

# Technical Data Sheet

Compressor model **NX23FBa**  
 Voltage **220-240V 50Hz ~1**  
 Refrigerant **R290**

APPLICATION		COMPRESSOR		MOTOR	
Application	Low Back Pressure	Displacement	23,20 cm <sup>3</sup>	Nominal Power	7/8 hp
Refrigerant	R290	Diameter	34,93 mm	Voltage/Frequency	220-240V 50Hz
Evaporating Temp.	-40,0 °C to -10,0 °C	Stroke	24,20 mm	Voltage range	187-255 V
Expansion	Capillar/Valve	Net Weight	16,75 Kg	Type	CSR
Comp. Cooling	Fan cooled	Oil type	ISO VG 32 ESTER	Phase number	1 PH
Max. ambient temp.	43,0 °C	Oil charge	650 cm <sup>3</sup>	Locked Rotor Amps (LRA)	30,00 A
				Max. Cont. Current (MCC)	5,60 A
				Main W. resist. at 25°C	2,56 Ω
				Start W. resist. at 25°C	6,50 Ω

## NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	862 kCal/h	746 W
COP	1,41 W/W	1,09 W/W
EER	1,21 kCal/Wh	0,94 kCal/Wh
Input Power	711 W	685 W
Current	3,66 A	3,53 A

## APPROVALS



## TEST CYCLE CONDITIONS

	ASHRAE LBP (B)	CECOMAF LBP (A)
Evaporating temp. (T <sub>e</sub> )	-23,3 °C	-25,0 °C
Condensing temp. (T <sub>c</sub> )	55,0 °C	55,0 °C
Liquid temp. (T <sub>liq.</sub> )	32,0 °C	55,0 °C
Ambient temp. (T <sub>amb.</sub> )	32,0 °C	32,0 °C
Suction temp. (T <sub>suction</sub> )	32,0 °C	32,0 °C
Voltage/Frequency	220 V 50 Hz	220 V 50 Hz

## ELECTRICAL COMPONENTS

Starting capacitor	72- 88 µF 330 V			
Run capacitor	16 µF 420 V			
Relay	Option 1			
Reference	2014 180. + NTC15Ω			
Pick-Up	16.70 A			
Drop-Out	14.00 A			
Protector	Option 1			
Reference	T0535			
Current	17,00 A			
Time check	7,5-14 seg			
Disc temp. (Open/Close)	105,00 / 52,00 °C			

This product is approved for R290 and R600a regarding explosion safety according to standard EN 60335-1 and EN 60335-2-34

## ASHRAE

Tc °C	Te °C	Cooling Capacity kCal/h	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	386	456	2,40	0,98	0,85
40	-35	527	512	2,68	1,20	1,03
40	-30	695	566	2,94	1,43	1,23
40	-25	889	617	3,20	1,68	1,44
40	-23,3	961	634	3,28	1,76	1,52
40	-20	1.109	666	3,44	1,94	1,67
40	-15	1.355	712	3,67	2,21	1,90
40	-10	1.627	757	3,88	2,50	2,15

45	-40	362	453	2,38	0,93	0,80
45	-35	501	518	2,70	1,13	0,97
45	-30	666	580	3,01	1,34	1,15
45	-25	857	640	3,31	1,56	1,34
45	-23,3	928	660	3,41	1,64	1,41
45	-20	1.074	697	3,59	1,79	1,54
45	-15	1.317	752	3,86	2,04	1,75
45	-10	1.586	805	4,12	2,29	1,97

50	-40	339	450	2,37	0,87	0,75
50	-35	475	523	2,73	1,06	0,91
50	-30	637	594	3,08	1,25	1,07
50	-25	825	663	3,42	1,45	1,25
50	-23,3	895	685	3,53	1,52	1,31
50	-20	1.039	729	3,75	1,66	1,43
50	-15	1.279	792	4,06	1,88	1,61
50	-10	1.546	854	4,36	2,11	1,81

55	-40	315	447	2,35	0,82	0,70
55	-35	448	529	2,76	0,99	0,85
55	-30	608	608	3,15	1,16	1,00
55	-25	793	685	3,53	1,35	1,16
55	-23,3	862	711	3,66	1,41	1,21
55	-20	1.004	760	3,90	1,54	1,32
55	-15	1.242	832	4,25	1,74	1,49
55	-10	1.505	902	4,59	1,94	1,67

60	-40	292	444	2,33	0,76	0,66
60	-35	422	534	2,79	0,92	0,79
60	-30	579	622	3,22	1,08	0,93
60	-25	761	708	3,65	1,25	1,07
60	-23,3	829	737	3,79	1,31	1,13
60	-20	970	791	4,05	1,43	1,23
60	-15	1.204	872	4,45	1,61	1,38
60	-10	1.465	951	4,82	1,79	1,54

## CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	417	456	2,40	0,91	0,79
40	-35	582	512	2,68	1,14	0,98
40	-30	770	566	2,94	1,36	1,18
40	-25	983	617	3,20	1,59	1,38
40	-23,3	1.061	634	3,28	1,67	1,45
40	-20	1.220	666	3,44	1,83	1,58
40	-15	1.481	712	3,67	2,08	1,80
40	-10	1.766	757	3,88	2,33	2,02

45	-40	377	453	2,38	0,83	0,72
45	-35	529	518	2,70	1,02	0,88
45	-30	704	580	3,01	1,21	1,05
45	-25	904	640	3,31	1,41	1,22
45	-23,3	977	660	3,41	1,48	1,28
45	-20	1.128	697	3,59	1,62	1,40
45	-15	1.376	752	3,86	1,83	1,58
45	-10	1.648	805	4,12	2,05	1,77

50	-40	337	450	2,37	0,75	0,65
50	-35	475	523	2,73	0,91	0,79
50	-30	638	594	3,08	1,07	0,93
50	-25	825	663	3,42	1,25	1,08
50	-23,3	894	685	3,53	1,30	1,13
50	-20	1.036	729	3,75	1,42	1,23
50	-15	1.271	792	4,06	1,60	1,39
50	-10	1.530	854	4,36	1,79	1,55

55	-40	297	447	2,35	0,66	0,57
55	-35	422	529	2,76	0,80	0,69
55	-30	572	608	3,15	0,94	0,81
55	-25	746	685	3,53	1,09	0,94
55	-23,3	810	711	3,66	1,14	0,98
55	-20	944	760	3,90	1,24	1,07
55	-15	1.166	832	4,25	1,40	1,21
55	-10	1.411	902	4,59	1,56	1,35

60	-40	257	444	2,33	0,58	0,50
60	-35	369	534	2,79	0,69	0,60
60	-30	506	622	3,22	0,81	0,70
60	-25	667	708	3,65	0,94	0,81
60	-23,3	727	737	3,79	0,99	0,85
60	-20	852	791	4,05	1,08	0,93
60	-15	1.060	872	4,45	1,22	1,05
60	-10	1.293	951	4,82	1,36	1,18

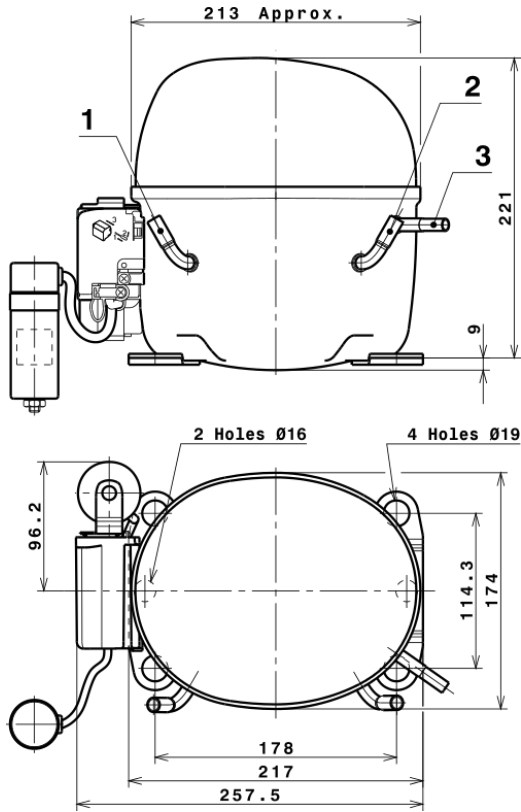
## EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	3.546,9153693836	321,4106620072	1,7676602422	33,032679349462
2	89,1938277873	-6,0847330806	-0,0311033405	0,9300156255013
3	-29,5760362402	13,4573370848	0,0651852536	-0,11645276960757
4	0,4693330639	-0,0464988016	-0,0002776757	0,0069846640182262
5	-0,5384085106	0,3517584866	0,0017064233	-0,0014746311150401

Equation	$x_1 + x_2Te + x_3Tc + x_4Te^2 + x_5TeTc$
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# Technical Data Sheet

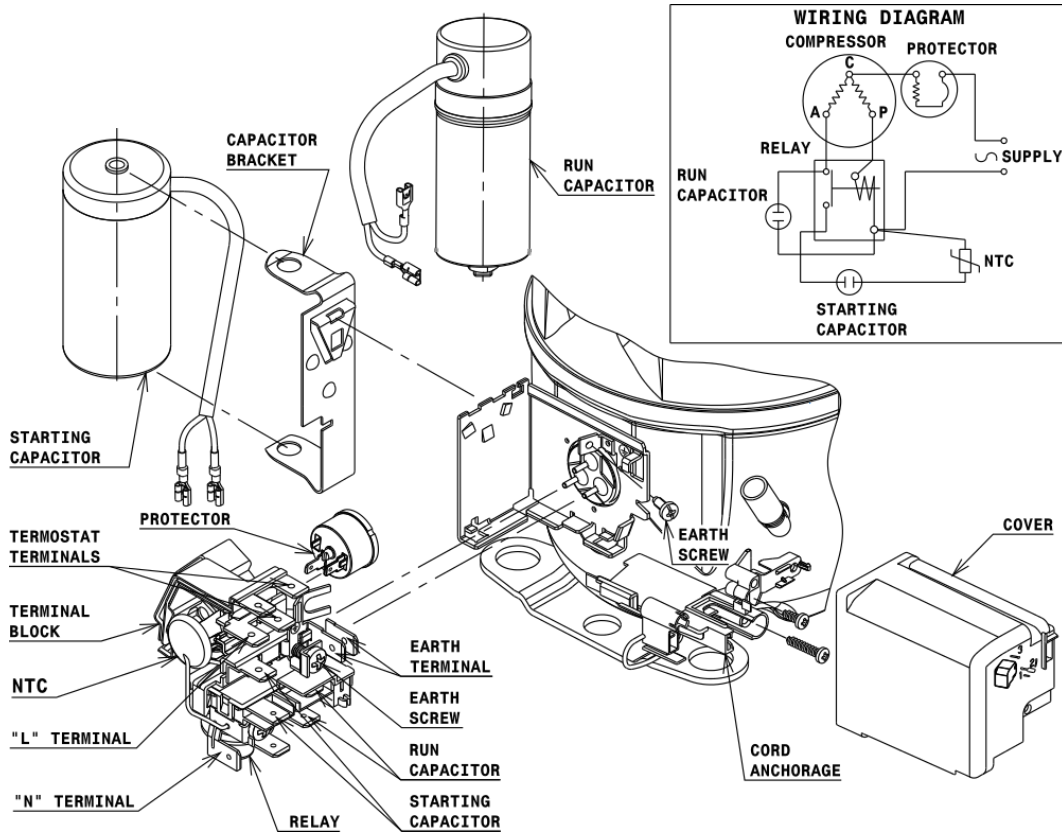
## COMPRESSOR DIMENSIONS



DESIGNATION	INTERNAL DIAM.
1 Service	9,7 mm
2 Suction	9,7 mm
3 Discharge	6,5 mm

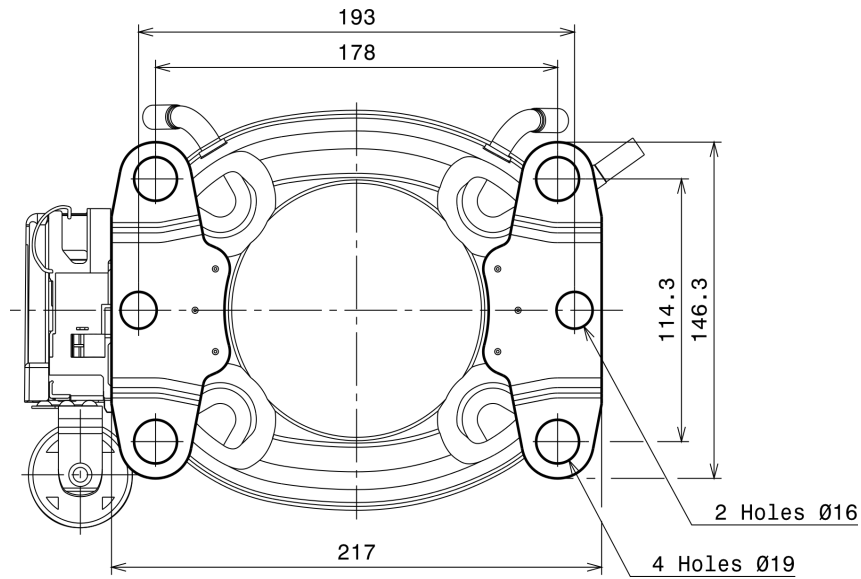
## WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

### CSR CONNECTION (CURRENT RELAY + NTC) (X range)



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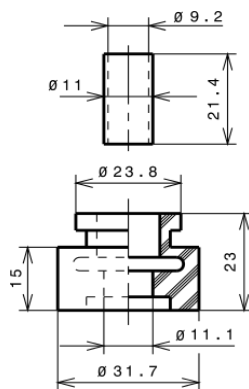
## FIXINGS



## SILENT BLOCKS (MOUNTING ACCESSORIES)

### STANDARD

Ø19 holes (178x114.3 net)



## SOA

SOA R290 LBP

