DAS HERZ DER FRISCHE

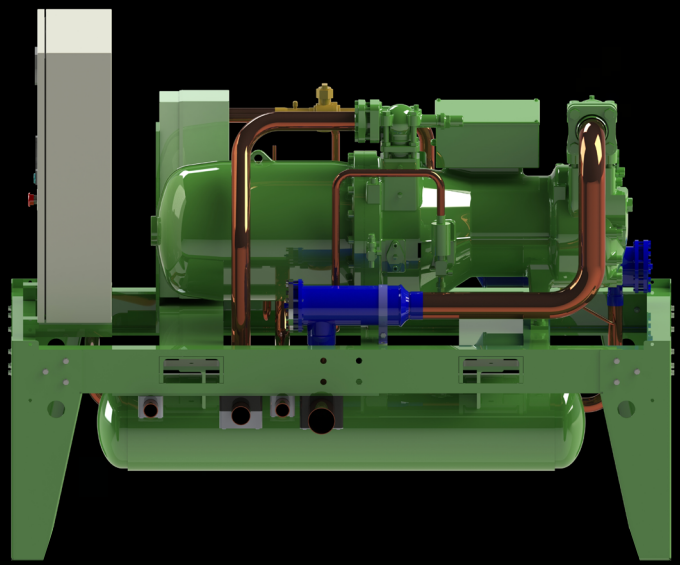
COMMECH SERIES

AIR CONDITIONING

CSH SEMI-HERMETIC SCREW PACKAGES

ORIGINAL MANUFACTURED EQUIPMENT

Commech Series New Models



BA-509-4 AUS

Product Features

The BITZER ComMech Series compact screw compressor pack offers contractors and system owners a complete factory assembled system; designed and built by BITZER Australia's trained staff to ensure optimal compatibility of all components which provides durability, reliability and energy efficient performance in a compact system design.

The series offers the highest possible operational efficiency over a wide application range which is increasingly important with the introduction of MEPS (Minimum Energy Performance Standards) and a continually growing awareness of system operating costs.

Safety has been high on our designers' priority, with the inclusion of all necessary pressure controls and relief valve protection fitted as standard, as well as provision for correct mechanical handling of the assembly during installation, ensuring a safety first approach.

Reduced installation times and minimal maintenance down time is achieved through excellent access to all major components, with additional system isolation points installed as standard thus allowing direct access to major serviceable components. With a complete offering of all required components pre assembled on the package, minimal labour is required to complete the system connection.

The BITZER ComMech Series includes an optional integrated Economiser System.

The Economiser design provides mechanical liquid sub-cooling of the systems liquid refrigerant supply which delivers a significant improvement to the overall air conditioning system efficiency. This application provides the system operator with a more stable operating condition even in high ambient conditions and delivers to the system owner a significant reduction in operating costs over the entire life of the plant.

Accurate load matching is achieved even with single compressor operation, through an innovative capacity slider control within the CSH screw compressor.

The compressor has the capability to provide infinite capacity control or 4 step capacity control to deliver the exact refrigeration capacity required to directly match the air conditioned space requirements at any given time. This flexible load matching design allows for full exploitation of low power consumption when ambient temperatures decrease or the required duty falls below maximum design conditions.

This feature again delivers significant reductions in operating costs to the system owner.

Noise and vibration controls have been critically reviewed and maintained at extremely low levels through modern advancements in BITZER screw compressor technology and innovative anti vibration methods adopted within the package.

Explanation of Type Designation

CSH 7573 - 90 - Y - 40P

Semi hermetic screw compressor

CSH **75**73 - 90 - Y - 40P

Housing size

CSH 75**73** - 90 - Y - 40P

Code for displacement

CSH 757**3** - 90 - Y - 40P

Compressor execution (1 = standard)

CSH 7573 - **90** - Y - 40P

Code for motor size

CSH 7573 - 90 - **Y** - 40P

Oil charge (polyol ester for R134a and R407C)

CSH 7573 - 90 - Y - **40P**

Motor code

System refrigerant loss integrity has been enhanced through the use of pre-formed pipe work and highly robust pipe fixings providing a significant reduction in the use of mechanical joints.

An optional fully integrated electrical system, complete with all component wiring and micro processor controller, can be provided for compressor control management and safety monitoring of the compressor under all operating conditions.

The BITZER CSH micro processor control has a number of active functions to bring the compressor back to a safe operating condition prior to reaching the safety shutdown mode.

With extensive BITZER Australia technical support throughout our National branch network, you can be assured of professional assistance during the installation and operation of your project.

Product Features

The BITZER ComMech Series screw compressor packages are designed to offer the best possible quality refrigeration plant for commercial air conditioning and high temperature product storage.

The heart of the package is the BITZER CSH compact screw compressor mounted on a rigid frame structure, raised to a suitable working height for easy service access. All pipe work and line components are individually engineered to match each compressor selection providing optimum system efficiency and performance.

The large volume liquid receiver is fitted with full port flanged service valves, three sight glasses for liquid indication and a safety pressure relief valve.

A liquid by-pass assembly can also be installed to reduce the required refrigerant charge during normal operation. The main liquid line is fitted with a generously sized multiple core drier shell, charging valve, moisture indicator and isolation valves, plus the option of a fully prepared Economiser assembly (liquid sub-cooling heat exchanger assembly). The suction line has a multiple core filter shell with access valve for additional compressor protection.

Discharge, suction and liquid lines are securely fixed to the rigid base frame assisting vibration minimisation. All connections are positioned externally of the package for direct connection to the air handler and BUFFALO LDV or VB Series air cooled condensers.

The ComMech Series can also be equipped with a powder coated weather proof enclosure with six individual access doors, allowing direct access to all major service components resulting in reduced maintenance time.

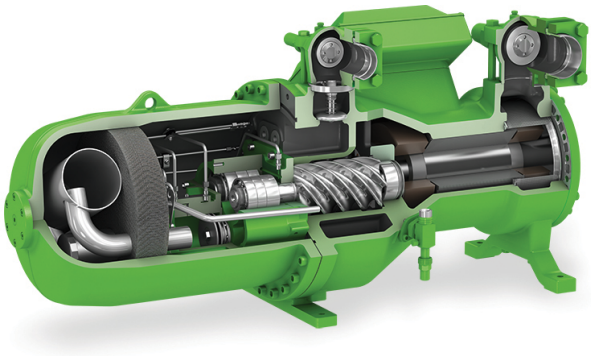
The durable weather proof enclosure allows for the package to be installed in external locations, such as a roof top condenser deck where it is directly connected to the air cooled condenser.

The external enclosure is lined with sound absorbing high density foam to assist in meeting the most stringent sound and environmental conditions.

The frame structure provides built in fork lift access and crane lifting points for safe handling during transport and installation.

Product Features

BITZER CSH screw compressor design features:



The new "CSH" series is based on the proven construction elements of the innovative BITZER compact screws recognised worldwide as benchmark. They have been specifically developed further with view to their universal application in air-cooled chillers and heat pumps.

BITZER compact screws are of two-shaft rotary displacement design with newly developed profile geometry. The main parts are male and female rotors, fitted into an enclosed housing precisely located at both ends in roller contact bearings (radial and axial).

Owing to the specific design, this type of compressor does not require any working valves. To protect against reverse running when the compressor is switched off (expansion operation) a check valve is incorporated in the discharge chamber.

An internal pressure relief valve is fitted providing over pressure protection.

The compressor is driven by a three-phase asynchronous motor which is built into the compressor housing. The motor rotor is located directly on the shaft of the male screw rotor. Motor cooling is achieved by the returning cold refrigerant vapour which mainly flows through the bores in the motor rotor.

The deciding technical features are:

Balanced product range
- 14 basic models (14 economised models)
- Tight performance graduation

Universal applications
- R134a, R407C
- R404A, R507A and R22 available on request
- With or without Economiser Operation
- Motor (Version 2) available especially matched for 134a

Proven long-life bearings with pressure unloading
- Robust axial bearings in tandem configuration
- Bearing chamber pressure isolated by seal rings
- Pressure unloading of axial bearings

Optimised oil management
- Three stage oil separator
- Long-life fine 10um mesch size oil filter
- Pressure relieved bearing chamber ensuring minimum refrigerant dilution into the oil thus providing higher oil viscosity

Flexible application with additional cooling
- Direct liquid injection
- External oil cooler for extended application and highest efficiency

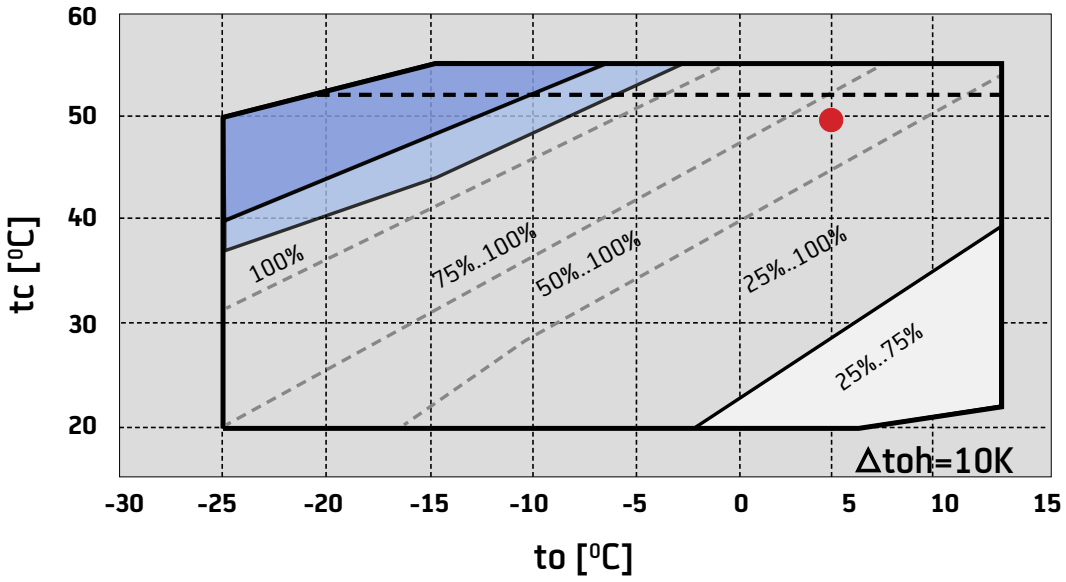
Dual capacity control
- Infinite or 4-step control with Vi compensation
- Simple control by flanged solenoid valves
- Automatic start unloading

Economiser with sliding suction position
- Unique for compact screws
- Highest cooling capacity and energy efficiency at full and part load conditions

Opertaion Strategies

The controller control logic controls the compressor capacity by stepless capacity control, this allows digital output signals to be pulsed to the unloader solenoids in a variable timing duration.

The control logic can determine in which region the operating condition is in; weather it is in 25%..75%, 25%..100%, 50%..100%, 75%..100% or 100%. Depending on the region, the unloader solenoids CR1, CR2, CR3 and CR4 are pulsed.

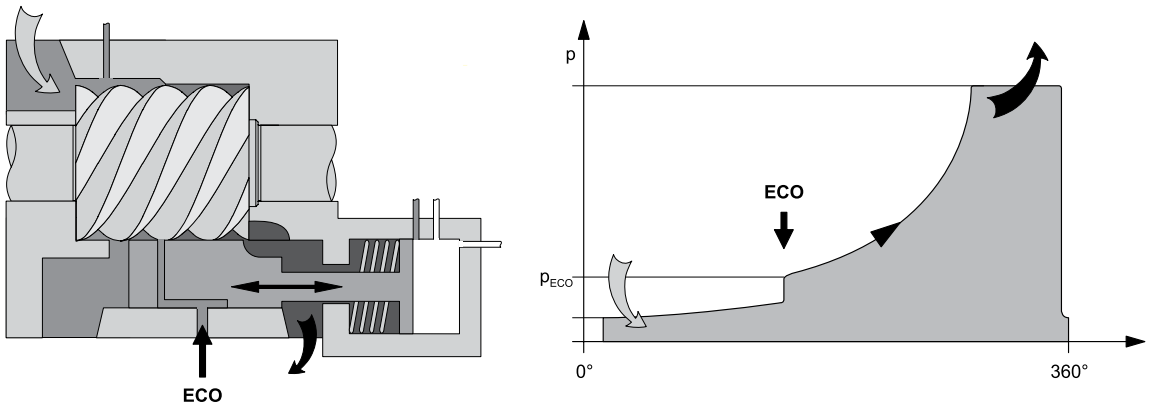


The controller comes with 7 refrigerants: R134a, R404A, R407C, R407F, R438A, R448A, R449A. If the used refrigerant is not in this list, then there is an option to select other refrigerant and put the refrigerant constants A1, A2, A3 and the glide.

When selecting refrigerant R134a, there are 2 types of compressor motor can be used; large motor M1 and small motor M2. Please check which compressor motor you have and then select the right one.

Product Features

Economiser Operation with Sub-cooling Circuit

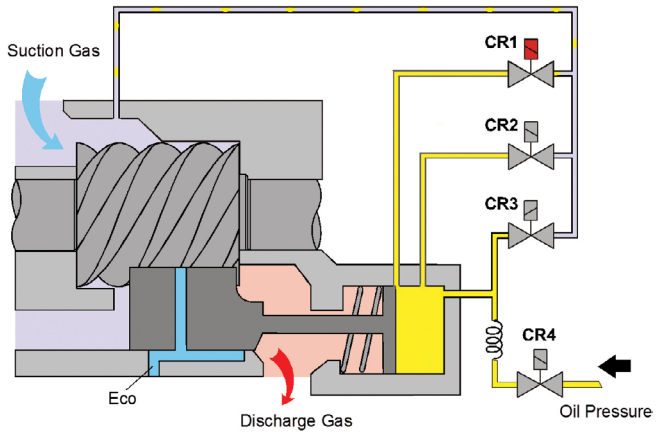


The ease and efficiency of liquid sub-cooling is one of the special features of the BITZER CSH screw compressor which confirms its superiority above similar semi-hermetic screw compressors in the market today.

A part of the refrigerant mass flow from the condenser enters the sub-cooler via an expansion device, and evaporates upon absorbing heat from the counter flowing liquid refrigerant (sub-cooling).

The superheated vapour is taken in at the compressor's ECO connection, mixed with the mass flow from the evaporator and compressed to a high pressure.

The ECO connection enters the compression chamber through the loading slide valve. This allows the sub-cooling heat exchanger to operate on a cosistent evaporation temperature ensuring minimal sub-cooled liquid temperature changes without the use of other evaporator control valves.



This design provides an overall balanced and stable system operation even during part load conditions.

Capacity Control

Solenoid 1, 2 and 3 vent oil to suction in stages to allow the piston to move the slide valve towards the discharge end of the compressor when in the unload position.

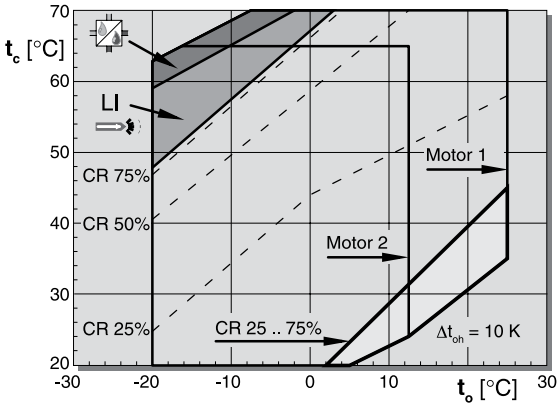
Solenoid 4 adds oil to hydraulic cylinder to move the slide valve towards the suction end of the rotors which loads the compressor.

Performance Data

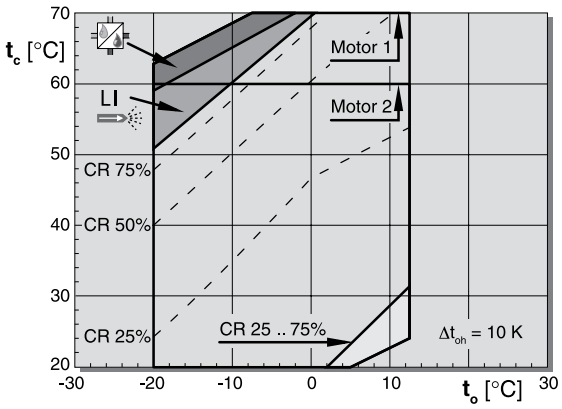
Application Limits

Application limits data based on 20°C suction gas temperature

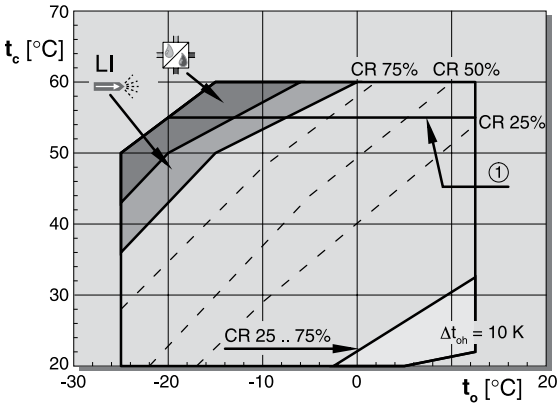
R134a Standard



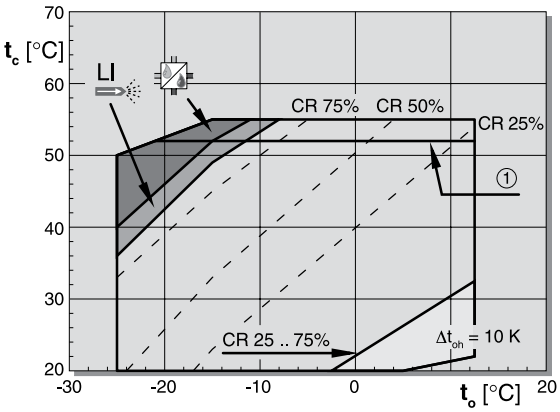
R134a ECO



R407C Standard



R407C ECO



Explanation to application limits

Thermal limits for capacity control (CR) and additional coolling (liquid injection and external oil cooling) depend on the compressor type.

The maximum condensing temperature can be restricted with individual types.

Note:

Extended application limits are possible depending on system layout. However, this must be individually co-ordinated with BITZER.

Performance Data

Performance data 50 Hz based on 10K suction gas superheat, without liquid sub-cooling[1]

Compressor type ①	Cond. temp. °C		Cooling capacity Q_o [Watt] / Power consumption P_e [kW] — Evaporation temperature °C						
		↓	10	7.5	5	0	-5	-10	-15
CSH6553-35Y	30	Q	117196	106822	97153	79790	64825	51977	40965
		P	17.1	16.8	16.4	15.9	15.4	15.0	14.7
	40	Q	105883	96194	87176	71006	57093	45155	34913
		P	20.2	19.8	19.5	18.9	18.3	17.8	17.4
	48	Q	95483	86433	78024	62990	50098	39069	29622
		P	23.2	22.8	22.4	21.8	21.2	20.7	20.2
	60	Q	77964	70021	62677	49645	38587	29221	21267
		P	28.9	28.5	28.2	27.6	27.0	26.5	26.1
CSH6563-40Y	30	Q	146225	133135	120962	99194	80577	64765	51413
		P	22.0	21.4	20.9	19.9	19.1	18.5	18.1
	40	Q	131367	119382	108243	88329	71280	56752	44400
		P	25.7	25.1	24.5	23.5	22.6	21.9	21.4
	48	Q	118494	107438	97170	78828	63124	49712	38248
		P	29.0	28.5	27.9	27.0	26.2	25.5	25.0
	60	Q	97921	88331	79445	63610	50070	38480	28497
		P	36.0	35.6	35.2	34.5	33.9	33.4	33.1
CSH6583-50Y	30	Q	169372	154357	140361	115228	93593	75072	59286
		P	23.3	22.8	22.4	21.6	20.9	20.3	19.7
	40	Q	152089	138270	125415	102405	82676	65846	51535
		P	27.7	27.2	26.7	25.8	25.1	24.3	23.7
	48	Q	136900	124105	112231	91053	72984	57643	44646
		P	31.9	31.3	30.9	30.0	29.1	28.4	27.7
	60	Q	112603	101457	91167	72963	57609	44723	33924
		P	39.8	39.3	38.8	37.9	37.2	36.5	35.8
CSH6593-60Y	30	Q	191086	174147	158355	130001	105592	84697	66886
		P	26.0	25.5	25.0	24.1	23.4	22.7	22.0
	40	Q	171587	155997	141494	115533	93275	74288	58142
		P	30.9	30.3	29.8	28.9	28.0	27.2	26.5
	48	Q	154451	140016	126620	102727	82341	65033	50370
		P	35.6	35.0	34.5	33.5	32.6	31.7	31.0
	60	Q	127039	114464	102855	82317	64994	50457	38274
		P	44.5	43.9	43.4	42.4	41.5	40.7	40.0
CSH7573-70Y	30	Q	292032	208244	188537	153389	123460	98184	76997
		P	42.5	31.7	30.8	29.4	28.2	27.3	26.5
	40	Q	266479	186106	167999	135795	108467	85450	66180
		P	50.1	37.5	36.7	35.2	34.0	33.0	32.1
	48	Q	241944	166175	149523	120025	95129	74270	56884
		P	57.2	43.4	42.6	41.2	40.0	38.9	37.9
	60	Q	199650	133717	119542	94687	74023	56986	43011
		P	72.0	55.0	54.2	52.8	51.6	50.4	49.2
CSH7583-80Y	30	Q	256300	233518	212240	174188	141645	114014	90698
		P	37,3	36.0	34.8	32.8	31.3	30.5	30.2
	40	Q	234100	212499	192563	156969	126586	100815	79060
		P	44,0	42.9	41.8	40.0	38.4	37.3	36.6
	48	Q	206600	192324	173694	140534	112344	88528	68488
		P	52,0	49.3	48.4	46.6	45.0	43.7	42.6
	60	Q	175200	157629	141347	112614	88493	68387	51698
		P	63,2	62.5	61.8	60.2	58.6	57.0	55.4
CSH7593-90Y	30	Q	291900	265973	241737	198397	161331	129860	103303
		P	42,5	41.0	39.6	37.3	35.7	34.7	34.4
	40	Q	266600	242033	219326	178786	144179	114826	90048
		P	50,1	48.8	47.6	45.5	43.8	42.5	41.6
	48	Q	235400	219054	197835	160066	127958	100832	78007
		P	59,3	56.1	55.1	53.1	51.3	49.8	48.5
	60	Q	199600	179537	160992	128266	100792	77891	58883
		P	72,0	71.2	70.4	68.6	66.8	65.0	63.1

Additional cooling required and / or limited capacity regulation

Performance Data

Performance data 50 Hz based on 10K suction gas superheat and 10K temp. diff.(TCU - TMS) across the heat exchanger.

Compressor type ①	Cond. temp. °C		Cooling capacity Q_o [Watt] / Power consumption P_e [kW] — Evaporation temperature °C						
		↓	10	7.5	5	0	-5	-10	-15
CSH6553-35Y	30	Q	117828	109237	101071	85946	72307	60012	48916
		P	17.2	17.2	17.2	17.1	16.9	16.6	16.3
	40	Q	113773	105123	96911	81726	68077	55818	44807
		P	21.9	21.8	21.7	21.3	20.9	20.4	19.8
	48	Q	108724	100108	91938	76868	63371	51303	40520
		P	26.1	26.0	25.8	25.3	24.7	24.1	23.4
	60	Q	98617	90185	82214	67584	54584	43070	32898
		P	33.4	33.2	33.0	32.5	31.9	31.2	30.5
CSH6563-40Y	30	Q	144574	133847	123675	104922	88172	73277	60094
		P	21.6	21.5	21.4	21.0	20.6	20.2	19.9
	40	Q	138583	128116	118181	99833	83392	68715	55654
		P	27.1	26.8	26.5	25.9	25.2	24.6	24.0
	48	Q	132007	121819	112144	94261	78210	63848	51028
		P	32.0	31.6	31.3	30.5	29.7	29.0	28.3
	60	Q	119264	109613	100447	83496	68266	54612	42388
		P	41.4	41.1	40.7	39.9	39.1	38.4	37.7
CSH6583-50Y	30	Q	168383	156006	144222	122358	102655	84975	69181
		P	23.1	23.1	23.1	23.0	22.7	22.3	21.8
	40	Q	161058	148823	137196	115700	96431	79252	64026
		P	29.5	29.3	29.1	28.6	28.0	27.3	26.6
	48	Q	152611	140622	129254	108316	89659	73145	58639
		P	35.3	35.0	34.7	33.9	33.1	32.2	31.3
	60	Q	136438	125037	114278	94617	77318	62244	49256
		P	45.8	45.3	44.8	43.8	42.8	41.7	40.7
CSH6593-60Y	30	Q	185860	172293	159371	135380	113735	94278	76856
		P	25.0	25.1	25.2	25.1	24.9	24.5	24.0
	40	Q	177943	164519	151756	128140	106939	87999	71165
		P	32.1	32.0	31.8	31.4	30.8	30.1	29.3
	48	Q	168712	155547	143058	120032	99479	81243	65170
		P	38.6	38.3	38.0	37.2	36.4	35.5	34.6
	60	Q	150918	138385	126549	104893	85796	69102	54656
		P	50.2	49.7	49.2	48.2	47.1	46.0	45.0
CSH7573-70Y	30	Q	222355	205244	189030	159187	132613	109093	88414
		P	31.4	31.2	30.9	30.4	29.9	29.3	28.7
	40	Q	212454	195600	179651	150355	124355	101435	81382
		P	39.7	39.3	38.9	38.1	37.3	36.4	35.5
	48	Q	200645	184247	168757	140398	115355	93413	74360
		P	47.7	47.2	46.7	45.6	44.6	43.5	42.3
	60	Q	177222	161921	147537	121414	98637	78993	62270
		P	62.5	61.8	61.2	59.8	58.4	56.9	55.3
CSH7583-80Y	30	Q	253500	234701	216861	183945	154529	128392	105310
		P	36.7	36.2	35.6	34.6	33.8	33.3	33.2
	40	Q	246327	227399	209452	176394	146930	120837	97893
		P	46.4	45.8	45.2	43.9	42.7	41.6	40.8
	48	Q	235330	216606	198883	166327	137440	112000	89783
		P	55.1	54.5	53.8	52.3	50.8	49.3	47.9
	60	Q	210891	192988	176114	145340	118347	94913	74815
		P	71.8	71.2	70.5	68.8	66.9	64.8	62.7
CSH7593-90Y	30	Q	282856	262051	242288	205769	173063	143937	118155
		P	40.8	40.2	39.7	38.7	37.8	37.3	37.3
	40	Q	275144	254139	234205	197436	164602	135468	109799
		P	51.7	51.1	50.5	49.1	47.8	46.7	45.8
	48	Q	262969	242156	222439	186176	153945	125511	100639
		P	61.4	60.8	60.1	58.6	57.0	55.4	53.9
	60	Q	235603	215667	196864	162537	132387	106179	83679
		P	80.2	79.6	78.9	77.1	75.1	72.8	70.6

Additional cooling required and / or limited capacity regulation

Performance Data

Performance data 50 Hz based on 10K suction gas superheat, without liquid sub-cooling①

Compressor type ①	Cond. temp. °C	↓	Cooling capacity Q_o [Watt] / Power consumption P_e [kW] — Evaporation temperature °C							
			10	7.5	5	0	-5	-10	-15	-20
CSH6553-50Y	30	Q		154060	140892	117147	96578	78851	63633	50590
		P		25.9	25.1	23.7	22.6	21.6	20.7	19.9
	40	Q	150304	137225	125029	103119	84240	68059	54241	42454
		P	31.8	31.0	30.2	28.9	27.7	26.7	25.8	24.9
	48	Q	133813	121648	110337	90109	72797	58066	45583	35014
		P	36.8	36.0	35.2	33.9	32.7	31.7	30.7	29.8
	50	Q	129366	117444	106369	86592	69701	55362	43243	33008
		P	38.1	37.4	36.6	35.3	34.1	33.0	32.1	31.1
CSH6563-60Y	30	Q		193238	176694	146863	121023	98755	79641	63260
		P		32.1	31.2	29.5	28.0	26.7	25.7	24.8
	40	Q	188621	172190	156869	129344	105627	85299	67940	53131
		P	39.4	38.4	37.5	35.8	34.4	33.1	32.0	31.0
	48	Q	168043	152759	138547	113131	91377	72864	57173	43886
		P	45.6	44.6	43.7	42.1	40.6	39.3	38.1	37.0
	50	Q	162499	147520	133604	108752	87524	69502	54265	41394
		P	47.3	46.4	45.5	43.8	42.3	41.0	39.8	38.7
CSH7553-70Y	30	Q		232545	211654	174204	142085	114758	91686	72334
		P		37.9	36.8	34.8	33.1	31.6	30.2	29.1
	40	Q	223939	203669	184833	151192	122480	98161	77696	60551
		P	45.6	44.6	43.6	41.9	40.3	39.0	37.7	36.5
	48	Q	196466	178118	161122	130924	105333	83815	65831	50845
		P	52.2	51.4	50.5	49.0	47.7	46.4	45.2	44.0
	50	Q	189317	171476	154968	125685	100930	80167	62858	48467
		P	54.1	53.3	52.5	51.0	49.7	48.5	47.3	46.2
CSH7563-80Y	30	Q		267602	243681	200760	163895	132483	105919	83598
		P		45.4	43.4	40.1	37.5	35.5	34.0	32.9
	40	Q	255406	232403	211016	172791	140124	112411	89048	69430
		P	54.1	52.1	50.4	47.4	45.1	43.4	42.0	41.0
	48	Q	222473	201808	182661	148614	119727	95396	75016	57981
		P	60.6	58.9	57.3	54.7	52.8	51.3	50.1	49.2
	50	Q	213979	193928	175370	142426	114543	91116	71539	55210
		P	62.4	60.8	59.3	56.8	54.9	53.5	52.4	51.5
CSH7573-90Y	30	Q		303211	276712	229000	187812	152520	122498	97117
		P		48.8	47.4	44.9	42.7	40.9	39.3	38.0
	40	Q	291210	265777	242061	199466	162799	131431	104735	82083
		P	59.2	57.8	56.5	54.1	52.1	50.3	48.8	47.4
	48	Q	255634	232751	211466	173374	140731	112911	89285	69226
		P	68.1	66.8	65.6	63.5	61.5	59.8	58.2	56.8
	50	Q	246355	224138	203489	166579	135000	108123	85321	65967
		P	70.7	69.4	68.2	66.1	64.2	62.5	60.9	59.4
CSH7583-100	30	Q		348138	318045	263858	217072	176968	142825	113925
		P		57.7	55.9	52.7	49.9	47.6	45.6	43.9
	40	Q	336338	307357	280333	231796	190008	154250	123803	97945
		P	69.0	67.3	65.8	63.0	60.6	58.5	56.6	54.9
	48	Q	297446	271266	246913	203327	165968	134118	107057	84064
		P	78.8	77.3	75.9	73.4	71.1	69.1	67.2	65.4
	50	Q	287254	261804	238149	195860	159669	128856	102701	80484
		P	81.6	80.1	78.8	76.3	74.1	72.0	70.1	68.3
CSH7593-110Y	30	Q		397193	362672	300887	247888	202607	163978	130933
		P		67.4	64.7	60.0	56.3	53.4	51.1	49.4
	40	Q	381996	348373	317209	261722	214470	174385	140400	111448
		P	81.0	78.5	76.2	72.3	69.1	66.4	64.2	62.2
	48	Q	339246	308333	279768	229149	186323	150224	119783	93933
		P	91.8	89.8	87.9	84.7	82.0	79.7	77.5	75.5
	50	Q	328767	298519	270592	221166	179423	144296	114718	89620
		P	94.8	92.9	91.1	88.1	85.6	83.3	81.2	79.1

Additional cooling required and / or limited capacity regulation

Performance Data

Performance data 50 Hz based on 10K suction gas superheat and 10K temp. diff. (TCU - TMS) across the heat exchanger.

Compressor type ①	Cond. temp. °C	ê	Cooling capacity Q_o [Watt] Evaporation temperature °C 10	7.5	5	0	Power consumption P_e [kW] -5	-10	-15	-20
CSH6553-50Y	30	Q			140865	121368	103583	87436	72850	59753
		P			25.1	24.7	24.1	23.5	22.8	22.2
	40	Q	155875	144878	134370	114783	97040	81066	66786	54127
		P	33.1	32.8	32.5	31.8	30.9	30.1	29.1	28.2
	48	Q	147470	136524	126092	106738	89333	73803	60073	48069
		P	40.3	39.9	39.5	38.5	37.5	36.4	35.3	34.2
	50	Q	144862	133950	123559	104305	87027	71651	58100	46302
		P	42.3	41.9	41.4	40.4	39.3	38.2	37.0	35.8
CSH6563-60Y	30	Q			176694	146863	121023	98755	79641	63260
		P			31.2	29.5	28.0	26.7	25.7	24.8
	40	Q	188621	172190	156869	129344	105627	85299	67940	53131
		P	39.4	38.4	37.5	35.8	34.4	33.1	32.0	31.0
	48	Q	168043	152759	138547	113131	91377	72864	57173	43886
		P	45.6	44.6	43.7	42.1	40.6	39.3	38.1	37.0
	50	Q	162499	147520	133604	108752	87524	69502	54265	41394
		P	47.3	46.4	45.5	43.8	42.3	41.0	39.8	38.7
CSH7553-70Y	30	Q			211854	180363	152082	126865	104567	85043
		P			36.8	36.1	35.3	34.3	33.2	32.2
	40	Q	232041	214674	198172	167690	140450	116307	95116	76730
		P	47.4	47.1	46.8	45.9	44.8	43.7	42.4	41.1
	48	Q	215765	199082	183270	154189	128376	105685	85972	69090
		P	57.2	56.8	56.4	55.4	54.2	52.9	51.5	50.1
	50	Q	211132	194661	179063	150415	125040	102795	83534	67111
		P	59.9	59.5	59.1	58.1	56.9	55.5	54.1	52.6
CSH7563-80Y	30	Q			239256	204192	172536	144170	118976	96834
		P			42.5	40.8	39.3	38.1	36.9	35.9
	40	Q	259350	240238	222032	188284	157987	131023	107273	86619
		P	54.9	53.9	52.9	51.1	49.5	48.0	46.8	45.6
	48	Q	239537	221275	203930	171926	143408	118257	96355	77582
		P	64.9	63.8	62.8	61.0	59.4	57.9	56.6	55.4
	50	Q	233982	215981	198898	167427	139450	114848	93503	75297
		P	67.7	66.6	65.6	63.8	62.1	60.7	59.4	58.2
CSH7573-90Y	30	Q			265878	228242	194003	163068	135345	110739
		P			45.2	44.7	43.9	43.0	42.0	40.9
	40	Q	289191	268861	249408	213086	180134	150458	123964	100560
		P	58.7	58.4	58.0	57.1	56.0	54.7	53.4	52.0
	48	Q	269193	249724	231126	196498	165217	137190	112322	90522
		P	71.3	70.9	70.4	69.2	67.8	66.3	64.6	63.0
	50	Q	263432	244223	225883	191768	160994	133468	109097	87787
		P	74.8	74.4	73.8	72.6	71.1	69.5	67.8	66.1
CSH7583-100	30	Q			312389	268265	228257	192219	160002	131457
		P			54.7	53.6	52.2	50.8	49.3	47.8
	40	Q	341499	317527	294634	252011	213482	178900	148116	120981
		P	70.1	69.6	69.0	67.6	66.0	64.3	62.5	60.7
	48	Q	319644	296639	274710	234000	197367	164662	135737	110443
		P	84.2	83.6	82.8	81.2	79.3	77.3	75.2	72.9
	50	Q	313300	290588	268948	228816	192756	160619	132258	107523
		P	88.1	87.4	86.7	85.0	83.0	80.9	78.6	76.3
CSH7593-110Y	30	Q			348164	299722	255475	215349	179273	147173
		P			62.7	60.1	58.0	56.3	54.9	53.5
	40	Q	379518	353160	327917	280741	237917	199372	165034	134829
		P	80.7	79.3	78.0	75.7	73.8	71.9	70.1	68.2
	48	Q	356203	330618	306180	260708	219714	183126	150870	122874
		P	95.8	94.6	93.5	91.4	89.4	87.4	85.2	82.7
	50	Q	349636	324292	300104	255154	214713	178710	147071	119723
		P	100.0	98.9	97.8	95.7	93.8	91.7	89.4	86.8

Additional cooling required and / or limited capacity regulation

Sound Data

Compressor	One-third octave band [dB(A)] 1)							Sound pressure level 2)
	125	250	500	1000	2000	4000	8000	[dB(A)]
CSH 6553-35Y	31.8	61.3	81.5	79.7	68.6	60.0	52.8	77.0
CSH 6563-40Y	33.4	62.5	82.6	81.5	71.2	61.1	52.5	78.5
CSH 6583-50Y	41.1	59.9	82.6	80.7	75.3	68.4	58.1	80.6
CSH 6593-60Y	33.6	64.3	81.2	82.0	76.3	66.9	57.9	80.7
CSH 7553-50Y	45.1	72.5	82.1	75.8	73.8	63.6	53.5	79.6
CSH 7563-60Y	47.6	72.5	79.6	82.5	74.0	63.9	51.9	79.5
CSH 7573-70Y	38.8	74.6	78.4	78.1	77.7	66.2	57.7	79.7
CSH 7583-80Y	33.1	71.8	80.0	80.9	74.7	65.6	57.2	79.9
CSH 7593-90Y	46.3	71.6	79.1	79.3	45.6	62.7	51.5	79.6

1) One-third octave band of the sound power level

2) Based on freefield area conditions with hemispherical sound emission in 1 m distance

3) Corrected to 3.0 m distance to accordance to Australian standard

4) Tolerance: +/- 2 dB(A)

5) Noise emission will vary on capacity load status of compressor. Data based on 100% loaded

6) Sound data for panelised unit to be available when testing is completed

7) Basis: R407C/R134a, 50Hz, to/tc=+5/50°C

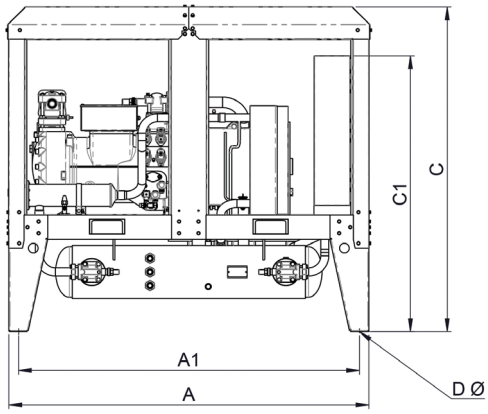
For additional model sound data and further details contact your local BITZER office.

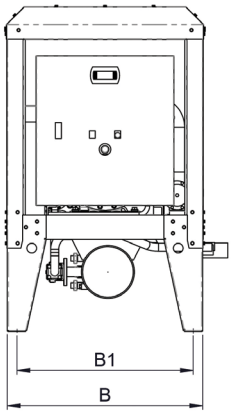
Technical Data

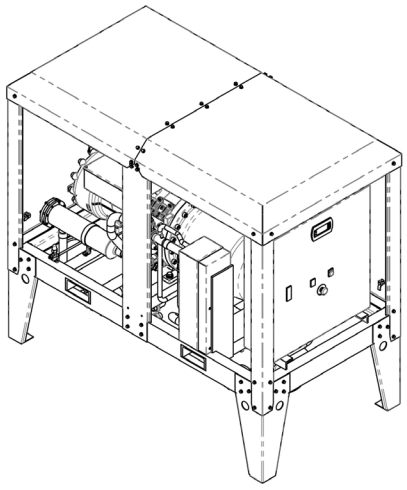
Compressor Type	Motor Version	Oil charge	Unit weight	Capacity control	Discharge line size	Condenser drain line size	Suction line size	Liquid line size	Receiver capacity R134a / R407C		Motor connection Δ/ΔΔ	Max. Operating current	Max. Power consumption
		Litre	kg	%	inch	inch	inch	inch	kg			Amp.	kW
CSH6553-35Y	2	9.5	605	4 step 25,50,75 & 100% Stepless 25 to 100% (refer application limits)	1-5/8″	1-5/8″	2-1/8″	1-3/8″	103	-	430V (+/-10%) Δ-3-50Hz(50/50 part wind 45P)	52	34
CSH6553-50Y	1	9.5	613		1-5/8″	1-5/8″	2-1/8″	1-3/8″	-	90		73	52
CSH6563-40Y	2	9.5	605		1-5/8″	1-5/8″	2-1/8″	1-3/8″	103	-		60	41
CSH6563-60Y	1	9.5	613		1-5/8″	1-5/8″	2-1/8″	1-3/8″	-	90		97	65
CSH6583-50Y	2	9.5	653		2-1/8″	2-1/8″	2-5/8″	1-5/8″	126	-		73	51
CSH6593-60Y	2	9.5	653		2-1/8″	2-1/8″	2-5/8″	1-5/8″	126	-		97	56
CSH7553-70Y	1	15	808		2-1/8″	2-1/8″	3-1/8″	1-5/8‟	-	110		115	78
CSH7563-80Y	1	15	813		2-1/8″	2-1/8″	3-1/8″	1-5/8″	-	110		133	88
CSH7573-70Y	2	15	808		2-1/8″	2-1/8″	3-1/8″	1-5/8″	126	-		115	78
CSH7573-90Y	1	15	823		2-1/8″	2-1/8″	3-1/8″	1-5/8″	-	110		150	96
CSH7583-80Y	2	15	818		2-1/8″	2-1/8″	3-1/8″	1-5/8″	126	-		133	88
CSH7583-100Y	1	15	828		2-1/8″	2-1/8″	3-1/8″	1-5/8″	-	110		155	102
CSH7593-90Y	2	15	823		2-1/8″	2-1/8″	3-1/8″	1-5/8″	126	-		150	96
CSH7593-110Y	1	15	843		2-1/8″	2-1/8″	3-1/8″	1-5/8″	-	110		170	112

Dimensional Data

ComMech CSH 65 & 75 Series







Dimensions in millimetres (mm)							
Model	A	A(1)	B	B1	C	*C1	DØ
CSH Series	1855	1755	1005	905	1670	1350	16

*C1 = overall height without enclosure

Notes:

Notes:

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