Start/stop button

OPTIONS

Remote controls

Further options and control cabinet equipment according to agreement

TECHNICAL EXECUTION (EUROPE) ACCORDING TO

EMC Directive 2004/108/EEC

Low Voltage Directive 2006/95/EC

WEEE Directive 2002/96/EC



SOFTSTARTER



TSA softstarter control

TYPE

TSA 7,5 kW to 250 kW
in switch housing

DESIGN

Softstarter in switch housing, system protection class $\geq$ IP54
Dimensions depending on size, voltage and output

USER BENEFITS

Softstarter for digital current and starting torque reduction when switched on. Protected start/stop operation, no switch-over peak as with star-delta, reliable operation through monitoring, can be used as motor controller

ELECTRICAL DATA

Mains voltage (+10%/-15%),
TSA52-: 200 to 525 V
TSA69-: 200 to 690 V
Mains frequency: 45 to 65 Hz
Three fully controlled phases
Control voltage: 100 - 240 V
Ambient temperature: -10° to +40°C
(incl. cabinet heating and
hygrostat)

EQUIPMENT

- Circuit-breaker with emergency stop function
- Integrated bypass contactor
- Coated circuit boards
- Aeration and ventilation
- PTC thermistor evaluation PTC
- PPU - Operating and parameterisation panel in housing door
- Start/stop button, fault acknowledgement, indicator lights

OPTIONS

- Interface RS232
- Bus systems: Profibus, Profinet, Modbus/TCP (Ethernet)
- Remote controls
- Further options subject to coordination

TECHNICAL EXECUTION (EUROPE) ACCORDING TO

EMC Directive 2004/108/EEC
Low Voltage Directive 2006/95/EC
WEEE Directive 2002/96/EC





FU frequency converters (in metal housing)

TYPE

FDU 5.5 kW to 200 kW
in metal housing

DESIGN

Frequency inverter in metal housing, system protection class $\geq$ IP54
Dimensions depending on size, voltage and output

USER BENEFITS

controlled start and stop operation, controlled run-up and rundown, stepless fan operation, efficient energy consumption adapted to air demand, reliable operation through monitoring, can be used as motor controller

ELECTRICAL DATA

Mains voltage (+10%/-15%),
FDU48-: 380 to 480 V (on request from 230 V)
FDU52-: 500 to 525 V - (size B,C,D)
FDU69-: 500 to 690 V - (C69 - F69)
Mains frequency: 45 to 65 Hz
Input power factor: 0.95
Output voltage: 0 to mains voltage
Output frequency: 0 to 400 Hz
Output switching frequency: 3 kHz
Efficiency at rated load: 98%
Ambient temperature: 0° to + 40°C

EQUIPMENT

- Integrated line filters (FU)
- Coated circuit boards (FU)
- PTC thermistor evaluation PTC
- PPU - Operating and parameterisation panel in housing door incl. Bluetooth interface

OPTIONS

- Main switch in FI housing (up to 37 kW)
- Housing for substructure mounting with main switch (type FDU__UB) incl. frame and canopy (up to 200 kW)
- Stand
- Interface
- Bus systems: Profibus, Profinet, Modbus/TCP (Ethernet)
- Remote controls
- Further options subject to agreement
- Fire mode

TECHNICAL EXECUTION (EUROPE) ACCORDING TO

EMC Directive 2004/108/EEC
Low Voltage Directive 2006/95/EC
WEEE Directive 2002/96/EC



FU OUTDOOR



Kerfmann
INNOVATION



FU frequency converters (in outdoor housing)

TYPE

FDU to 400 kW
in outdoor housing (OD)

DESIGN

Frequency inverter in housing, system protection class $\geq$ IP54 Skid mounting suitable for construction sites with skids

Dimension: Height: 2.21 m
Width: 1.2 to 1.7m
Depth: 0.5 to 0.97m

USER BENEFITS

controlled start and stop operation, controlled run-up and rundown, stepless fan operation, efficient energy consumption adapted to air demand, reliable operation through monitoring, can be used as motor controller

ELECTRICAL DATA

Mains voltage (+10%/-15%),
FDU48-: 380 to 480 V – size G (2xE),H (2xF)
FDU69-: 500 to 690 V – (on request)
Mains frequency: 45 to 65 Hz
Input power factor: 0.95
Output voltage: 0 to mains voltage
Output frequency: 0 to 400 Hz
Output switching frequency: 3 kHz
Efficiency at rated load: 98%
Ambient temperature: -10° to + 40°C
(integr. heating)

EQUIPMENT

- Integrated line filters (FU)
- Coated circuit boards
- circuit breaker with emergency stop function
- Fuses in the FU
- PTC thermistor evaluation PTC
- PPU – Operating and parameterisation panel in housing door incl. Bluetooth interface

OPTIONS

- Interface
- Bus systems: Profibus, Profinet, Modbus/TCP (Ethernet)
- Remote controls
- Further options subject to coordination
- Fire mode
- Safe stop

TECHNICAL EXECUTION ACCORDING TO

EMC Directive 2004/108/EEC
Low Voltage Directive 2006/95/EC
WEEE Directive 2002/96/EC





FU frequency converters control (in control panel)

TYPE

FDU to 3000 kW
in control cabinet

DESIGN

Frequency inverter in control cabinet, system protection class $\geq$ IP54

Dimension:	Height:	2.35m
	Width:	1.2 depending on performance
	Depth:	0.6 m

USER BENEFITS

controlled start and stop operation, controlled run-up and run-down, stepless fan operation, efficient energy consumption adapted to air demand, reliable operation through monitoring, can be used as motor controller

ELECTRICAL DATA

Mains voltage (+10%/-15%),

FDU48-:	380 to 480 V - (on request from 230V)
FDU69-:	500 to 690 V - (from size H69)

Mains frequency: 45 to 65 Hz

Input power factor: 0.95

Output voltage: 0 to mains voltage

Output frequency: 0 to 400 Hz

Output switching frequency: 3 kHz

Efficiency at rated load: 98%

Ambient temperature: -10° to + 40°C
(integr. control cabinet heater)

EQUIPMENT

- Integrated line filters (FU)
- Coated circuit boards
- Circuit breaker with Voltage tripping
- Fuses in the FU
- Control cabinet ventilated
- PTC thermistor evaluation PTC
- PPU – Operating and parametrising panel in cabinet door incl. Bluetooth interface
- Button for start, stop, reset, signal lamps
- Potentiometer
- Emergency off pushbutton

OPTIONS

- Interface
- Bus systems: Profibus, Profinet, Modbus/TCP (Ethernet)
- Remote controls
- Further options subject to coordination
- Large systems up to 6,600 V
- Air conditioning
- Fire Mode
- Safe stop

TECHNICAL EXECUTION (EUROPE) ACCORDING TO

EMC Directive 2004/108/EEC
Low Voltage Directive 2006/95/EC
WEEE Directive 2002/96/EC





TYPE

DESIGN

USER BENEFITS

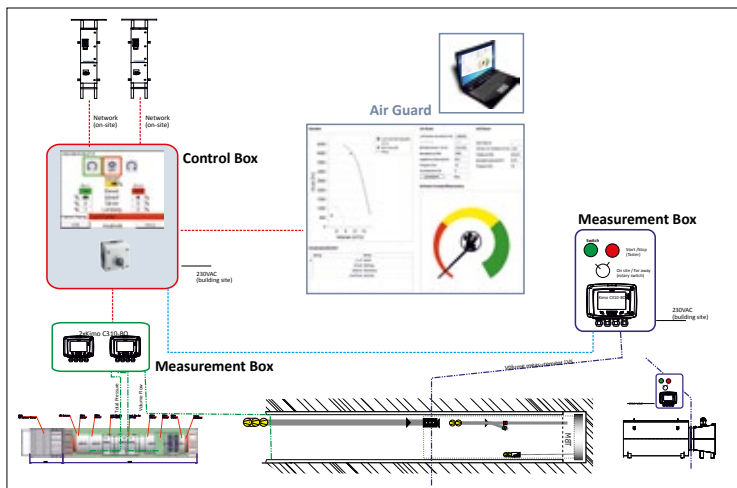
ELECTRICAL DATA

Standard auxiliary voltages from 24 - 240 V

EQUIPMENT

OPTIONS

- Cable remote control with selection buttons
- Wireless (GSM) or optical fibre remote transmission of signals
- Touch display or input devices [e.g. IPC with keyboard]
- Various bus systems: Profibus, Profinet, Modbus/TCP [Ethernet]
- The control system can process single logic connections, individual signals from measuring devices or highly complex signal chains and dependencies according to customer requirements.
- The Korfmann „Airguard“ system as well as the various measuring systems can be integrated into the higher level control system



KORFMANN AIR GUARD

Korfmann
INNOVATION



Korfmann Air Guard

patented system

Ventilation by means of ducts

optimised energy management in real time

ADVANTAGES

The following things can be achieved through an intelligent target/actual comparison:

- Enormous energy savings
- Detection of defects in the system
- System development (preview into the future)
- Limit considerations (fans + ducts)

FURTHER ADVANTAGES

- Location-independent monitoring and control
- Documentation of the air situation

OPTIONS

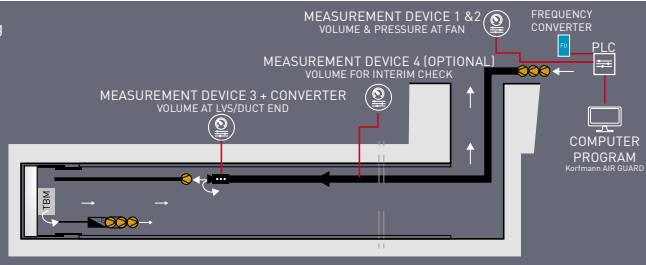
- Control according to different measured values (e.g. NOX, methane etc.)
- Integration into higher-level systems

VARIANTS

Software engineering	BASIC	BASIC +	PREMIUM	PREMIUM +
Korfmann AIR GUARD basic software	X	X	X	X
Documentation function		X	X	X
TeamViewer remote maintenance function			X	X
Future approximation			X	X
Hardware control technology				
Fan control Korfmann AIR GUARD	X	X	X	X
Hardware measurement technology				
Volume measurement duct end	X	X	X	X
Volume measurement fan	X	X	X	X
Pressure measurement fan	X	X	X	X
Ethernet converter [Ethernet -> 4-20 mA]	[X]	[X]	[X]	[X]
LWL converter [LWL->4-20 mA]	[X]	[X]	[X]	[X]
Conversion LVS with measuring blades	[X]	[X]	[X]	[X]
Additional meter + orifice plate				X
Hardware/additional				
Laptop + Software			X	X
Measurement data [1x]	X	X	X	X
Test bench measurement + measurement data of further fans				X
Commissioning on site	X	X	X	X

[x] = depending on case

Intelligent control and monitoring system which consists of various measurement and control components as well as computer software (see picture).



BREATHE THE DIFFERENCE

FURTHER PRODUCT INFORMATION AND TECHNICAL DATA IS PROVIDED UNDER
WWW.KORFMANN.COM



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