

# Technical Data Sheet

Compressor model **NST30NGb\_T**  
 Voltage **220-240V 50/60Hz ~1**  
 Refrigerant **R290**  
 Compressor status **Active**

## APPLICATION

Application Low-Medium Back Pressure  
 Refrigerant R290  
 Evaporating Temp. -40,0 °C to 0,0 °C  
 Expansion Capillar/Valve  
 Comp. Cooling Fan cooled  
 Max. ambient temp. 43,0 °C

## COMPRESSOR

Displacement 29,95 cm<sup>3</sup>  
 Diameter 39,98 mm  
 Stroke 23,85 mm  
 Net Weight 0,00 Kg  
 Oil type ISO VG 46 ESTER  
 Oil charge 700 cm<sup>3</sup>  
 HP 1 hp

## MOTOR

Voltage/Frequency 220-240V 50Hz  
 Voltage range 187-255 V  
 Type CSR  
 Phase number 1 PH  
 Locked Rotor Amps (LRA) 36,80 A  
 Max. Cont. Current (MCC) 9,80 A  
 Main W. resist. at 25°C 2,24 Ω  
 Start W. resist. at 25°C 7,38 Ω

## NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	1.033 kCal/h	882 W
COP	1,42 W/W	1,08 W/W
EER	1,22 kCal/Wh	0,94 kCal/Wh
Input Power	847 W	814 W
Current	4,24 A	4,09 A

## APPROVALS



## TEST CYCLE CONDITIONS

	ASHRAE LMBP (B)	CECOMAF LMBP (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	108-130 μF 330 V		
Run capacitor	20 μF 450 V		
Relay	Option 1		
Reference	RVA 2L..		
Pick-Up	224-252 V		
Drop-Out	40-105 V		
Protector	Option 1		
Reference	T0258		
Current	23,50 A		
Time check	7,5-14 seg		
Disc temp. (Open/Close)	120,00 / 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	413	502	2,67	0,96	0,82
40	-35	583	579	3,02	1,17	1,01
40	-30	800	658	3,38	1,41	1,22
40	-25	1.066	738	3,74	1,68	1,44
40	-23,3	1.167	765	3,87	1,77	1,52
40	-20	1.379	819	4,11	1,96	1,68
40	-15	1.740	901	4,49	2,25	1,93
40	-10	2.148	984	4,86	2,54	2,18
40	-5	2.604	1.069	5,25	2,83	2,44
40	0	3.108	1.154	5,64	3,13	2,69

45	-40	385	511	2,71	0,88	0,75
45	-35	550	594	3,09	1,08	0,93
45	-30	763	678	3,47	1,31	1,12
45	-25	1.023	763	3,86	1,56	1,34
45	-23,3	1.122	793	3,99	1,65	1,42
45	-20	1.331	850	4,25	1,82	1,57
45	-15	1.686	937	4,65	2,09	1,80
45	-10	2.090	1.026	5,05	2,37	2,04
45	-5	2.540	1.115	5,46	2,65	2,28
45	0	3.039	1.206	5,88	2,93	2,52

50	-40	358	521	2,76	0,80	0,69
50	-35	517	609	3,16	0,99	0,85
50	-30	725	698	3,56	1,21	1,04
50	-25	980	789	3,98	1,45	1,24
50	-23,3	1.078	820	4,12	1,53	1,31
50	-20	1.283	880	4,39	1,69	1,46
50	-15	1.633	973	4,81	1,95	1,68
50	-10	2.031	1.067	5,24	2,21	1,90
50	-5	2.477	1.162	5,67	2,48	2,13
50	0	2.971	1.258	6,11	2,75	2,36

55	-40	330	530	2,80	0,72	0,62
55	-35	485	624	3,22	0,90	0,78
55	-30	687	718	3,66	1,11	0,96
55	-25	937	814	4,09	1,34	1,15
55	-23,3	1.033	847	4,24	1,42	1,22
55	-20	1.235	911	4,53	1,58	1,36
55	-15	1.580	1.009	4,98	1,82	1,57
55	-10	1.973	1.108	5,43	2,07	1,78
55	-5	2.414	1.209	5,89	2,32	2,00
55	0	2.902	1.310	6,35	2,58	2,22

60	-40	303	540	2,84	0,65	0,56
60	-35	452	638	3,29	0,82	0,71
60	-30	649	738	3,75	1,02	0,88
60	-25	894	840	4,21	1,24	1,07
60	-23,3	988	874	4,36	1,31	1,13
60	-20	1.187	942	4,67	1,47	1,26
60	-15	1.527	1.045	5,14	1,70	1,46
60	-10	1.915	1.150	5,62	1,94	1,67
60	-5	2.350	1.255	6,10	2,18	1,87
60	0	2.834	1.362	6,59	2,42	2,08

## CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	446	502	2,67	0,89	0,77
40	-35	657	579	3,02	1,13	0,98
40	-30	913	658	3,38	1,39	1,20
40	-25	1.213	738	3,74	1,64	1,42
40	-23,3	1.324	765	3,87	1,73	1,50
40	-20	1.556	819	4,11	1,90	1,64
40	-15	1.944	901	4,49	2,16	1,86
40	-10	2.376	984	4,86	2,41	2,09
40	-5	2.852	1.069	5,25	2,67	2,31
40	0	3.372	1.154	5,64	2,92	2,52

45	-40	401	511	2,71	0,78	0,68
45	-35	591	594	3,09	0,99	0,86
45	-30	824	678	3,47	1,22	1,05
45	-25	1.102	763	3,86	1,44	1,25
45	-23,3	1.207	793	3,99	1,52	1,32
45	-20	1.424	850	4,25	1,68	1,45
45	-15	1.790	937	4,65	1,91	1,65
45	-10	2.200	1.026	5,05	2,15	1,85
45	-5	2.655	1.115	5,46	2,38	2,06
45	0	3.153	1.206	5,88	2,61	2,26

50	-40	356	521	2,76	0,68	0,59
50	-35	524	609	3,16	0,86	0,74
50	-30	736	698	3,56	1,05	0,91
50	-25	992	789	3,98	1,26	1,09
50	-23,3	1.089	820	4,12	1,33	1,15
50	-20	1.292	880	4,39	1,47	1,27
50	-15	1.636	973	4,81	1,68	1,45
50	-10	2.025	1.067	5,24	1,90	1,64
50	-5	2.457	1.162	5,67	2,11	1,83
50	0	2.933	1.258	6,11	2,33	2,01

55	-40	311	530	2,80	0,59	0,51
55	-35	457	624	3,22	0,73	0,63
55	-30	647	718	3,66	0,90	0,78
55	-25	882	814	4,09	1,08	0,94
55	-23,3	971	847	4,24	1,15	0,99
55	-20	1.160	911	4,53	1,27	1,10
55	-15	1.482	1.009	4,98	1,47	1,27
55	-10	1.849	1.108	5,43	1,67	1,44
55	-5	2.260	1.209	5,89	1,87	1,62
55	0	2.714	1.310	6,35	2,07	1,79

60	-40	266	540	2,84	0,49	0,43
60	-35	390	638	3,29	0,61	0,53
60	-30	559	738	3,75	0,76	0,65
60	-25	771	840	4,21	0,92	0,79
60	-23,3	853	874	4,36	0,98	0,84
60	-20	1.028	942	4,67	1,09	0,94
60	-15	1.328	1.045	5,14	1,27	1,10
60	-10	1.673	1.150	5,62	1,46	1,26
60	-5	2.062	1.255	6,10	1,64	1,42
60	0	2.495	1.362	6,59	1,83	1,58

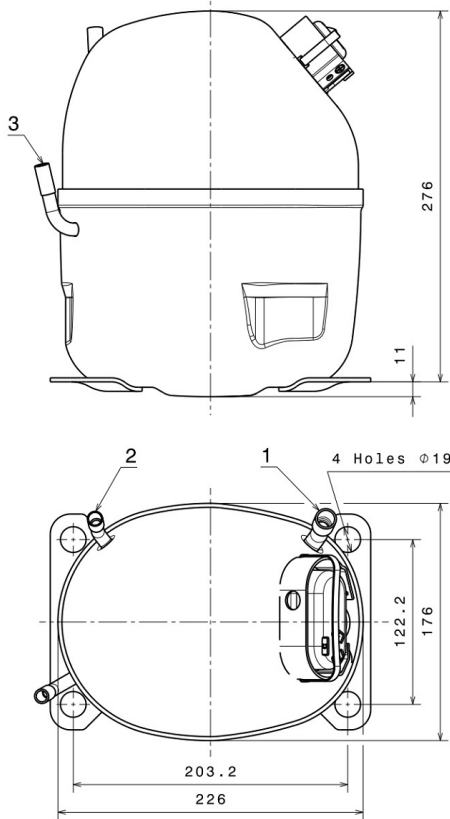
## EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	5.123,9788722115	757,7718608349	3,8289913389	46,487127017346
2	142,6048777994	9,1613968063	0,0417709947	1,4822280562692
3	-45,1665695035	10,6786278492	0,0487505362	-0,1747292289291
4	0,8608253789	0,0271280404	0,0001309983	0,012831419768438
5	-0,9039449711	0,2184363413	0,0009986003	-0,0026871887127022

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

## COMPRESSOR DIMENSIONS

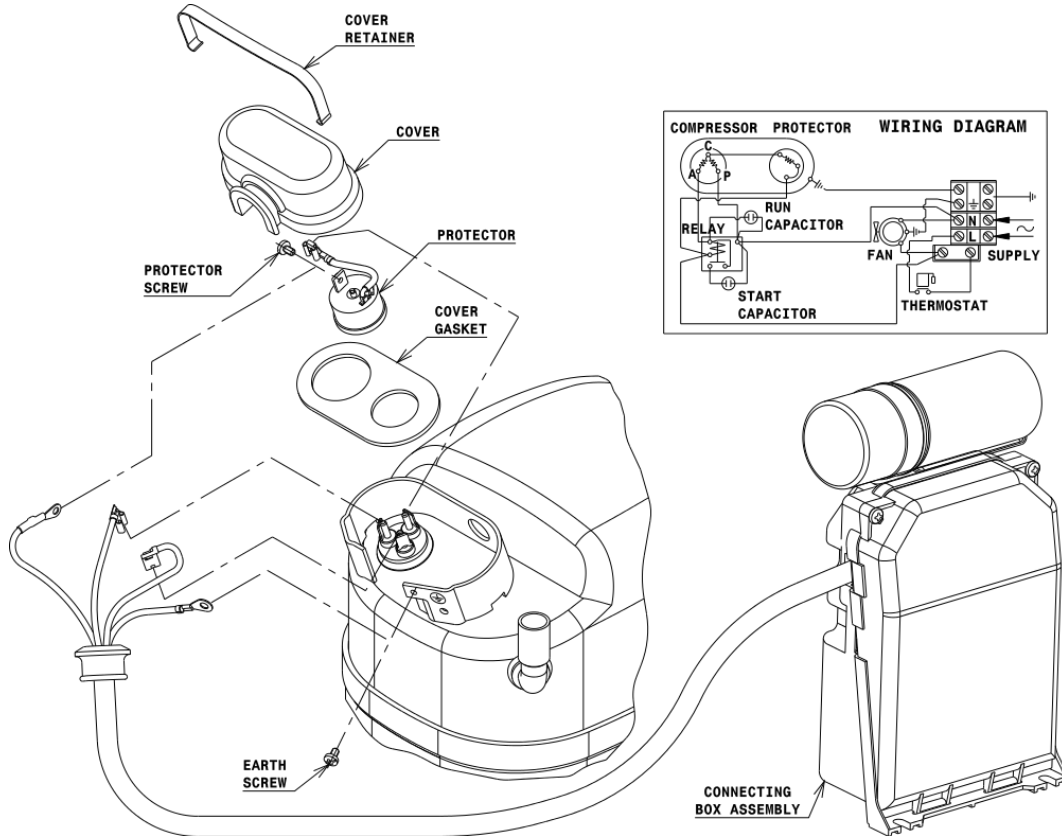


## DESIGNATION INTERNAL DIAM.

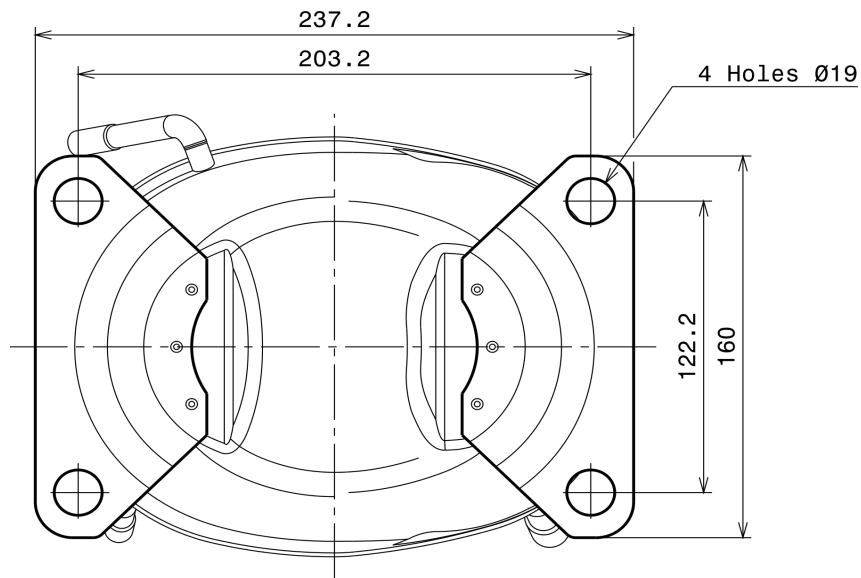
1	Suction	12,7 mm
2	Service	9,7 mm
3	Discharge	8,0 mm

## WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

### CSR CONNECTION (EXTERNAL CONNECTING BOX) (S range)



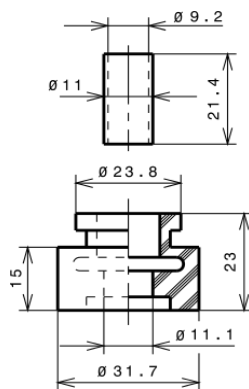
## FIXINGS



## SILENT BLOCKS (MOUNTING ACCESSORIES)

### STANDARD

$\varnothing 19$  holes (203.2x122.2 net)



## SOA

SOA R290 LMBP

