

LCP Ex, LCP - Cartridge dust collector with pulse jet cleaning.



LCP



LCP Ex

LCP Ex, LCP cartridge dust collectors designed for continuous operation in process and general dust extraction applications with free flowing dust. This new dust collector range offers on-line high efficiency pulse jet cleaning.

Description

All LCP Ex, LCP units have generously sized integral pre-separation chambers to increase their dust load capacity whilst reducing the load on the filter cartridges. Maintenance is from the top, within handrails if specified. A range of space saving integral fans from 5,5 kW to 18,5 kW may be specified, with optional air silencers. Larger units may be served by floor mounted high efficiency *Combifab* fans.

Options

- Hopper in the pyramid or trough version.
- Dust can be collected in a bin (50L or 100L with wheels), big-bag outlet.
- Discharge can be also via counter balanced valve.
- Range of integral fans from 5,5 kW to 18,5 kW with optional silencers with weather cowl.
- Ground mounted *Combifab* fans for higher airflow volumes.
- ATEX certified explosion relief panels when handling combustible dusts (St1, St2 or St3),
- Heat tracing and insulation up to 60°C for ATEX and non-ATEX units.
- *Insight Control Panel* for monitoring and control, Insight Ready (connectivity module to connect to Nederman's cloud based filtration knowledge center, Insight Analytics).



Specification

- 3 mm steel, painted C2-M/C3-L.
- Bolted assembly.
- Weatherproof for exposed locations.
- On-line cleaning with high efficiency diaphragm valves.
- Large integral pre-separation chamber.
- Different cartridge media types (SC 100, 140, 148 150, 151, 178, 190), selected to best fit the application.
- Standard legs calculated in accordance to Eurocode 3s.a.:
 - wind loads (EN 1991-1-4 zone 2),
 - earthquake (0,08x g horizontal acceleration).

Dust collector type	Maximum overpressure [Pa]	Maximum negative pressure [Pa]	Operation / Ambient temperature [°C]	P _{red}
Standard version	2000	6000	Min. -20 Max. +60	0,25 bar
Atex version		5000		

Combustible dust properties	Data	
K _{ST}	Max. 200 bar m s ⁻¹	200 - 300 bar m s ⁻¹
Explosion class	St 1	St 2

Product marking of LCP Ex



 II 1(3)/- D Ex h IIIB T135°C Da(Dc)/-

Cartridge material

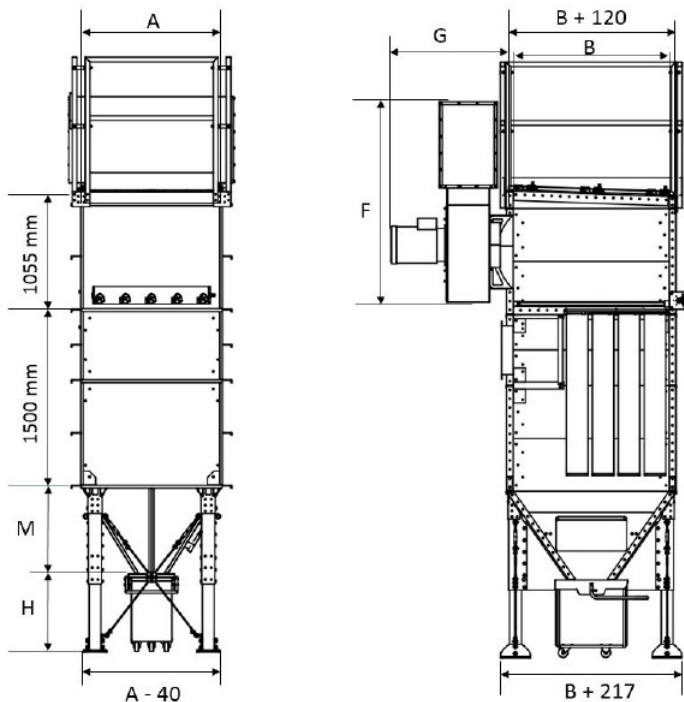
- SC 100 - Pleated high quality thermal bonded polyester fibers.
- SC 140 - as SC100 but with metallised antistatic treatment.
- SC 148 - Spunbond polyester with antistatic treatment and nanofiber
- SC 150 - Polyester with PTFE membrane.
- SC 151 - Polyester, PTFE membrane, antistatic.
- SC 178 - is 80% cellulose, 20% polyester material with nanofiber.
- SC 190 - as CA100 but with PTFE type dust release treatment.

Requirements:

- Compressed air requirements: Normal operating pressure for cleaning air - 6 bar (max. 7 bar) dry and oil free.
The noise level pic of jet cleaning system is 61 [Db] measured 1,5m from tank filed at pressure 6,5Bar
- Electrical requirements for Fan: 400V, 3 phase, 50Hz and 480V, 3 phase, 60Hz,

Other voltages available by request.

Dimensions & weights



Fan motor power [kW]	F [mm]	G [mm]	Weight excl silencer and weather cowls [kg]	Noise level dB(A)**	
				with silencer	without silencer
5,5	1685	729	92	79	85
7.5 (S)*	1685	729	97	81	85
7.5 (L)*	1850	893	147	82	85
11	1850	998	179	84	87
15	1850	998	192	84	90
18,5	1850	998	210	85	94

* - two quantities of the fan with an engine power 7,5 kW

** - Measuring surface sound pressure level in 1 m distance for an open outlet or silencer at the outlet [dB(A)]. Applies to all fans with a frequency of 50 Hz.

Length mm of the dust collector	Screw conveyor length mm	
	1320 mm width	2200 mm width
900	N/A	N/A
1200	N/A	N/A
1800	1170	N/A
2100	1320	N/A
2400	1470	1470
3000	2220	2088
3300	2370	2370
3600	2670	2670
4200	3270	3270
4500	3570	3570
4800	3870	3870

A (length mm of the chamber)	B (width mm of the LCP)	M		H (height mm of accessories)
		Height of the hopper (mm)	Type	
900	1320	755**	pyramidal	400 - 50L bin with wheels 665 - 100L bin with wheels 315 - screw conveyor 300 - rotary valve NRS(Z)3 350 - JAUDT 1860 - NRS(Z) 3 + big bag + pallet
1200			pyramidal	
1800			pyramidal, trough	
2100			pyramidal, trough	
2400			pyramidal, trough	
1200	2200	1384**	pyramidal	
1800*			pyramidal	
2100*			pyramidal	
2400			pyramidal, trough	
3000*			pyramidal, trough	
3300*			pyramidal, trough	
3600			pyramidal, trough	
4200*			pyramidal, trough	
4500*			pyramidal, trough	
4800			pyramidal, trough	

*If 50L or 100L bin add 650 mm for transition.

**If screw conveyor add 100 mm of transition for hopper height.

Length (mm)	Number of hoppers			
	Pyramidal		Trough	
	1320 mm width	2200 mm width	1320 mm width	2200 mm width
900	1	N/A	N/A	N/A
1200	1	1	N/A	N/A
1800	2	1	1	N/A
2100	2	1	1	N/A
2400	2	2	1	1
3000	3	2	1	1
3300	3	2	1	1
3600	3	3	1	1
4200	4	2	1	1
4500	4	3	1	1
4800	4	4	1	1

NOTE! Units without hoppers or where the hopper will be made locally or by others, no ATEX marking is available and will need to be certified locally.

A (length mm of the chamber)	CAC [kg]		DAC [kg]		HOPPER [kg]				HANDRAILS [kg]
	1320 width mm	2200 width mm	1320 width mm	2200 width mm	1320 width mm - pyramidal	2200 width mm - pyramidal	1320 width mm - trough	2200 width mm - trough	
900	330	N/A	329	N/A	360	N/A	N/A	N/A	30
1200	390	593	362	458	390	570	N/A	N/A	30
1800	550	796	463	566	615	660	577	N/A	60
2100	610	898	496	597	645	685	570	N/A	60
2400	670	1000	529	628	765	1010	661	710	60
3000	N/A	1203	N/A	736	N/A	1100	N/A	1057	90
3300	N/A	1305	N/A	767	N/A	1125	N/A	1082	90
3600	N/A	1407	N/A	798	N/A	1450	N/A	1110	90
4200	N/A	1610	N/A	910	N/A	1240	N/A	1274	120
4500	N/A	1712	N/A	943	N/A	1565	N/A	1362	120
4800	N/A	1814	N/A	976	N/A	1760	N/A	1390	150

ACCESSORIES	kg	Qty
Bin 50/100L	23	1 pcs
Cartridges	5	1 pcs
Ladder	102	1 pcs

Filter area vs dust collector type (Compressed air consumption is 32,4 [m³/h]**)

Dust collector length (mm)	Dust collector type*	Quantity of cartridges	1320 width			2200 width		
			Filter area m²			Filter area m²		
			Cartidge material: SC100,140, 150,151,190	Cartidge material: SC178	Cartidge material: SC148	Cartidge material: SC100,140, 150,151,190	Cartidge material: SC178	Cartidge material: SC148
900	LCP 3-9: 3x3	9	54	119	59	N/A	N/A	N/A
900	LCP 3-12: 3x4	12	72	158	78	N/A	N/A	N/A
1200	LCP 4-16: 4x4	16	96	211	104	N/A	N/A	N/A
1200	LCP 5-20: 5x4	20	120	264	130	N/A	N/A	N/A
1800	LCP 6-24: 6x4	24	144	317	156	N/A	N/A	N/A
1200	LCP 4-28: 4x7	28	N/A	N/A	N/A	168	370	182
2100	LCP 8-32: 8x4	32	192	422	208	N/A	N/A	N/A
1200	LCP 5-35: 5x7	35	N/A	N/A	N/A	210	462	228
2400	LCP 9-36: 9x4	36	216	475	234	N/A	N/A	N/A
2400	LCP 10-40: 10x4	40	240	528	260	N/A	N/A	N/A
1800	LCP 6-42: 6x7	42	N/A	N/A	N/A	252	554	273
2100	LCP 7-49: 7x7	49	N/A	N/A	N/A	294	647	319
2100	LCP 8-56: 8x7	56	N/A	N/A	N/A	336	739	364
2400	LCP 9-63: 9x7	63	N/A	N/A	N/A	378	832	410
2400	LCP 10-70: 10x7	70	N/A	N/A	N/A	420	924	455
3000	LCP 11-77: 11x7	77	N/A	N/A	N/A	462	1016	501
3300	LCP 12-84: 12x7	84	N/A	N/A	N/A	504	1109	546
3300	LCP 13-91: 13x7	91	N/A	N/A	N/A	546	1201	592
3600	LCP 14-98: 14x7	98	N/A	N/A	N/A	588	1294	637
3600	LCP 15-105: 15x7	105	N/A	N/A	N/A	630	1386	683
4200	LCP 16-112: 16x7	112	N/A	N/A	N/A	672	1478	728
4500	LCP 17-119: 17x7	119	N/A	N/A	N/A	714	1571	774
4500	LCP 18-126: 18x7	126	N/A	N/A	N/A	756	1663	819
4800	LCP 19-133: 19x7	133	N/A	N/A	N/A	798	1756	865
4800	LCP 20-140: 20x7	140	N/A	N/A	N/A	840	1848	910

Figure 2. Air flow range for 4.0 to 7.5 S kW

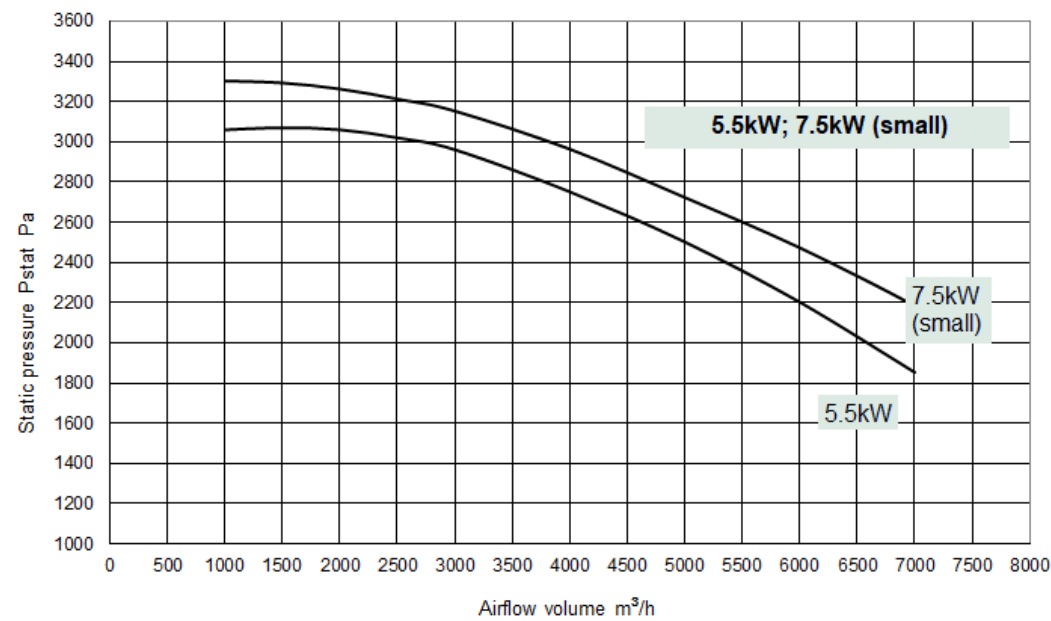
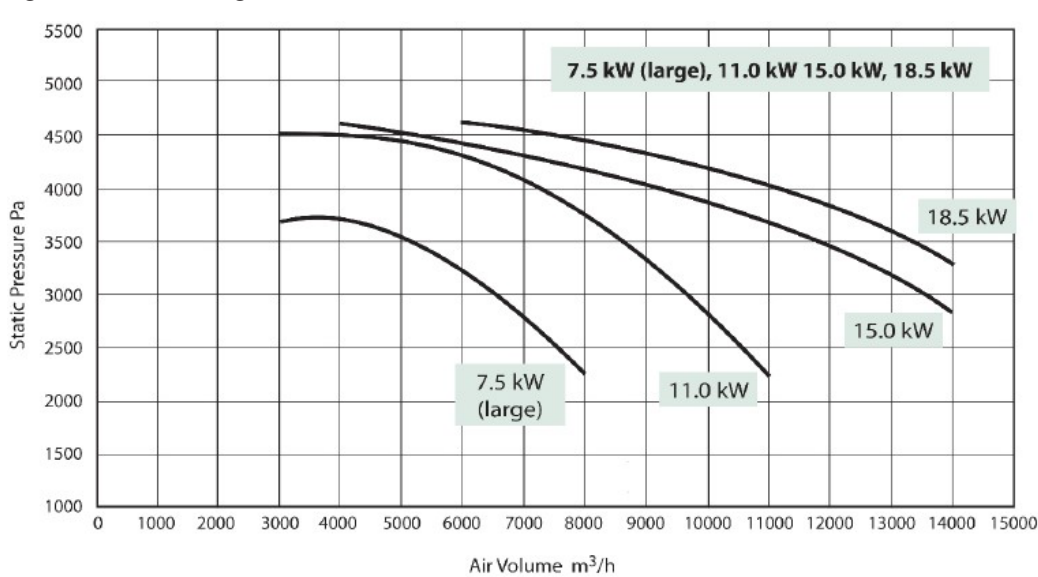
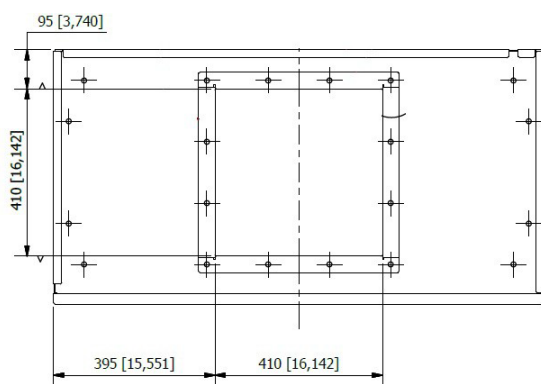
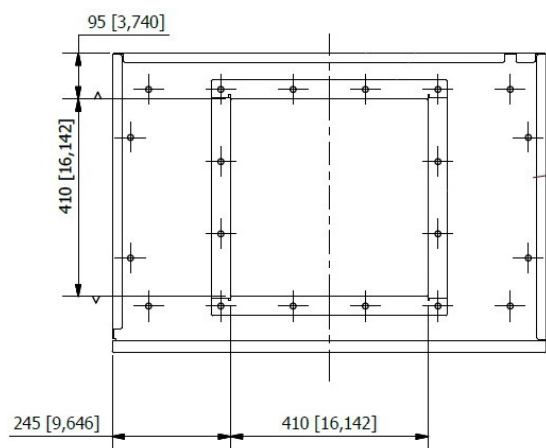
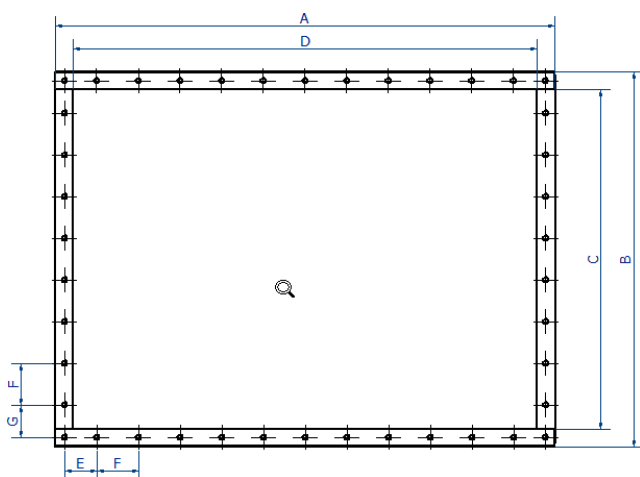
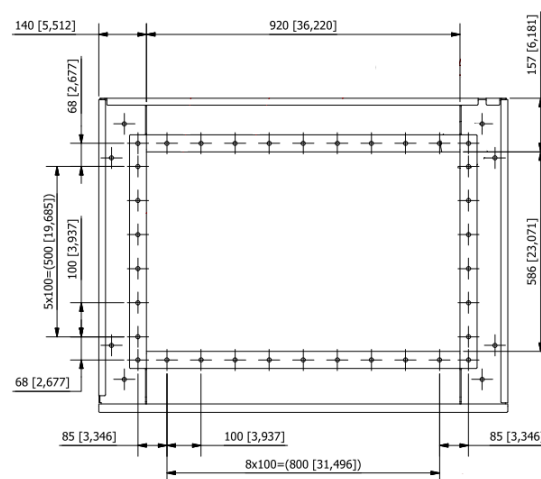
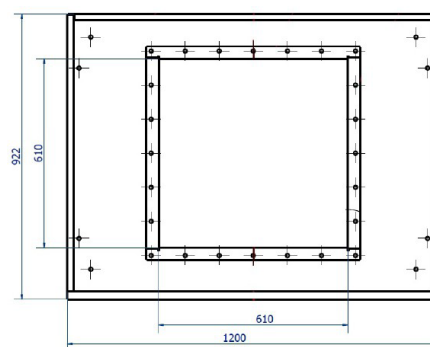
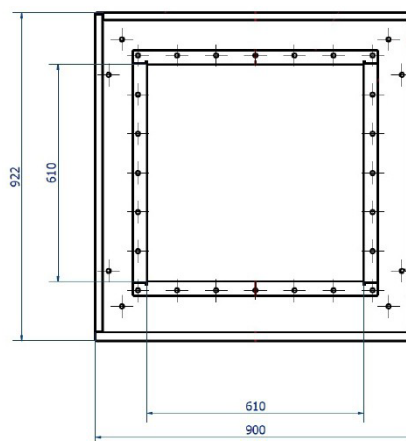


Figure 3. Air flow range for 7.5 L to 11,5 kW



Inlet dimensions**410x410 mm**

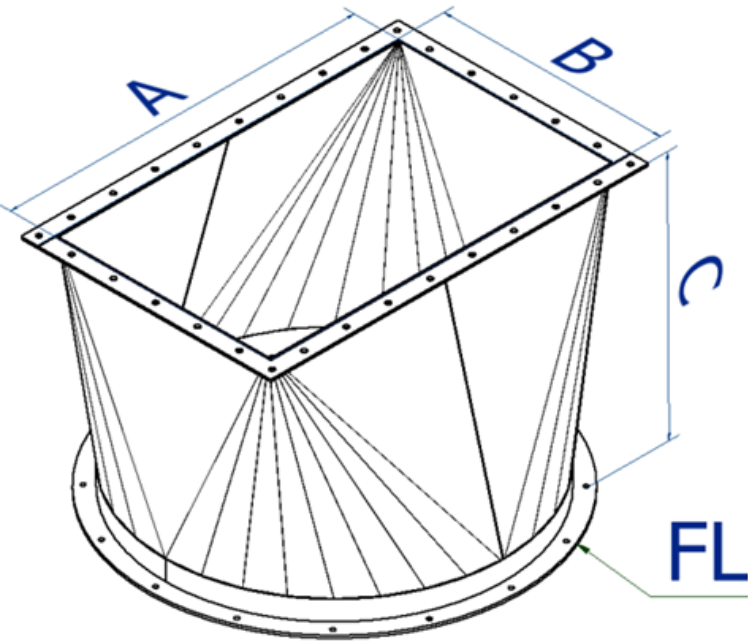
**No module panel mounted
with 100 mm duct flange**

**Outlet dimensions****920x586 mm****610x610 mm**

Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]
Inlet dimension	900	600	516	814	77	100	78
	1200	600	516	1114	77	100	78
Outlet dimension	900	900	816	814	77	100	78
	1200	900	816	1114	77	100	78

Inlet / Outlet Description, T=2mm welded FL

Item no.	Flange type	A [mm]	B [mm]	C [mm]
73009093	FL 700	610	610	300
73009094	FL 450	410	410	250
73009095	FL 1200	1114	816	880
73009096	FL 1000	1114	516	1000
73009097	FL 1000	816	814	400
73009098	FL 800	920	586	450
73009099	FL 800	814	516	600



Accessories

Figure	Description	Figure	Description
A blue, box-like fan unit with a circular outlet on the side.	Integral fan (NF)	A metal frame with two horizontal rails and a vertical support.	Toeboard with rail
A blue and grey fan unit with a large circular outlet.	External fan (Combifab)	A vertical metal ladder with rungs and a safety cage.	Access ladder
A blue, rectangular silencer with a weather cowl on top.	Silencer with weather cowls		
A blue screw conveyor with a long, angled housing.	Screw conveyor (PSK, PSR)		
A grey, box-like rotary valve with a circular outlet.	Rotary valve (NRS3, NRSZ3)	A metal frame with a circular, rotating component.	Ladder blockade
A grey, rectangular dust collecting bin with a handle.	Dust collecting bin 50L or 100L (available with wheels)	-	Explosion detection sensor
-	Big bag	-	Differential pressure indicator
A grey, double-flap valve with a central pivot point.	Double flap valve	-	Trace heating system and thermal insulation
A grey, rectangular explosion panel with a metal frame.	Explosion panel	-	Controler system for complete dust extraction installation - according with the special requirements of customer
A grey, rectangular secondary filter with a metal frame.	Secondary filter H13		