

## Shenyang Shenyileng Refrigeration Co., Ltd.

Add: No. 31 Zhenxing 6 St., Hutai Xincheng Shenyang City, Liaoning Province, China

Tel: +86-24-83501123

Fax: +86-24-87440208

Web: <http://www.syl-inter.com>

E-mail: [colin\\_inter@vip.sina.com](mailto:colin_inter@vip.sina.com); [colin@syl-inter.com](mailto:colin@syl-inter.com)

For further information, please login our home page: <http://www.syl-inter.com>

## Semi-Hemetic Scroll Compressor Catalogue (VLB Series)

### Compressor

SHENYANG SHENYILENG REFRIGERATION CO., LTD.





Shenyang Shenyleng Refrigeration Co., Ltd. (SYL) located in Shenyang China, we are a professional refrigeration compressor and refrigeration equipment manufacturer.

Our company possesses an highly experienced technology and production team, as well as a complete machining center and testing laboratory, so it has the guarantee to ensure the quality of our products. Based on the needs of domestic and overseas market, we developed one/two stage reciprocating compressor S and SI series reciprocating compressors and VLB series scroll compressors, which cover wide range of refrigerating applications.

Our sales and after-sales service network and clients are throughout the country, East Asia, and Southeast Asia markets. On the basis of maintaining the original domestic and Asian market share, we have actively start developing other regional overseas markets.

SYL is willing to cooperate with you, and create a better tomorrow!

## CONTENTS

1	Product Features.
3	Compressor Model Description
4-7	Technical Specifications
4	VLB-L
6	VLB-M
8-9	Operating Range
8	VLB-L
9	VLB-M
10-13	Refrigerating Capacity
10	R22
12	R404A
14-16	Dimensions
14	VLB-L
15	VLB-M

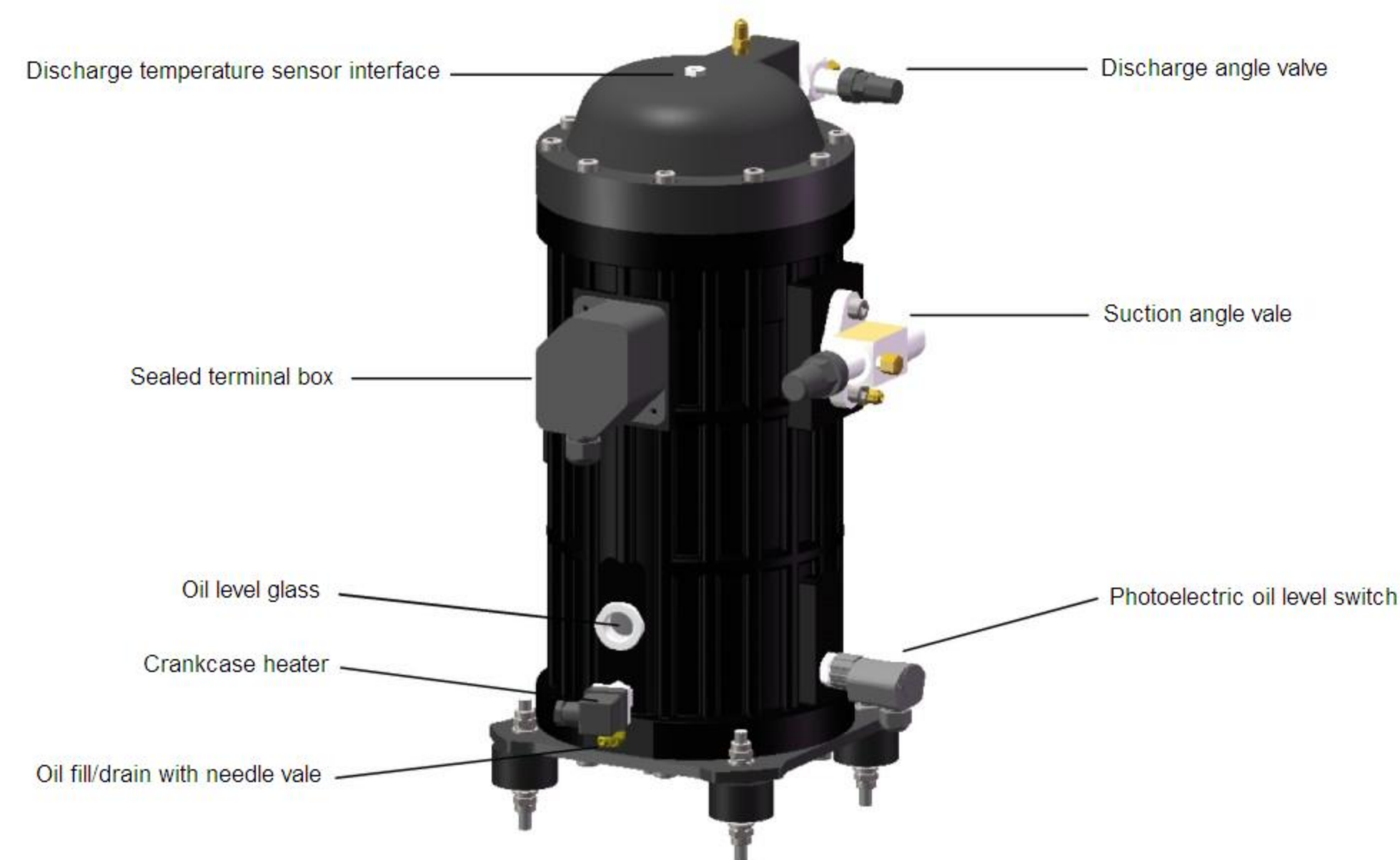




VLB-M Series

Medium Temperature Semi-Hermetic Scroll Compressor

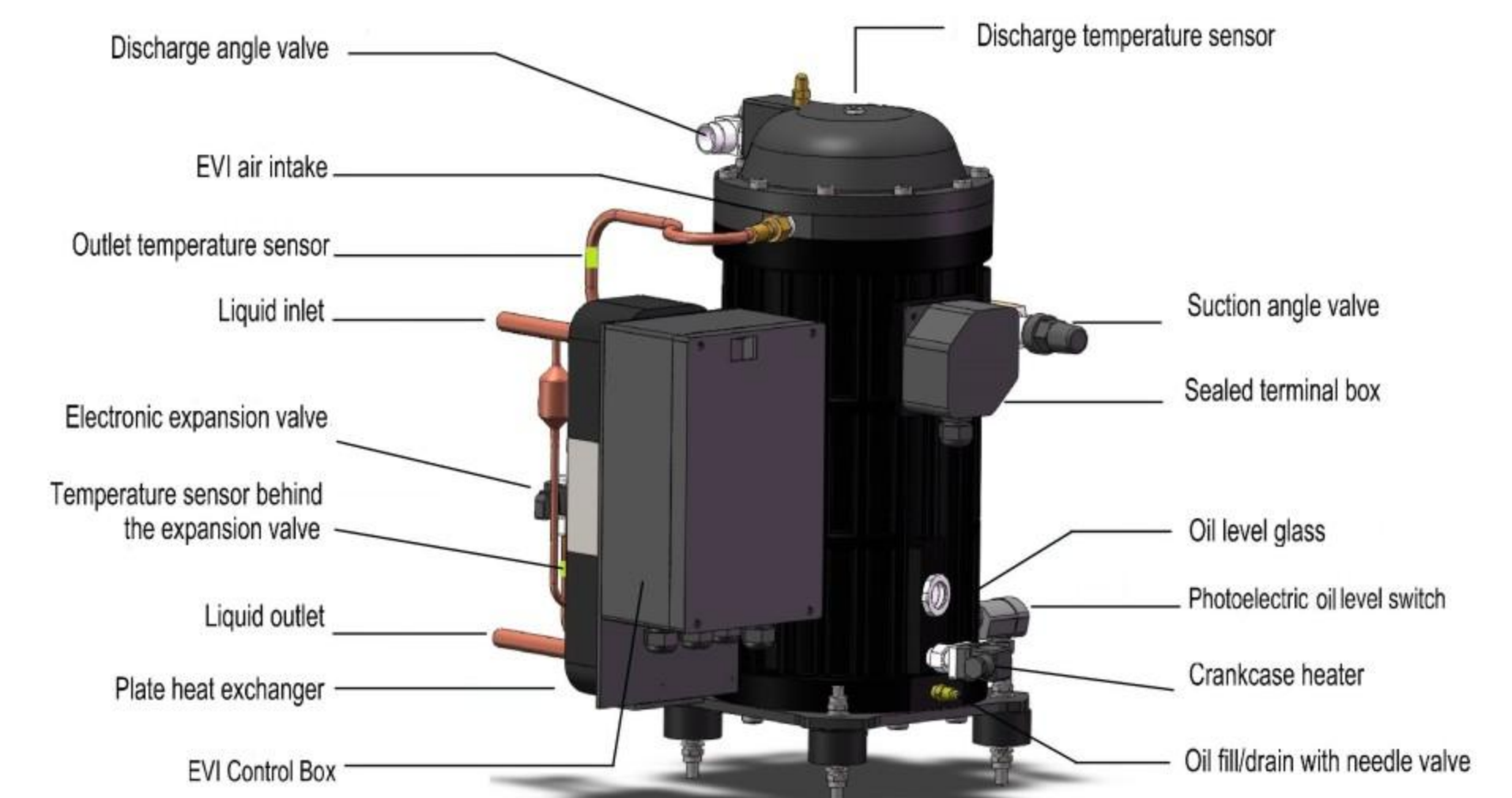
- Specific design for medium temperature cold storage from scroll to whole machine, product defying from inside to outside;
- Radial and axial of double flexibility design, optimum design of axial floating seal, increase efficiency;
- Accurate discharge temperature control, wide range of operation;
- Accurate calculation of load and sealing force, low operating noise;
- High energy efficiency motor design;
- Easy maintenance.



VLB-L Series

Low Temperature Semi-Hermetic Scroll Compressor

- Specific design for low temperature frozen and cold storage from scroll to whole machine, product defying from outside to inside;
- Radial and axial of double flexibility design, optimum design of axial floating seal, increase efficiency;
- Accurate discharge temperature control, wide range of operation;
- Accurate calculation of load and sealing force, low operating noise;
- High energy efficiency motor design;
- Integrated injection enthalpy-adding technology;
- In the R22 application, the evaporation temperature is up to -40°C;
- Easy maintenance.

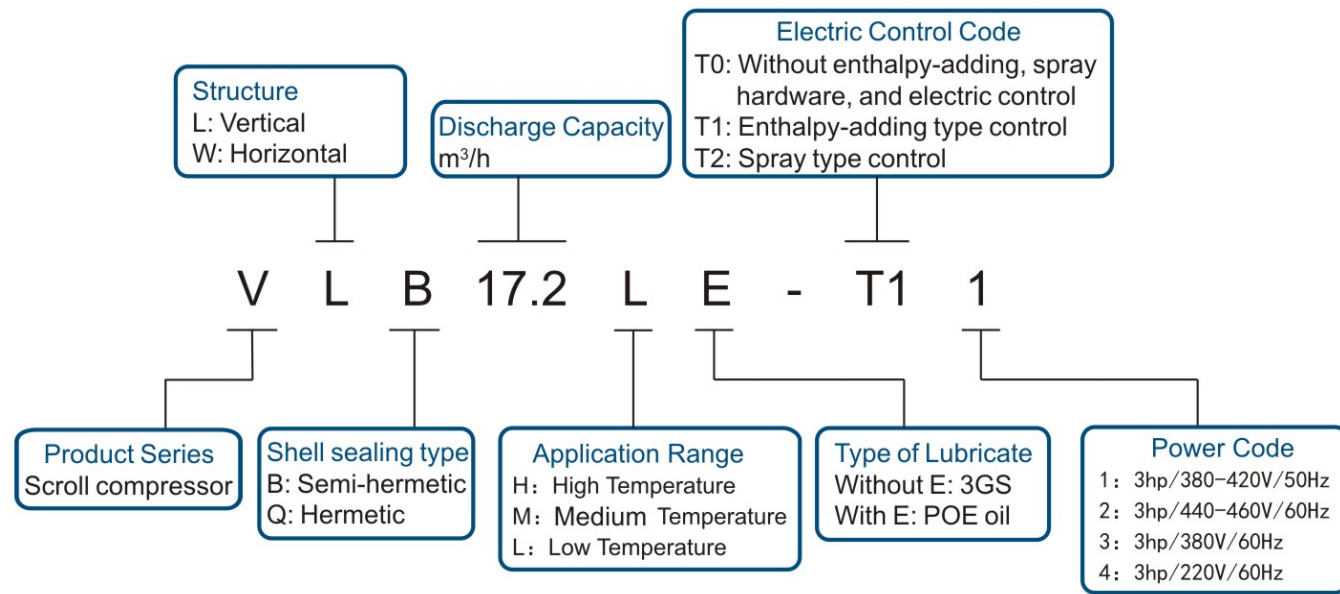




VLB Series

VLB-L Series

R22/50Hz



Model	VLB17.2L	VLB20.9L	VLB29.5L	VLB34.5L	VLB41.5L
Nominal power (Hp)	6	8	10	13	15
Standard motor	380V/50Hz/3P				
Discharge capacity (m <sup>3</sup> /h)	17.2	20.9	29.5	34.5	41.5
Refrigerant	R22				
Nominal refrigerating capacity (W)	5047	6322	8596	10133	12529
Nominal input power (W)	3453	4308	5720	6821	8435
Nominal working efficiency ratio (W/W)	1.46	1.47	1.50	1.49	1.49
Nominal working current (A)	6.3	9.6	11.2	12.6	16.7
Locked rotor current (A)	78	108	108	108	136.5
Max. working current (A)	12.5	18.5	23	23.5	29.5
Crankcase heater power (W)	75				
Pipe Connection (In)					
Discharge line external diameter	1/2	7/8			
Suction line external diameter	7/8	1 1/8		1 3/8	
Liquid inlet/outlet line external diameter	1/2	5/8			3/4
External dimensions (mm)					
Length(L)	480				
Width(W)	390				
Height(H)	547				
Installation size of footing (Aperture mm)	190X190(10.5)				
Lubricating oil type	3GS				
Initial lubricating oil injection (L)	2.7				
Max. working pressure (MPa)					
High pressure side	3				
Low pressure side	2				
Weight(kg)	88	90	91	91	93

Evaporating temperature -31.6°C, condensing temperature 40.6°C, suction temperature 4.4°C, before entering economizer without subcooling



## Technical Specifications

### VLB-L Series

### R404A/50Hz

Model	VLB17.2LE	VLB20.9LE	VLB29.5LE	VLB34.5LE	VLB41.5LE
Nominal power (Hp)	6	8	10	13	15
Standard motor	380V/50Hz/3P				
Discharge capacity (m <sup>3</sup> /h)	17.2	20.9	29.5	34.5	41.5
Refrigerant	R404A				
Nominal refrigerating capacity (W)	5803	7268	9884	11649	14418
Nominal input power (W)	3690	4622	6223	7263	8989
Nominal working efficiency ratio (W/W)	1.57	1.57	1.59	1.60	1.60
Nominal working current (A)	8.6	10	11.9	13.3	18
Locked rotor current (A)	78	108	108	108	136.5
Max. working current (A)	12.5	18.5	23	23.5	29.5
Crankcase heater power (W)	75				
Pipe Connection (In)					
Discharge line external diameter	1/2	7/8			
Suction line external diameter	7/8	1 1/8		1 3/8	
Liquid inlet/outlet line external diameter	1/2	5/8			3/4
External dimensions (mm)					
Length(L)	480				
Width(W)	390				
Height(H)	547				
Installation size of footing (Aperture mm)	190X190(10.5)				
Lubricating oil type	POE				
Initial lubricating oil injection (L)	2.7				
Max. working pressure (MPa)					
High pressure side	3				
Low pressure side	2				
Weight(kg)	88	90	91	91	93

Evaporating temperature-31.6°C, condensing temperature 40.6°C, suction temperature 4.4°C, before entering economizer without subcooling.

## Technical Specifications

### VLB-M Series

### R22/50Hz

Model	VLB17.2M	VLB20.9M	VLB29.5M	VLB34.5M	VLB41.5M
Nominal power (Hp)	6	8	10	13	15
Standard motor	380V/50Hz/3P				
Discharge capacity (m <sup>3</sup> /h)	17.2	20.9	29.5	34.5	41.5
Refrigerant	R22				
Nominal refrigerating capacity (W)	10200	13200	18200	21000	26000
Nominal input power (W)	4430	5690	7745	8860	11560
Nominal working efficiency ratio (W/W)	2.3	2.32	2.35	2.37	2.25
Nominal working current (A)	8.5	11.2	13.6	15.7	20.7
Locked rotor current (A)	78	108	108	108	136.5
Max. working current (A)	12.5	18.5	23	23.5	30.7
Crankcase heater power (W)	70	90			75
Pipe Connection (In)					
Discharge line external diameter	1/2	7/8			
Suction line external diameter	7/8	1 1/8		1 3/8	
Liquid inlet/outlet line external diameter					
External dimensions (mm)					
Length(L)	320				
Width(W)	373				
Height(H)	547				
Installation size of footing (Aperture mm)	190X190(10.5)				
Lubricating oil type	3GS				
Initial lubricating oil injection (L)	2.7				
Max. working pressure (MPa)					
High pressure side	3				
Low pressure side	2				
Weight(kg)	80	82	83	83	85

Evaporating temperature-6.7°C, condensing temperature 48.9°C, suction temperature 4.4°C, without subcooling.



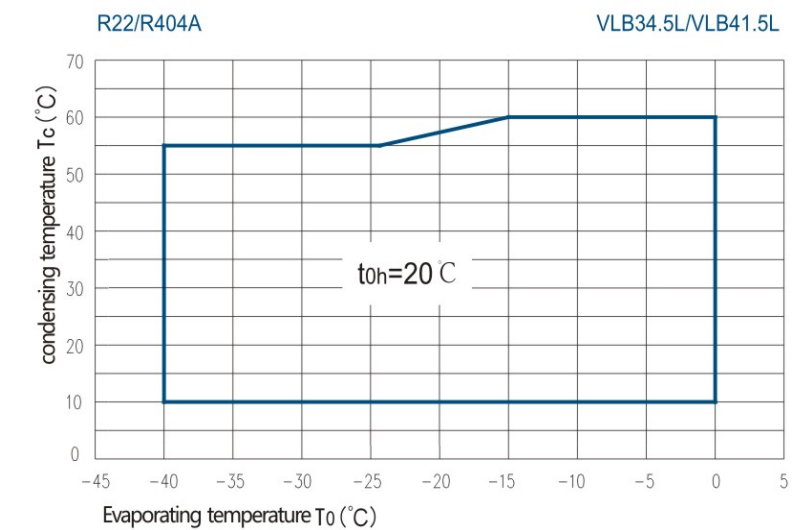
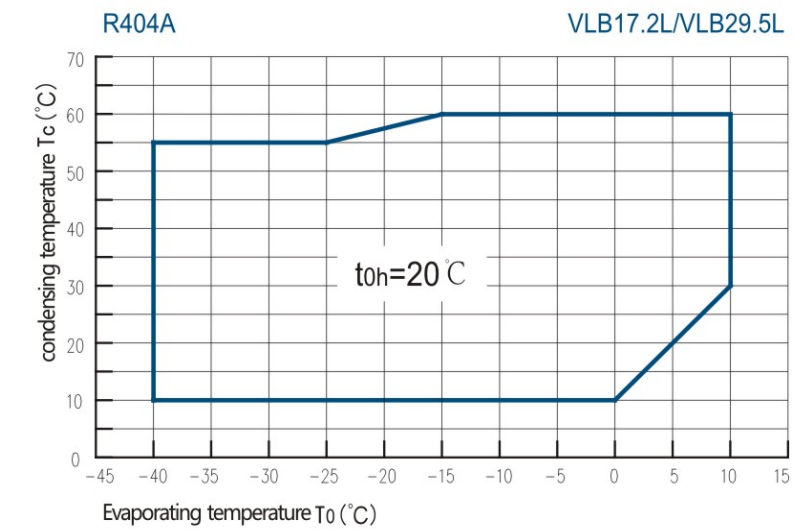
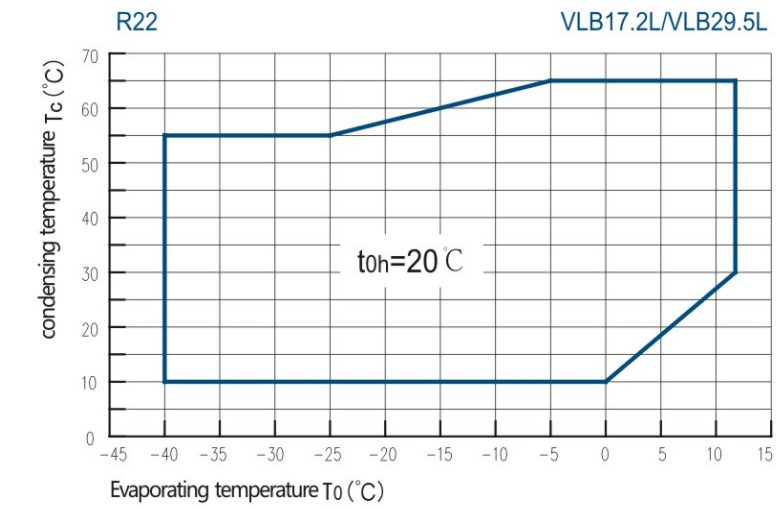
VLB-M Series

R404A/50Hz

VLB-L Series

型号 Model	VLB17.2ME	VLB20.9ME	VLB29.5ME	VLB34.5ME	VLB41.5ME
Nominal power (Hp)	6	8	10	13	15
Standard motor	380V/50Hz/3P				
Discharge capacity (m <sup>3</sup> /h)	17.2	20.9	29.5	34.5	41.5
Refrigerant	R404A				
Nominal refrigerating capacity (W)	8500	12893	17856	20544	25680
Nominal input power (W)	4250	6330	8692	9950	13150
Nominal working efficiency ratio (W/W)	2	2.04	2.05	2.06	1.95
Nominal working current (A)	8	12.1	15.5	16.9	23
Locked rotor current (A)	60	117	121	121	148.5
Max. working current (A)	12.2	18.4	23.4	27.6	32.8
Crankcase heater power (W)	70	90		75	
Pipe Connection (In)					
Discharge line external diameter	1/2	7/8			
Suction line external diameter	7/8	1 1/8		1 3/8	
Liquid inlet/outlet line external diameter					
External dimensions (mm)					
Length(L)	320				
Width(W)	373				
Height(H)	547				
Installation size of footing (Aperture mm)	190X190(10.5)				
Lubricating oil type	POE				
Initial lubricating oil injection (L)	1.4	2.7		3	
Max. working pressure (MPa)					
High pressure side	3.2				
Low pressure side	2				
Weight(kg)	80	82	83	83	85

Evaporating temperature -6.7°C, condensing temperature 48.9°C, suction temperature 4.4°C, without subcooling.

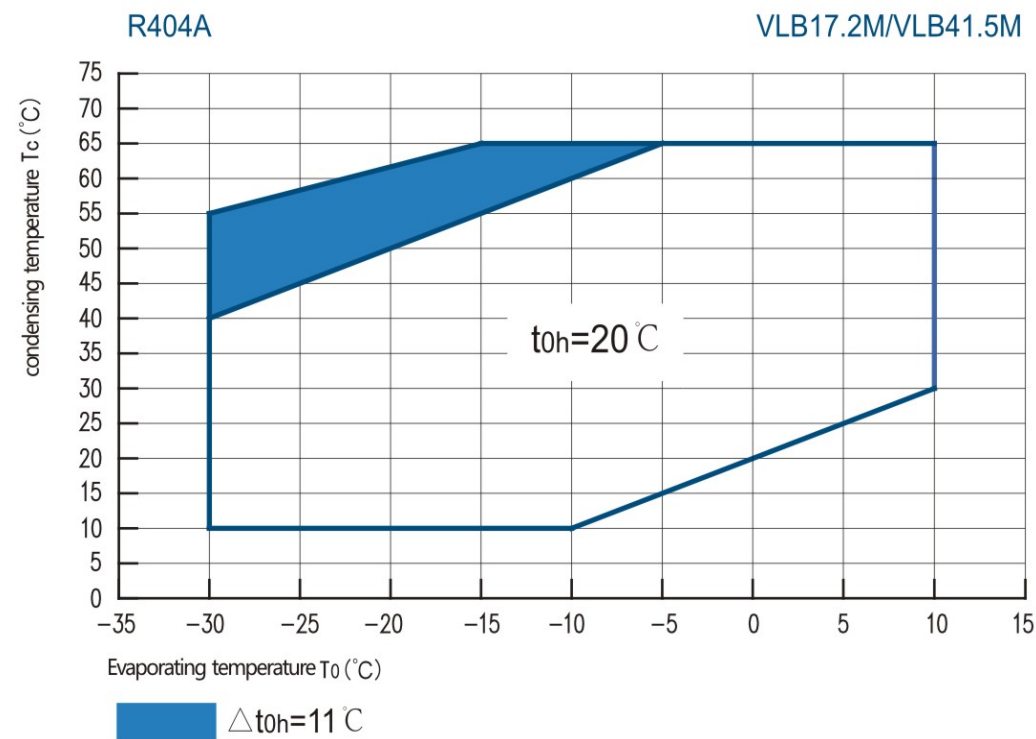
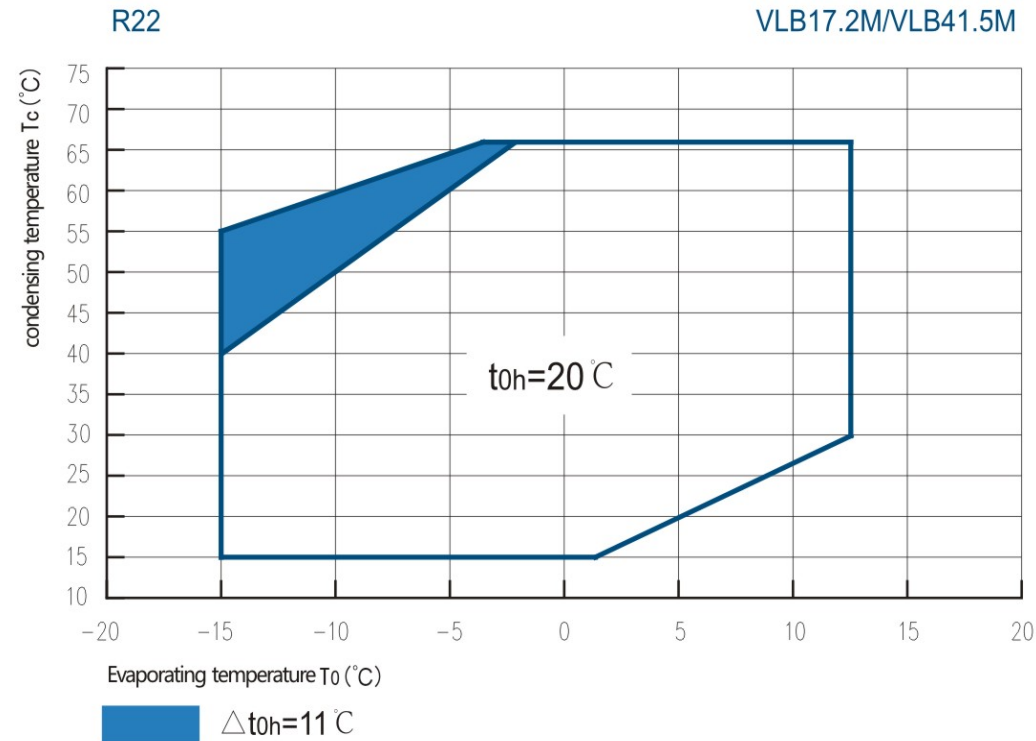




VLB-M Series

VLB-L Series

R22/50Hz



Model	Condensing temperature (°C)	Et (°C)											
		-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	
VLB17.2L	Q	60						7939	9442	11153	13088	15023	16958
		50	3066	3863	4785	5844	7054	8429	9982	11729	13682	15635	17587
		40	3474	4389	5409	6551	7827	9251	10837	12598	14549	16500	18452
	P	30	3793	4804	5905	7109	8432	9885	11484	13240	15171	17100	19031
		60						5847	6072	6188	6232	6260	6281
		50	4089	4130	4218	4303	4379	4436	4537	4611	4718	4886	5173
VLB20.9L	Q	40	3229	3331	3442	3521	3596	3698	3827	3937	4141	4342	4500
		30	2462	2612	2721	2818	2933	3095	3281	3484	3612	3886	4049
		60						9945	11826	13970	16393	18817	21241
	P	50	4740	4839	4995	5129	5197	5279	5437	5650	5909	6119	6255
		40	3956	4173	4311	4409	4504	4632	4700	4782	4925	5041	5136
		30	3084	3272	3408	3529	3673	3877	4109	4252	4419	4557	4629
VLB29.5L	Q	60						13523	16081	18996	22292	25588	28883
		50	5221	6581	8150	9954	12014	14356	17003	19977	23303	26630	29956
		40	5917	7474	9213	11158	13331	15756	18457	21457	24781	28104	31427
	P	30	6460	8183	10058	12109	14361	16836	19559	22552	25839	29126	32413
		60						9860	10239	10495	10874	11322	11533
		50	6526	6581	6792	7110	7509	7802	8097	8537	8963	9183	9361
VLB34.5L	Q	40	4931	5339	5805	5937	6064	6237	6505	6919	7529	8139	8494
		30	4152	4405	4588	4752	4945	5219	5624	6209	6625	6773	6896
		60						15939	18955	22391	26275		
	P	50	7870	8404	8775	9041	9261	9493	9797	10229	10849		
		40	6216	6556	6774	6928	7077	7279	7592	8075	8787		
		30	4845	5141	5354	5545	5771	6091	6563	7245	8197		
VLB41.5L	Q	60						19709	23438	27687	32490		
		50	7610	9591	11879	14507	17511	20924	24781	29117	33964		
		40	8624	10894	13428	16262	19429	22964	26901	31274	36118		
	P	30	9416	11926	14659	17649	20931	24539	28507	32869	37660		
		60						14229	14776	15432	16270		
		50	9732	10392	10850	11179	11451	11739	12114	12649	13416		
40	7686	8107	8376	8567	8751	9000	9387	9985	10865				
30	5991	6357	6621	6857	7136	7532	8115	8959	10136				

Refrigerating capacity relating to suction temperature 20°C, before entering economizer without subcooling.



# Refrigerating Capacity (w)

## VLB-M Series

## R22/50Hz

Model	Condensing temperature (°C)	Et ( °C )						
		-15	-10	-5	0	5	10	
VLB17.2M	Q	60		6575	8394	9890	11651	13695
		50	5873	7207	9474	11350	13421	15714
		40	7354	8983	10849	12899	15081	17430
		30	8339	10070	11974	14001	16104	18319
	P	60		4287	4497	4675	4841	5013
		50	3492	3664	3807	3940	4081	4249
		40	2975	3097	3212	3337	3492	3694
		30	2507	2618	2743	2899	3105	3380
VLB20.9M	Q	60		10092	12884	15181	17883	21021
		50	9015	11061	14542	17422	20600	24120
		40	11287	13788	16652	19799	23148	26753
		30	12800	15457	18378	21489	24717	28118
	P	60		6647	6971	7247	7504	7771
		50	5414	5680	5902	6108	6326	6587
		40	4611	4802	4979	5174	5413	5727
		30	3886	4059	4252	4494	4813	5239
VLB29.5M	Q	60		13915	17765	20931	24657	28983
		50	12430	15251	20050	24021	28403	33256
		40	15563	19010	22959	27298	31916	36887
		30	17648	21312	25340	29629	34080	38769
	P	60		9073	9516	9893	10244	10608
		50	7391	7755	8057	8338	8636	8993
		40	6295	6555	6798	7063	7390	7818
		30	5305	5541	5805	6135	6571	7152
VLB34.5M	Q	60		15750	20107	23691	27908	32805
		50	14069	17262	22694	27188	32148	37641
		40	17615	21517	25987	30898	36125	41751
		30	19975	24122	28681	33537	38574	43881
	P	60		10270	10771	11198	11595	12007
		50	8366	8777	9119	9437	9775	10179
		40	7125	7419	7694	7994	8364	8849
		30	6004	6272	6570	6944	7437	8096
VLB41.5M	Q	60		20079	25635	30203	35580	41823
		50	17936	22008	28932	34662	40985	47988
		40	22457	27432	33130	39391	46055	53227
		30	25466	30753	36565	42755	49177	55943
	P	60		13486	14144	14704	15226	15767
		50	10985	11526	11975	12392	12836	13366
		40	9356	9743	10103	10497	10983	11620
		30	7884	8236	8628	9118	9766	10630

Refrigerating capacity relating to suction temperature 20°C, without subcooling.

  Refrigerating capacity relating to suction temperature 11°C, without subcooling

# Refrigerating Capacity (w)

## VLB-L Series

## R404A/50Hz

Model	Condensing temperature (°C)	Et ( °C )										
		-40	-35	-30	-25	-20	-15	-10	-5	0	5	10
VLB17.2LE	Q	60					7795	9114	10602	12285	13969	15653
		50	3471	4429	5449	6561	7790	9166	10713	12464	14442	16419
		40	4062	5086	6204	7446	8838	10409	12186	14196	16467	18738
		30	4550	5637	6853	8225	9779	11544	13548	15818	18381	20944
	P	60					6271	6467	6626	6825	6984	7115
		50	4501	4562	4650	4767	4916	5099	5319	5579	5716	5863
		40	3500	3573	3658	3761	3884	4027	4196	4391	4566	4685
		30	2779	2886	2994	3106	3225	3352	3493	3647	3817	3987
VLB20.9LE	Q	60					9764	11416	13279	15388	17497	19606
		50	4348	5548	6826	8218	9758	11480	13420	15611	18088	20566
		40	5088	6370	7771	9326	11070	13038	15263	17781	20626	23471
		30	5699	7061	8584	10302	12249	14460	16970	19813	23023	26234
	P	60					7855	8126	8299	8549	8748	8911
		50	5638	5714	5824	5971	6157	6337	6490	6587	6699	6855
		40	4384	4474	4582	4711	4864	5045	5256	5500	5781	6018
		30	3481	3614	3750	3890	4039	4200	4374	4567	4781	4994
VLB29.5LE	Q	60					13277	15524	18057	20925	23793	26660
		50	5913	7544	9282	11175	13269	15611	18248	21228	24597	27966
		40	6919	8662	10567	12682	15054	17729	20755	24179	28047	31916
		30	7750	9602	11672	14008	16656	19663	23076	26941	31307	35673
	P	60					10575	10724	10872	11063	11330	11591
		50	7456	7693	7841	8038	8290	8599	8790	9045	9420	9643
		40	5903	6024	6169	6343	6549	6792	7076	7405	7783	8162
		30	4686	4866	5048	5238	5438	5654	5890	6149	6436	6724
VLB34.5LE	Q	60					15649	18298	21284	24664		
		50	6969	8892	10941	13172	15640	18400	21509	25021	28992	
		40	8155	10209	12455	14948	17744	20897	24464	28500	33059	
		30	9134	11318	13758	16511	19632	23176	27199	31756	36902	
	P	60					12342	12924	13609	14402		
		50	8858	8978	9151	9381	9674	10036	10469	10981	11575	
		40	6889	7030	7200	7403	7643	7927	8258	8642	9083	
		30	5469	5679	5891	6112	6346	6598	6873	7176	7511	
VLB41.5LE	Q	60					19367	22645	26342	30525		
		50	8625	11004	13540	16301	19356	22773	26620	30967	35881	
		40	10093	12635	15415	18500	21960	25863	30277	35271	40914	
		30	11305	14007	17027	20435	24297	28683	33662	39301	45670	
	P	60					15274	15995	16843	17824		
		50	10963	11111	11325	11610	11973	12420	12957	13590	14325	
		40	8526	8701	8911	9161	9459	9810	10220	10695	11241	
		30	6768	7028	7291	7565	7854	8166	8506	8881	9296	

Refrigerating capacity relating to suction temperature 20°C, before entering economizer without subcooling.

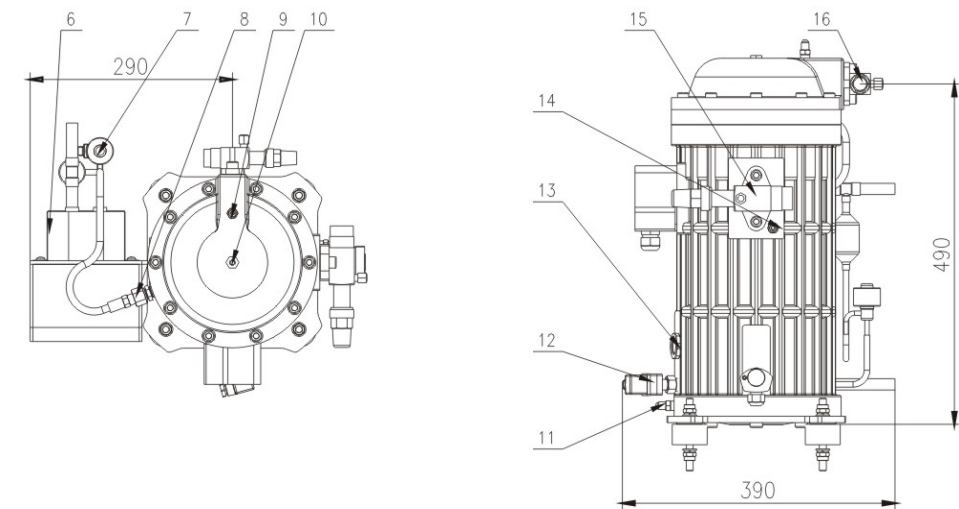
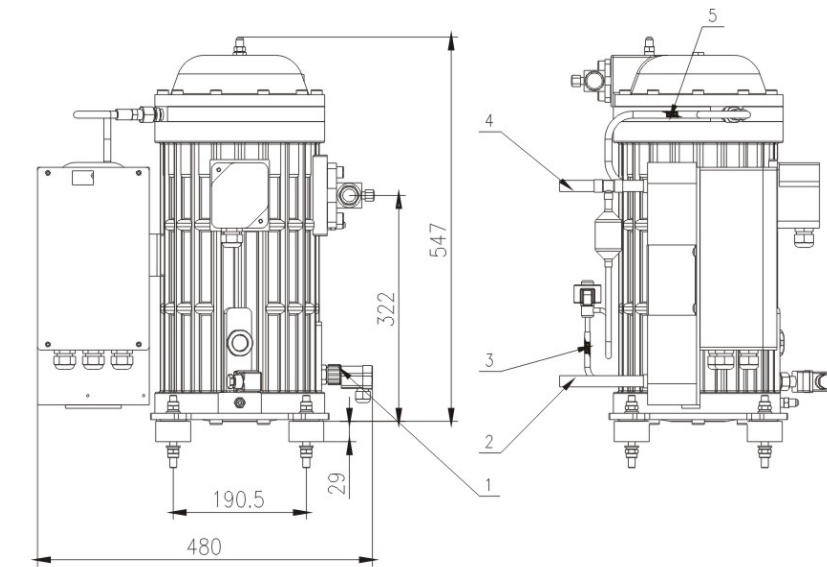


VLB-M Series

R404A/50Hz

VLB-L Series

Model	Condensing temperature (°C)	Et (°C)									
		-30	-25	-20	-15	-10	10	-5	0	5	
VLB17.2ME	Q	60			3952	5221	6021	7484	9562	12206	15368
		50	3632	3880	4499	5659	7311	9407	11898	14735	17870
		40	3850	4780	6300	8141	10255	12593	15105	17744	20461
	P	60	4879	6759	8789	10920	13104	15292	17435	19485	21393
		50	5221	5529	5683	5738	5750	5775	5869		
		40	3567	4026	4276	4372	4370	4296	4335	4499	
VLB20.9ME	Q	60	2981	3212	3291	3272	3211	3165	3188	3337	3668
		50	2363	2462	2465	2427	2404	2451	2624	2980	3573
		40	2363	2462	2465	2427	2404	2451	2624	2980	3573
	P	60	5951	7862	9067	11271	14400	18381	23142		
		50	5469	5842	6775	8522	11010	14167	17917	22190	26910
		40	5798	7198	9487	12260	15443	18963	22746	26720	30811
VLB29.5ME	Q	60	7348	10178	13235	16444	19733	23028	26255	29342	32215
		50	7784	8243	8472	8554	8572	8609	8749		
		40	5317	6002	6374	6518	6516	6450	6405	6463	6708
	P	60	4445	4789	4906	4877	4787	4718	4753	4975	5468
		50	3523	3671	3675	3618	3584	3654	3913	4443	5327
		40	7932	10477	12083	15020	19191	24497	30841		
VLB34.5ME	Q	60	7289	7786	9029	11357	14673	18880	23879	29572	35863
		50	7727	9593	12644	16339	20581	25272	30314	35610	41063
		40	9792	13564	17638	21915	26298	30689	34990	39104	42933
	P	60	10374	10985	11290	11400	11424	11474	11660		
		50	7087	7999	8495	8687	8683	8596	8536	8614	8940
		40	5923	6383	6538	6500	6380	6288	6334	6631	7287
VLB41.5ME	Q	60	4695	4892	4898	4822	4776	4870	5214	5921	7099
		50	9646	12743	14696	18268	23340	29794	37509		
		40	8865	9470	10981	13813	17846	22962	29041	35966	43616
	P	60	9397	11667	15377	19871	25030	30736	36869	43310	49941
		50	11909	16497	21451	26653	31984	37324	42555	47559	52216
		40	12616	13360	13731	13864	13894	13954	14181		
VLB41.5ME	Q	60	8619	9728	10332	10565	10561	10455	10382	10476	10872
		50	7204	7762	7951	7905	7759	7647	7704	8064	8863
		40	5710	5950	5957	5865	5808	5922	6342	7201	8634
	P	60	15779	15124	17442	21682	27702	35361	44519		
		50	10522	11239	13033	16394	21181	27253	34468	42687	51767
		40	11153	13848	18251	23585	29708	36479	43758	51403	59273
P	60	14135	19580	25460	31634	37960	44299	50508	56446	61973	
	50	11181	12621	16368	17332	17814	17986	18025	18103	18397	
	40	9346	10070	13404	13706	13701	13564	13469	13591	14105	
P	60	7408	7719	10316	10256	10066	9921	9995	10462	11498	
	50			7728	7608	7535	7683	8227	9342	11201	
	40										



ConnectionSize

Model	VLB17.2L	VLB20.9L	VLB29.5L	VLB34.5L	VLB41.5L
Suction Valve	22		28		35
Discharge Valve	12		22		22
Liquid inlet/Outlet inlet	12		16		19

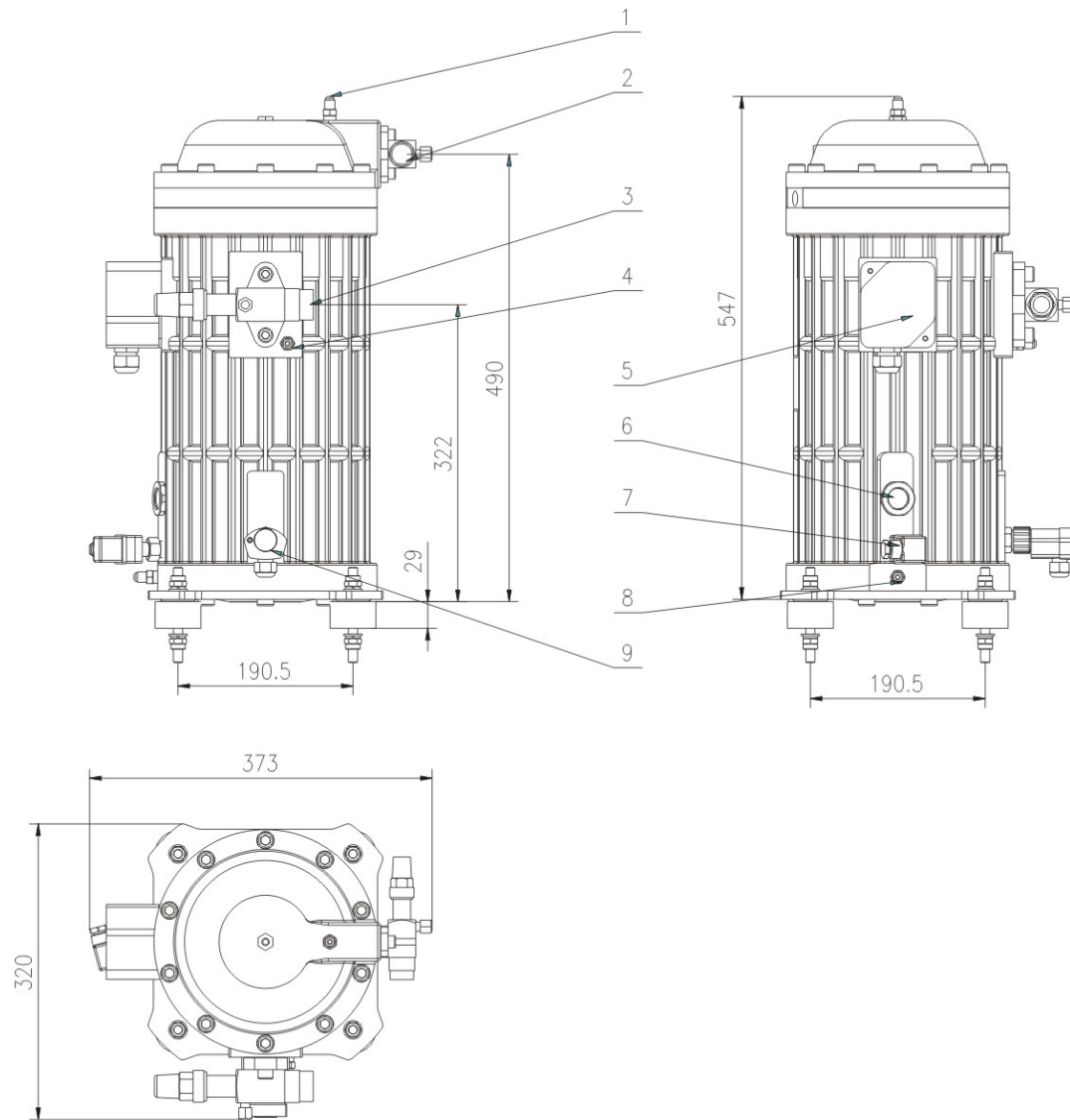
Refrigerating capacity relating to suction temperature 20°C, without subcooling.

Refrigerating capacity relating to suction temperature 11°C, without subcooling



## External Dimensions

### VLB-M Series



ConnectionSize

Model	VLB17.2M	VLB20.9M	VLB29.5M	VLB34.5M	VLB41.5M
Suction Valve	22		28		35
Discharge Valve	12		22		22

## External Dimensions

### VLB-M Series

VLB-L Connection indication	
1.Oil level switch M20×1.5	9.High pressure protection switch connection Rc1/8
2.Main loop outlet line I.D	10.Discharge temperature sensing probe placement area
3.Temperature sensor after EXV	11.Oil fill plug Rc1/8
4.Main loop outlet pipe	12.Crankcase heating pipe Rc3/8
5.(Vapor/liquid spray) outlet temperature sensor placement area	13.Oil level glass 1 1/8-18UNEF
6.Plate heat exchanger	14.Low pressure protection switch connection 1/4"SAE
7.Electronic expansion valve	15.Suction valve I.D
8.Spray connection Rc3/8	16.Discharge valve I.D

VLB-M Connection indication	
1.Discharge temperature sensing probe placement area	6.Oil level glass1 1/8-18UNEF
2.Discharge valve I.D	7.Crankcase heating pipe Rc3/8
3.Suction valve I.D	8.Oil fill/drain plug Rc1/8
4.Low pressure protection switch connection 1/4" SAE	9.Oil level switch M20×1.5
5.Junction box protection box	