

1 Specification

2 General

3	Specification number	-	LIN Pump
4	Pump type	-	centrifugal pump
5	Pump designation	-	C-19/EM-15

6 Environment

7	Country	-	not specified
8	Altitude	m	1000.0
9	Minimum ambient temperature	°C	-5.0
10	Maximum ambient temperature	°C	55.0
11	Atmospheric pressure	bar(a)	1.013
12	Gravity	m/s2	9.81

13 Installation

14	Installation	-	not specified
15	Mounting type	-	motor feet
16	Orientation	-	horizontal

17 Operation

18	Application	-	backup
19	Operation	-	continuous
20	Standby	-	ambient temperature

21 Cold end

22	Number of stages	-	1
23	Maximum allowable working pressure	bar(g)	40.0
24	Impeller diameter	mm	190.0
25	Impeller tip width	mm	4.5
26	Diffuser	-	150
27	Inducer	-	10.0° (with vane ring)
28	Orifice (downstream)	-	no
29	Shaft seal	-	gas riding seal (Sefco)
30	Casing material	-	bronze
31	Cold end coating	-	no coating
32	Suction flange	-	DN65 PN6
33	Discharge flange	-	DN40 PN40
34	Degassing connection	-	no
35	Drain connection	-	no
36	Distance piece	-	open
37	Closure plate for cold box	-	no
38	Cleaning for oxygen service	-	yes
39	Hydrostatic pressure test (150% MAWP)	-	yes

40 Drive and transmission

41 Transmission

42	Transmission type	-	direct
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43 Drive

44	Drive type	-	electric drive
45	Frame size	-	160M
46	Rated power	kW	15.0
47	Rated voltage	V	400.0

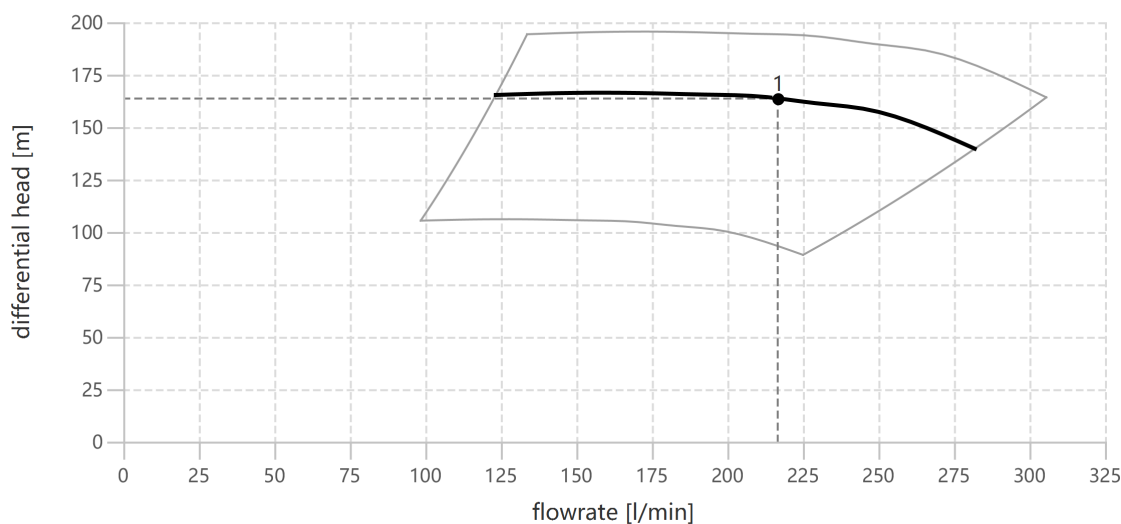
48	Rated speed	1/min	5160.0
49	Control mode	-	variable speed
50	Minimum speed	1/min	4220.0
51	Maximum speed	1/min	5810.0
52	Rated frequency	Hz	88.0
53	Number of poles	-	2
54	Phases	-	3
55	Winding connection	-	not specified
56	Efficiency class	-	IE2
57	Design temperature class	-	155 (F)
58	Use temperature class	-	130 (B)
59	Orientation	-	horizontal
60	Foot mounted	-	yes
61	Mounting code (IEC)	-	B3/B14
62	Minimum ambient temperature	°C	-20.0
63	Maximum ambient temperature	°C	55.0
64	Ingress protection code (casing)	-	IP55
65	Ingress protection code (terminal boxes)	-	IP55
66	Corrosivity category	-	C4 (high)
67	Color	-	Flame red (RAL3000)
68	Bearing lifetime	hrs	26500.0
69	Bearing lubricant	-	Klüber Isoflex Alltime SL2
70	Drive end regreasing	-	regreasing connection
71	Non drive end regreasing	-	regreasing connection
72	Drive end bearing heater	-	yes
73	Drive end bearing heater voltage	V	230.0
74	Drive end bearing heater power	W	70.0
75	Anti-condensation heater	-	no
76	Cooling	-	self ventilated
77	Terminal box position	-	right side (facing drive flange)
78	Auxiliary terminal box	-	yes
79	Fan terminal box	-	no
80	Gas system		
81	Gas system	-	none
82	Performance monitoring		
83	Cooldown monitoring	-	RTD duplex (2x3 wires)
84	Cool down monitoring position	-	discharge flange (top)
85	Leakage monitoring	-	RTD duplex (2x3 wires)
86	Winding temperature monitoring	-	2x3 PTC
87	Drive end bearing temperature monitoring	-	RTD duplex (2x3 wires) replaceable from outside
88	Non drive end bearing temperature monitoring	-	none
89	Vibration monitoring	-	no
90	Documentation		
91	Documentation language	-	english
92	Additional documentation language(s)	-	
93	Performance		
94	General performance		
95	Cold end		

96	Minimum speed	1/min	4220.0
97	Maximum speed	1/min	5730.0
98	Drive		
99	Minimum speed	1/min	4220.0
100	Maximum speed	1/min	5730.0

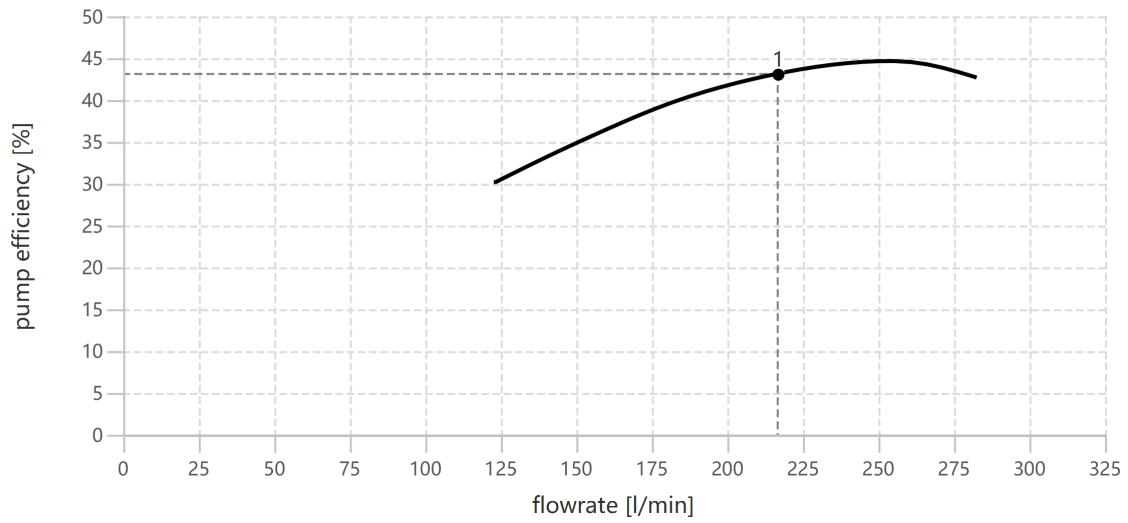
101 Operating points 1

102	Name	-	LIN Backup Pump
103	Liquid	-	LIN
104	Density	kg/l	0.81
105	Molar mass	g/mol	28.0
106	Flowrate	l/min	216.7
107	Differential head	m	163.602
108	Differential pressure	bar	13.0
109	Suction pressure (minimum)	bar(g)	1.15
110	Suction pressure (maximum)	bar(g)	1.15
111	Discharge pressure (minimum)	bar(g)	14.15
112	Discharge pressure (maximum)	bar(g)	13.0
113	Shut-off differential head	m	165.3
114	NPSH required	m	0.74
115	Efficiency	%	43.1
116	Ratio of best efficiency flowrate	%	86.0
117	Head drop	%	1.7
118	Impeller speed	1/min	5286.0
119	Drive power	kW	10.9
120	Drive power available	kW	15.0

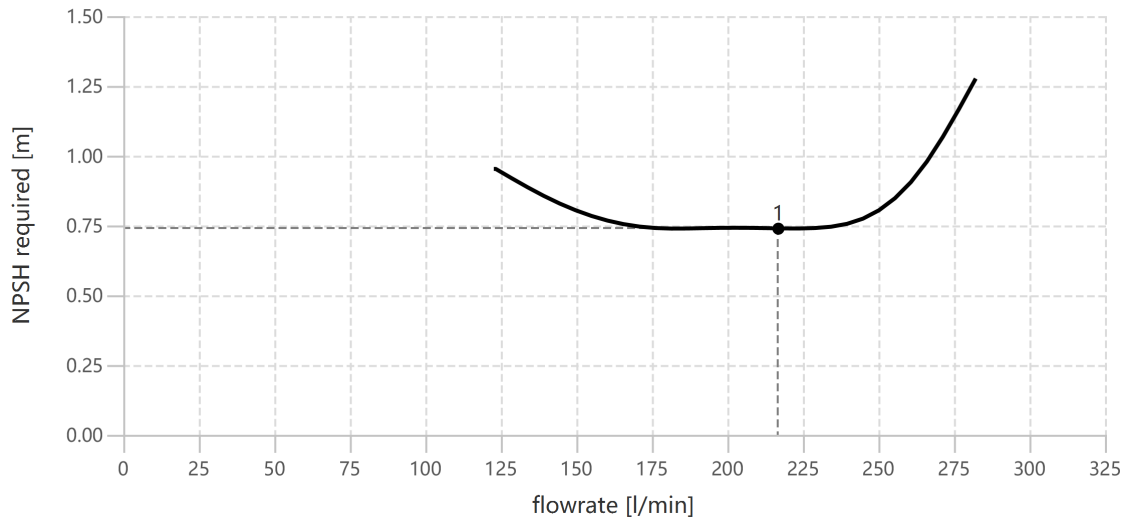
differential head



pump efficiency



NPSH required



drive power

