Technical Data Sheet

Compressor model **NST38NA_T**

Voltage **220-240V 50Hz ~1**

Refrigerant **R290**

Compressor status

APPLICATION

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

COMPRESSOR

Displacement	38,00 cm³
Diameter	45,00 mm
Stroke	23,80 mm
Net Weight	21,96 Kg
Oil type	ISO VG 46 ESTER
Oil charge	700 cm³
HP	1 1/2 hp

MOTOR

Voltage/Frequency	220-240V 50Hz
Voltage range	198-255 V
Type	CSR
Phase number	1 PH
Locked Rotor Amps (LRA)	46,00 A
Max. Cont. Current (MCC)	15,20 A
Main W. resist. at 25ºC	1,15 Ω
Start W. resist. at 25ºC	4,61 Ω

NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	1.465 kCal/h	1.263 W
COP	1,42 W/W	1,10 W/W
EER	1,22 kCal/Wh	0,95 kCal/Wh
Input Power	1.200 W	1.151 W
Current	6,33 A	6,12 A

APPROVALS

TEST CYCLE CONDITIONS

	ASHRAE LMBP (B)	**CECOMAF LMBP (A)**
Evaporating temp. (T_e)	-23,3 ºC	-25,0 ºC
Condensing temp. (T_c)	55,0 ºC	55,0 ºC
Liquid temp. ($T_{liq.}$)	32,0 ºC	55,0 ºC
Ambient temp. ($T_{amb.}$)	32,0 ºC	32,0 ºC
Suction temp. ($T_{suction}$)	32,0 ºC	32,0 ºC
Voltage/Frequency	220 V 50 Hz	220 V 50 Hz

ELECTRICAL COMPONENTS

Starting capacitor	88-108 µF 330 V			
Run capacitor	20 µF 450 V			
Relay	Option 1			
Reference	3ARR3 3AV3			
Pick-Up	224-252 V			
Drop-Out	40-90 V			
Protector	Option 1			
Reference	T1115			
Current	47,00 A			
Time check	2,8-5,2 seg			
Disc temp. (Open/Close)	120,00 / 52,00 ºC			

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

Technical Data Sheet

cubigel compressors

ASHRAE

Tc °C	Te °C	Cooling Capacity kCal/h	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	693	746	4,47	1,08	0,93
40	-35	929	854	4,90	1,26	1,09
40	-30	1.219	962	5,33	1,47	1,27
40	-25	1.563	1.069	5,78	1,70	1,46
40	-23,3	1.693	1.106	5,93	1,78	1,53
40	-20	1.962	1.176	6,23	1,94	1,67
40	-15	2.416	1.283	6,69	2,19	1,88
40	-10	2.925	1.389	7,15	2,45	2,11
40	-5	3.488	1.494	7,62	2,71	2,33
40	0	4.105	1.600	8,10	2,98	2,57
45	-40	640	735	4,43	1,01	0,87
45	-35	869	856	4,90	1,18	1,01
45	-30	1.152	976	5,39	1,37	1,18
45	-25	1.490	1.097	5,89	1,58	1,36
45	-23,3	1.617	1.137	6,06	1,65	1,42
45	-20	1.882	1.216	6,40	1,80	1,55
45	-15	2.329	1.335	6,92	2,03	1,74
45	-10	2.830	1.454	7,44	2,26	1,95
45	-5	3.386	1.572	7,98	2,51	2,15
45	0	3.997	1.690	8,52	2,75	2,37
50	-40	587	724	4,38	0,94	0,81
50	-35	809	858	4,91	1,10	0,94
50	-30	1.085	991	5,45	1,27	1,10
50	-25	1.416	1.124	6,01	1,47	1,26
50	-23,3	1.541	1.169	6,20	1,53	1,32
50	-20	1.801	1.256	6,57	1,67	1,43
50	-15	2.242	1.388	7,15	1,88	1,62
50	-10	2.736	1.519	7,74	2,09	1,80
50	-5	3.285	1.650	8,34	2,32	1,99
50	0	3.889	1.781	8,95	2,54	2,18
55	-40	534	713	4,34	0,87	0,75
55	-35	749	859	4,92	1,01	0,87
55	-30	1.018	1.005	5,51	1,18	1,01
55	-25	1.342	1.151	6,12	1,36	1,17
55	-23,3	1.465	1.200	6,33	1,42	1,22
55	-20	1.721	1.296	6,74	1,54	1,33
55	-15	2.154	1.440	7,38	1,74	1,50
55	-10	2.642	1.584	8,03	1,94	1,67
55	-5	3.184	1.728	8,70	2,14	1,84
55	0	3.781	1.871	9,38	2,35	2,02
60	-40	481	702	4,30	0,80	0,69
60	-35	689	861	4,92	0,93	0,80
60	-30	952	1.020	5,57	1,09	0,93
60	-25	1.269	1.178	6,23	1,25	1,08
60	-23,3	1.389	1.231	6,46	1,31	1,13
60	-20	1.640	1.335	6,92	1,43	1,23
60	-15	2.067	1.493	7,62	1,61	1,38
60	-10	2.548	1.649	8,33	1,80	1,54
60	-5	3.083	1.806	9,07	1,99	1,71
60	0	3.673	1.962	9,82	2,18	1,87

CECOMAF

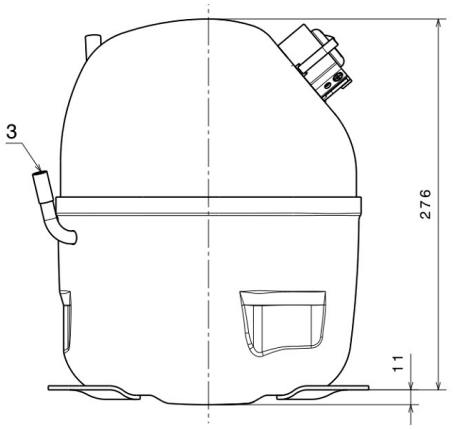
Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	748	746	4,47	1,00	0,87
40	-35	1.035	854	4,90	1,21	1,05
40	-30	1.372	962	5,33	1,43	1,23
40	-25	1.759	1.069	5,78	1,64	1,42
40	-23,3	1.902	1.106	5,93	1,72	1,49
40	-20	2.197	1.176	6,23	1,87	1,61
40	-15	2.685	1.283	6,69	2,09	1,81
40	-10	3.224	1.389	7,15	2,32	2,01
40	-5	3.813	1.494	7,62	2,55	2,20
40	0	4.452	1.600	8,10	2,78	2,40
45	-40	666	735	4,43	0,91	0,78
45	-35	925	856	4,90	1,08	0,93
45	-30	1.234	976	5,39	1,26	1,09
45	-25	1.594	1.097	5,89	1,45	1,26
45	-23,3	1.727	1.137	6,06	1,52	1,31
45	-20	2.003	1.216	6,40	1,65	1,42
45	-15	2.464	1.335	6,92	1,85	1,59
45	-10	2.974	1.454	7,44	2,05	1,77
45	-5	3.535	1.572	7,98	2,25	1,94
45	0	4.147	1.690	8,52	2,45	2,12
50	-40	585	724	4,38	0,81	0,70
50	-35	815	858	4,91	0,95	0,82
50	-30	1.097	991	5,45	1,11	0,96
50	-25	1.428	1.124	6,01	1,27	1,10
50	-23,3	1.552	1.169	6,20	1,33	1,15
50	-20	1.810	1.256	6,57	1,44	1,25
50	-15	2.242	1.388	7,15	1,62	1,40
50	-10	2.725	1.519	7,74	1,79	1,55
50	-5	3.258	1.650	8,34	1,97	1,71
50	0	3.841	1.781	8,95	2,16	1,86
55	-40	503	713	4,34	0,71	0,61
55	-35	706	859	4,92	0,82	0,71
55	-30	959	1.005	5,51	0,95	0,82
55	-25	1.263	1.151	6,12	1,10	0,95
55	-23,3	1.377	1.200	6,33	1,15	0,99
55	-20	1.617	1.296	6,74	1,25	1,08
55	-15	2.021	1.440	7,38	1,40	1,21
55	-10	2.476	1.584	8,03	1,56	1,35
55	-5	2.981	1.728	8,70	1,73	1,49
55	0	3.536	1.871	9,38	1,89	1,63
60	-40	421	702	4,30	0,60	0,52
60	-35	596	861	4,92	0,69	0,60
60	-30	822	1.020	5,57	0,81	0,70
60	-25	1.097	1.178	6,23	0,93	0,80
60	-23,3	1.202	1.231	6,46	0,98	0,84
60	-20	1.423	1.335	6,92	1,07	0,92
60	-15	1.800	1.493	7,62	1,21	1,04
60	-10	2.226	1.649	8,33	1,35	1,17
60	-5	2.704	1.806	9,07	1,50	1,29
60	0	3.231	1.962	9,82	1,65	1,42

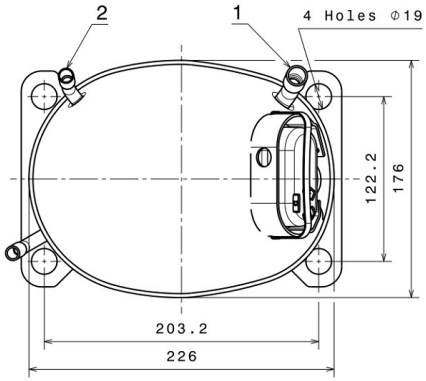
EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	6.885,8353728746	898,9556424946	4,7386588425	63,189409526736
2	176,9022730765	1,0543567438	0,0099590291	1,8322070059212
3	-62,6623901846	18,5849196221	0,0887913104	-0,2753189398907
4	0,9845280242	-0,0029425418	0,0003399017	0,014841649173395
5	-1,1588733528	0,5208148752	0,0024397339	-0,0036436456905524

Equation	$x_1 + x_2Te + x_3Tc + x_4Te^2 + x_5TeTc$

COMPRESSOR DIMENSIONS

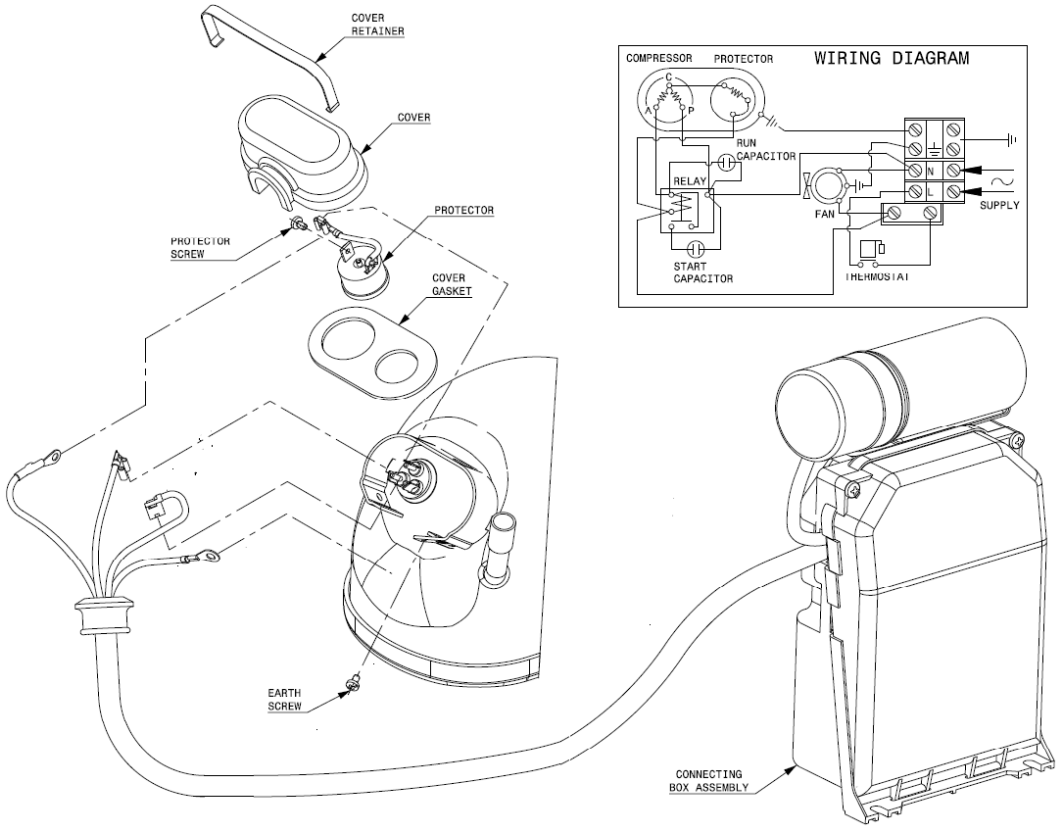




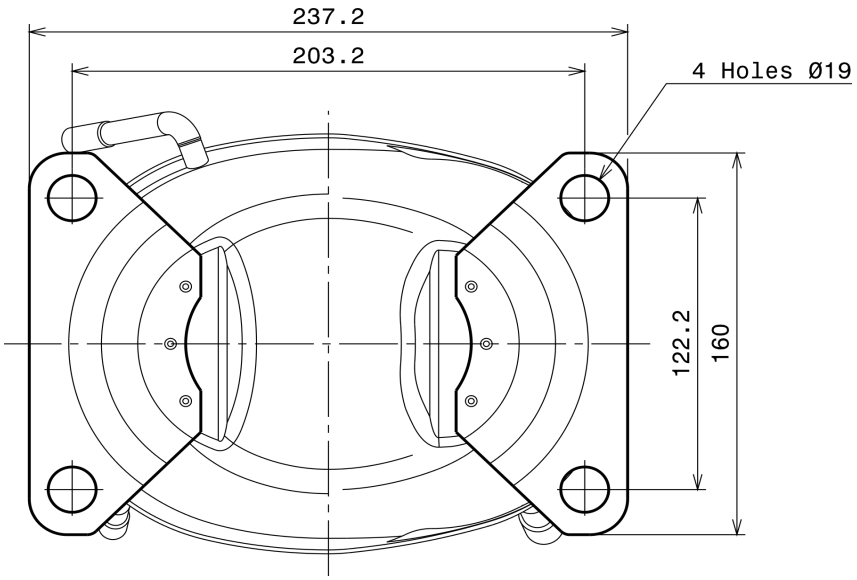
	DESIGNATION	INTERNAL DIAM.
1	Suction	12,7 mm
2	Service	9,7 mm
3	Discharge	8,0 mm

WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

CSR CONNECTION (EXTERNAL CONNECTING BOX) (NS Range)



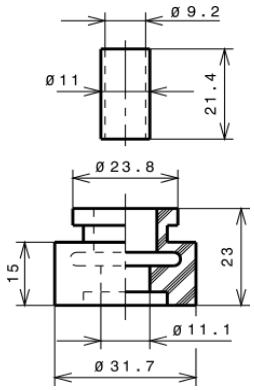
FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

STANDARD

Ø19 holes (203.2x122.2 net)



SOA

SOA R290 LMBP