

NHP Quick Selection Table R407C COPELAND ZH Compressors

Brine / Water Heat Pump Operation R407C					
Compressor: COPELAND ZH-range					
Nominal Design Conditions: B0/W35					
High COP Conditions					
EVAPORATOR	T _{dew} = -4 °C	SH: 2K	30% EthGlyc	0/-3 °C	
CONDENSER	T _{dew} = 38,5 °C	SC: 2K	Water	30/35 °C	
Normal COP Conditions					
EVAPORATOR	T _{dew} = -5 °C	SH: 3K	30% EthGlyc	0/-3 °C	
CONDENSER	T _{dew} = 40 °C	SC: 2K	Water	30/35 °C	

HIGH COP SELECTION

DATA COPELAND SELECT 6		EVAP	SWEP	Model	dP Brine	Pump	COND	SWEP	Model	dP Water	QPump
COMPRESSOR	COP	kW	Model	NoP	kPa	Q	kW	Type	NoP	kPa	W
ZH15	4,0	4,2 kW	B80-NHP	20	14 kPa	17 W	5,5 kW	B25T-NHP	14	14 kPa	12 W
ZH19	4,1	5,3 kW	B80-NHP	20	21 kPa	32 W	6,9 kW	B25T-NHP	20	11 kPa	12 W
ZH21	4,4	6,0 kW	B80-NHP	20	26 kPa	45 W	7,6 kW	B25T-NHP	20	13 kPa	16 W
ZH26	4,5	7,5 kW	B80-NHP	24	28 kPa	61 W	9,5 kW	B25T-NHP	30	10 kPa	15 W
ZH30	4,5	8,7 kW	B80-NHP	30	24 kPa	62 W	11,0 kW	B25T-NHP	34	10 kPa	18 W
ZH38	4,5	10,8 kW	B80-NHP	34	29 kPa	91 W	13,7 kW	B25T-NHP	40	12 kPa	26 W
ZH45	4,5	12,7 kW	P80-NHP	40	29 kPa	108 W	16,1 kW	B25T-NHP	50	11 kPa	28 W
ZH56	4,3	15,9 kW	P80-NHP	50	30 kPa	138 W	20,5 kW	B25T-NHP	60	13 kPa	42 W
ZH75	4,5	22,9 kW	P80-NHP	70	33 kPa	219 W	29,0 kW	B25T-NHP	70	20 kPa	93 W

NORMAL COP SELECTION

DATA COPELAND SELECT 6		EVAP	SWEP	Model	dP Brine	Pump	COND	SWEP	Model	dP Water	QPump
COMPRESSOR	COP	kW	Model	NoP	kPa	Q	kW	Type	NoP	kPa	W
ZH15	3,7	3,9 kW	B25T-NHP	20	17 kPa	19 W	5,3 kW	B25T-NHP	10	25 kPa	28 W
ZH19	3,9	5,0 kW	B25T-NHP	20	25 kPa	37 W	6,6 kW	B25T-NHP	14	20 kPa	29 W
ZH21	4,1	5,6 kW	B80-NHP	20	23 kPa	37 W	7,3 kW	B25T-NHP	14	24 kPa	40 W
ZH26	4,2	7,0 kW	B80-NHP	20	34 kPa	70 W	9,0 kW	B25T-NHP	14	36 kPa	75 W
ZH30	4,2	8,1 kW	B80-NHP	24	32 kPa	76 W	10,5 kW	B25T-NHP	20	25 kPa	59 W
ZH38	4,2	10,1 kW	B80-NHP	30	32 kPa	95 W	13,1 kW	B25T-NHP	20	38 kPa	113 W
ZH45	4,2	11,9 kW	B80-NHP	34	34 kPa	120 W	15,4 kW	B25T-NHP	24	37 kPa	129 W
ZH56	4,0	15,0 kW	P80-NHP	40	39 kPa	171 W	19,6 kW	B25T-NHP	30	39 kPa	172 W
ZH75	4,2	21,4 kW	P80-NHP	60	37 kPa	234 W	27,7 kW	B25T-NHP	50	31 kPa	195 W

Comments:

QPump indicates the estimated power consumption of the brine and water pump to overcome the pressure drop in the evaporator and condenser respectively according to the standardized European test conditions for heat pumps EN14511-3:2004 4.1.6.2.

The data is for comparison analysis only and SWEP has no liability for any Qpump data in these tables.

Data used in this calculation is subject to change without notice.

NHP Quick Selection Table R410A COPELAND ZP Compressors

Brine / Water Heat Pump Operation R410A					
Compressor: COPELAND ZP-range					
Nominal Design Conditions: B0/W35					
High COP Conditions					
EVAPORATOR	T _{dew} = -5 °C	SH: 2K	30% EthGlyc	0/-3 °C	
CONDENSER	T _{dew} = 36,5 °C	SC: 2K	Water	30/35 °C	
Normal COP Conditions					
EVAPORATOR	T _{dew} = -6 °C	SH: 3K	30% EthGlyc	0/-3 °C	
CONDENSER	T _{dew} = 38 °C	SC: 2K	Water	30/35 °C	

HIGH COP SELECTION

DATA COPELAND SELECT 6		EVAP	SWEP	Model	dP Brine	Pump	COND	SWEP	Model	dP Water	QPump
COMPRESSOR	COP	kW	Model	NoP	kPa	Q	kW	Type	NoP	kPa	W
ZP23	4,4	4,4 kW	V25T-NHP	20	21 kPa	26 W	5,4 kW	B15-NHP	30	7 kPa	6 W
ZP26	4,2	4,8 kW	V25T-NHP	20	24 kPa	33 W	6,0 kW	B15-NHP	34	7 kPa	6 W
ZP32	4,6	6,3 kW	V25T-NHP	24	28 kPa	51 W	7,7 kW	B25T-NHP	20	14 kPa	17 W
ZP41	4,6	7,8 kW	V25T-NHP	30	28 kPa	63 W	9,5 kW	B25T-NHP	24	15 kPa	22 W
ZP54	4,7	10,4 kW	V25T-NHP	40	29 kPa	87 W	12,7 kW	B25T-NHP	34	14 kPa	28 W
ZP67	4,7	12,6 kW	V25T-NHP	50	28 kPa	104 W	15,3 kW	B25T-NHP	40	14 kPa	35 W
ZP83	4,8	15,6 kW	V25T-NHP	60	31 kPa	143 W	18,9 kW	B25T-NHP	50	15 kPa	45 W
ZP90	4,7	17,0 kW	V25T-NHP	60	36 kPa	180 W	20,6 kW	B25T-NHP	60	13 kPa	43 W
ZP103	4,8	19,6 kW	V25T-NHP	70	38 kPa	215 W	23,7 kW	B25T-NHP	70	14 kPa	51 W

NORMAL COP SELECTION

DATA COPELAND SELECT 6		EVAP	SWEP	Model	dP Brine	Pump	COND	SWEP	Model	dP Water	QPump
COMPRESSOR	COP	kW	Model	NoP	kPa	Q	kW	Type	NoP	kPa	W
ZP23	4,0	4,1 kW	B25T-NHP	20	18 kPa	22 W	5,2 kW	B15-NHP	20	13 kPa	15 W
ZP26	3,8	4,5 kW	B25T-NHP	20	21 kPa	28 W	5,8 kW	B15-NHP	20	15 kPa	20 W
ZP32	4,2	5,9 kW	B25T-NHP	24	25 kPa	43 W	7,4 kW	B15-NHP	24	18 kPa	31 W
ZP41	4,2	7,3 kW	B25T-NHP	30	25 kPa	53 W	9,1 kW	B15-NHP	30	19 kPa	40 W
ZP54	4,3	9,8 kW	B25T-NHP	34	33 kPa	95 W	12,3 kW	B15-NHP	40	21 kPa	60 W
ZP67	4,3	11,9 kW	V25T-NHP	34	48 kPa	167 W	14,8 kW	B25T-NHP	30	23 kPa	79 W
ZP83	4,4	14,7 kW	V25T-NHP	40	51 kPa	220 W	18,1 kW	B25T-NHP	36	27 kPa	115 W
ZP90	4,3	15,9 kW	V25T-NHP	50	42 kPa	196 W	19,8 kW	B25T-NHP	40	24 kPa	111 W
ZP103	4,4	18,4 kW	V25T-NHP	60	42 kPa	226 W	22,8 kW	B25T-NHP	50	21 kPa	115 W

Comments:

QPump indicates the estimated power consumption of the brine and water pump to overcome the pressure drop in the evaporator and condenser respectively according to the standardized European test conditions for heat pumps EN14511-3:2004 4.1.6.2.

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NHP Quick Selection Table R407C COPELAND ZH-Vapor Injection Compressors

Brine / Water Heat Pump Operation R407C				
Compressor: COPELAND ZH-VAPOR INJECTION range				
Nominal Design Conditions: B0/W35				
Max dP 35-40kPa				
High COP Conditions				
EVAPORATOR	Tdew = -4°C	SH: 2K	30% EthGlyc	0/-3°C
CONDENSER	Tdew = 38,5°C	SC: 2K	Water	30/35°C
Normal COP Conditions				
EVAPORATOR	Tdew = -5°C	SH: 3K	30% EthGlyc	0/-3°C
CONDENSER	Tdew = 40°C	SC: 2K	Water	30/35°C

SWEP Eco for ZH units		
Model	Sub coolers	Connections
ZH09 ZH13	B8-10	6,5+3x12,8
ZH18 ZH24	B8-14	6,5+3x12,8
ZH33 ZH40	B8-20	6,5+3x12,8
ZH48	B16-20	12,8+22U+2*12,8

HIGH COP SELECTION

DATA COPELAND SELECT 6	EVAP	SWEP	Model	dP Brine	Pump	COND	SWEP	Model	dP Water	QPump	
COMPRESSOR	COP	kW	Model	NoP	Q	kW	Type	NoP	kPa	W	
ZH13	4,5	10,0 kW	B80-NHP	34	25 kPa	74 W	12,7 kW	B25T-NHP	34	13 kPa	26 W
ZH18	4,5	14,3 kW	P80-NHP	40	36 kPa	151 W	18,2 kW	B25T-NHP	50	17 kPa	49 W
ZH24	4,6	18,5 kW	P80-NHP	60	29 kPa	155 W	23,4 kW	B25T-NHP	60	17 kPa	62 W
ZH33	4,8	26,6 kW	P80-NHP	80	34 kPa	268 W	33,5 kW	B25T-NHP	80	22 kPa	117 W
ZH40	4,8	32,5 kW					40,5 kW				
ZH48	4,8	38,5 kW					48,0 kW				

Condenser operating at High Water temperature 55/60°C will result in Tdew of approximately 62°C

NORMAL COP SELECTION

DATA COPELAND SELECT 6	EVAP	SWEP	Model	dP Brine	Pump	COND	SWEP	Model	dP Water	QPump	
COMPRESSOR	COP	kW	Model	NoP	Q	kW	Type	NoP	kPa	W	
ZH13	4,3	9,6 kW	B80-NHP	30	29 kPa	82 W	12,4 kW	B25T-NHP	20	34 kPa	97 W
ZH18	4,2	13,7 kW	B80-NHP	40	33 kPa	134 W	17,7 kW	B25T-NHP	30	32 kPa	129 W
ZH24	4,3	17,7 kW	P80-NHP	50	36 kPa	187 W	22,8 kW	B25T-NHP	40	31 kPa	162 W
ZH33	4,5	25,2 kW	P80-NHP	70	39 kPa	287 W	32,0 kW	B25T-NHP	60	31 kPa	226 W
ZH40	4,5	31,0 kW	P80-NHP	80	46 kPa	414 W	39,5 kW	B25T-NHP	80	30 kPa	273 W
ZH48	4,5	36,5 kW					46,5 kW	B25T-NHP	80	41 kPa	438 W

Condenser operating at High Water temperature 55/60°C will result in Tdew of approximately 64°C

Comments:

QPump indicates the estimated power consumption of the brine and water pump to overcome the pressure drop in the evaporator and condenser respectively according to the standardized European test conditions for heat pumps EN14511-3:2004 4.1.6.2.

The data is for comparison analysis only and SWEP has no liability for any Qpump data in these tables.

Data used in this calculation is subject to change without notice.

Generic NHP Quick Selection Table R410A**Water Condenser selections for Heat Pump Operation R410A**

Compressor: GENERIC

Nominal Design Conditions: Water 30/35 °C

Freon : R410A Tdew = 37 °C SC: 2K

Condenser Capacity	B25T-NHP NoP	dP kPa	B10T-NHP NoP	dP kPa	B15-NHP NoP	dP kPa	B8-NHP NoP	dP kPa
3 kW	10	8	20	1	20	4	30	2
4 kW	10	15	24	1	20	8	34	2
5 kW	14	12	30	1	24	8	40	3
6 kW	14	17	34	2	30	8	-	-
7 kW	20	11	40	2	34	9	-	-
8 kW	20	15	50	1	40	9	-	-
9 kW	20	19	50	2	40	11	-	-
10 kW	24	16	60	2	50	10	-	-
11 kW	24	19	60	2	50	12	-	-
12 kW	30	15	70	2	-	-	-	-
13 kW	30	18	70	2	-	-	-	-
14 kW	30	20						
15 kW	34	19	-	-	-	-	-	-
16 kW	34	21	-	-	-	-	-	-
17 kW	40	18	-	-	-	-	-	-
18 kW	40	20	-	-	-	-	-	-
19 kW	40	22	-	-	-	-	-	-
20 kW	40	24	-	-	-	-	-	-

Water Condenser selections for Heat Pump Operation R410A

Compressor: GENERIC

Nominal Design Conditions: Water 30/35 °C

Freon : R410A Tdew = 39 °C SC: 2K

Condenser Capacity	B25T-NHP NoP	dP kPa	B10T-NHP NoP	dP kPa	B15-NHP NoP	dP kPa	B8-NHP NoP	dP kPa
3 kW	10	8	14	2	10	16	20	3
4 kW	10	15	14	3	10	28	24	4
5 kW	10	22	20	3	14	23	30	4
6 kW	10	32	24	3	14	33	34	5
7 kW	14	22	24	4	20	23	40	5
8 kW	14	29	30	3	20	30	-	-
9 kW	14	36	30	4	24	27	-	-
10 kW	20	23	34	4	24	33	-	-
11 kW	20	27	40	4	30	27	-	-
12 kW	20	32	40	4	30	32	-	-
13 kW	24	27	50	4	34	30	-	-
14 kW	24	31	50	4	34	35		
15 kW	24	35	50	5	40	31	-	-
16 kW	30	26	60	4	40	35	-	-
17 kW	30	30	60	5	-	-	-	-
18 kW	30	33	60	5	-	-	-	-
19 kW	34	35	70	5	-	-	-	-
20 kW	34	32	70	6	-	-	-	-

Generic NHP Quick Selection Table R407C**Water Condenser selections for Heat Pump Operation R407C**

Compressor: GENERIC

Nominal Design Conditions: Water 30/35 °C

Freon : R407C Tdew = 38 °C SC: 2K

Condenser Capacity	B25T-NHP NoP	dP kPa	B10T-NHP NoP	dP kPa
3 kW	14	4	30	1
4 kW	14	8	34	1
5 kW	20	6	40	1
6 kW	20	8	50	1
7 kW	20	11	60	1
8 kW	24	11	-	-
9 kW	30	9	-	-
10 kW	30	11	-	-
11 kW	30	13	-	-
12 kW	34	12	-	-
13 kW	34	14	-	-
14 kW	40	12	-	-
15 kW	40	14	-	-
16 kW	40	16	-	-
17 kW	50	12	-	-
18 kW	50	14	-	-
19 kW	50	15	-	-
20 kW	50	17	-	-

Water Condenser selections for Heat Pump Operation R407C

Compressor: GENERIC

Nominal Design Conditions: Water 30/35 °C

Freon : R407C Tdew = 40 °C SC: 2K

Condenser Capacity	B25T-NHP NoP	dP kPa	B10T-NHP NoP	dP kPa	B15-NHP NoP	dP kPa	B8-NHP NoP	dP kPa
3 kW	10	8	20	1	20	4	30	2
4 kW	10	15	24	1	24	5	34	2
5 kW	10	22	30	1	30	6	40	3
6 kW	10	32	34	2	34	7	50	3
7 kW	14	22	40	2	40	7	-	-
8 kW	14	29	50	1	-	-	-	-
9 kW	14	36	50	2	-	-	-	-
10 kW	20	23	60	2	-	-	-	-
11 kW	20	27	60	2	-	-	-	-
12 kW	20	32	70	2	-	-	-	-
13 kW	24	27	70	2	-	-	-	-
14 kW	24	31	-	-	-	-	-	-
15 kW	24	35	-	-	-	-	-	-
16 kW	30	26	-	-	-	-	-	-
17 kW	30	30	-	-	-	-	-	-
18 kW	30	33	-	-	-	-	-	-
19 kW	34	29	-	-	-	-	-	-
20 kW	34	32	-	-	-	-	-	-

Výměníky B8H	Katal.cena Schiessl	Výměníky B10TH	Katal.cena Schiessl	Výměníky B15H	Katal.cena Schiessl
B8H / 10	4 149 Kč	B10TH / 20	6 739 Kč	B15H / 10	5 261 Kč
B8H / 14	4 594 Kč	B10TH / 24	7 308 Kč	B15H / 20	6 827 Kč
B8H / 16	4 817 Kč	B10TH / 30	8 159 Kč	B15H / 24	7 454 Kč
B8H / 20	5 261 Kč	B10TH / 34	8 728 Kč	B15H / 30	8 395 Kč
B8H / 24	5 708 Kč	B10TH / 40	9 580 Kč	B15H / 34	9 022 Kč
B8H / 30	6 376 Kč	B10TH / 50	11 000 Kč	B15H / 40	9 961 Kč
B8H / 34	6 820 Kč	B10TH / 60	12 380 Kč	B15H / 50	11 527 Kč
B8H / 40	7 488 Kč	B10TH / 70	12 582 Kč		
Výměníky B25TH	Katal.cena Schiessl	Výměníky B/V/P80H	Katal.cena Schiessl	Výměníky B/V120TH	Katal.cena Schiessl
B25TH / 10	7 342 Kč	B80H / 20	9 178 Kč	B120TH / 40	31 037 Kč
B25TH / 16	8 757 Kč	B80H / 24	10 197 Kč	B120TH / 50	34 911 Kč
B25TH / 20	9 702 Kč	B80H / 30	11 731 Kč	B120TH / 60	38 785 Kč
B25TH / 26	11 117 Kč	V(P)80H / 34	13 894 Kč	B120TH / 70	42 658 Kč
B25TH / 30	12 060 Kč	V(P)80H / 40	15 408 Kč	B120TH / 80	46 534 Kč
B25TH / 34	13 653 Kč	V(P)80H / 50	17 867 Kč	B120TH / 90	50 407 Kč
B25TH / 40	14 418 Kč	V(P)80H / 60	20 455 Kč	V120TH / 40	33 221 Kč
B25TH / 50	16 776 Kč	V(P)80H / 70	22 979 Kč	V120TH / 50	37 651 Kč
B25TH / 60	19 136 Kč	V(P)80H / 80	25 502 Kč	V120TH / 60	39 978 Kč
B25TH / 70	21 494 Kč	V(P)80H / 90	28 026 Kč	V120TH / 70	46 512 Kč
B25TH / 80	23 852 Kč	V(P)80H / 100	30 550 Kč	V120TH / 80	50 942 Kč
				V120TH / 90	55 262 Kč

Ceny u výměníků B8H, B15H, B25TH, B80, B120TH jsou vztaženy k provedení pro PN 45

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