



CHILLER RANGE

WATER INLET = +12°C
WATER OUTLET = + 6°C

NH3 EVAPORATING TEMPERATURE = +2°C
NH3 CONDENSING TEMPERATURE = +40°C

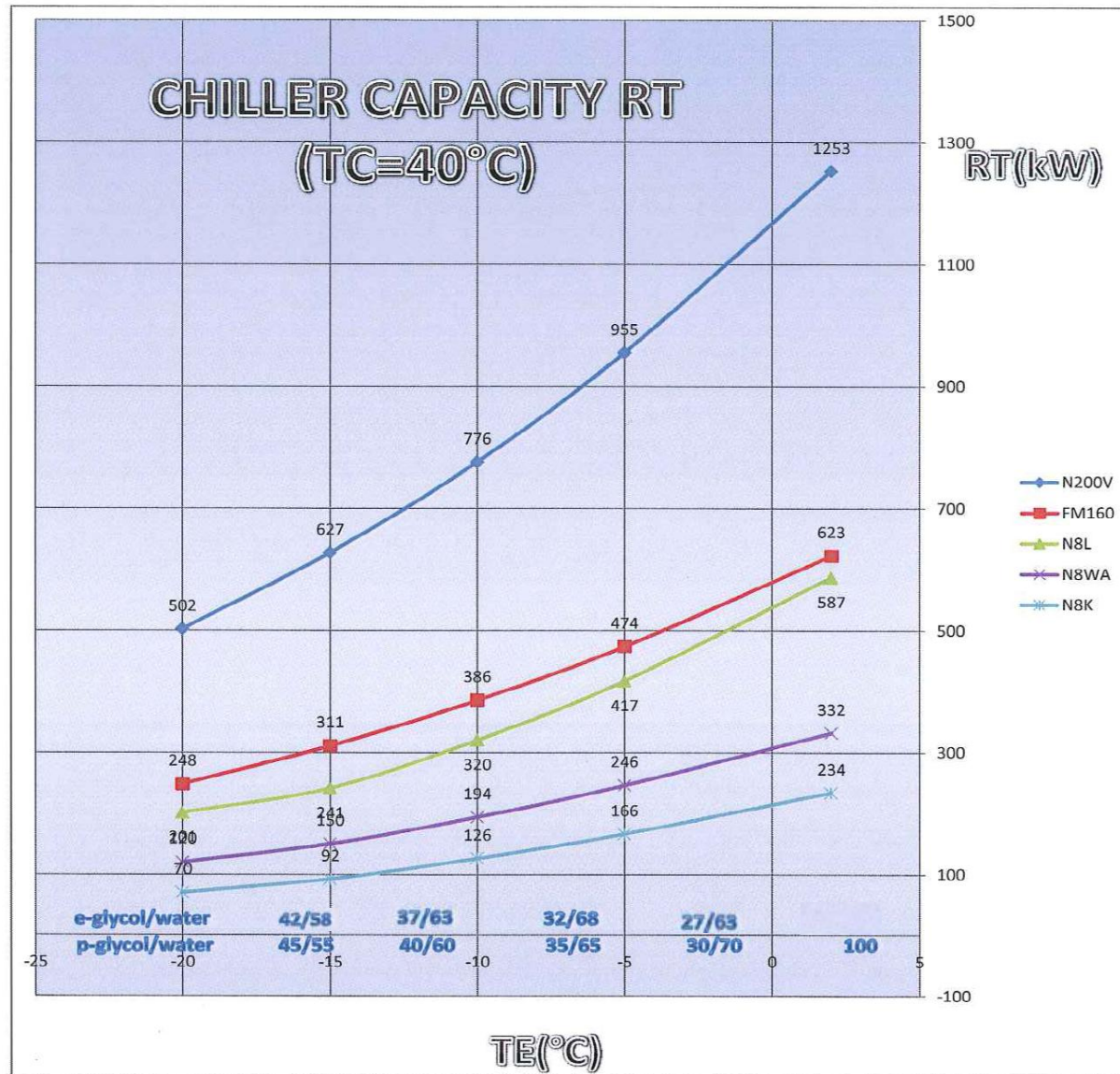
SH = 0°C
SC = 0°C

TYPE	RPM (rpm)	RT (kW)	BKW (kW)	COP-c	dP-evaporator (waterside) kPa	dP-condensor (waterside) kPa
N8K	1450	234	47	5.0	10	25
N8WA	1450	332	68	4.9	10	30
N8L	1450	586	120	4.9	12	42
FM160L	2950	623	124	5.0	12	42
N200VL	2950	1254	242	5.2	15	42

- **OPERATING RANGE EXTENSION**

N8K – N8WA – N8L – FM160L – N200VL
initially designed for $T_e=+2^{\circ}\text{C}$, $T_w=12/6^{\circ}\text{C}$
with the same initial evaporator model,
to an operating range down to $T_e=-20^{\circ}\text{C}$,
 $T_w=-12,5/-17,5^{\circ}\text{C}$,
in 4 steps.

Evaporating t° range



TE (°C)

+2

-5

-10

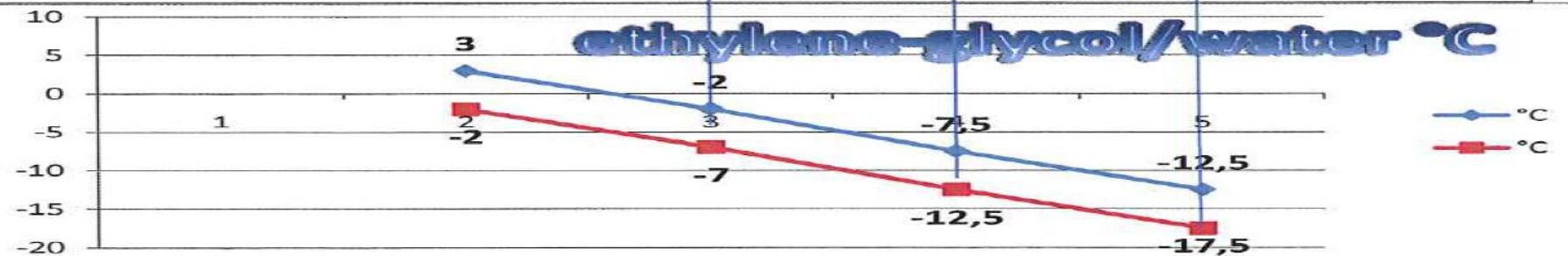
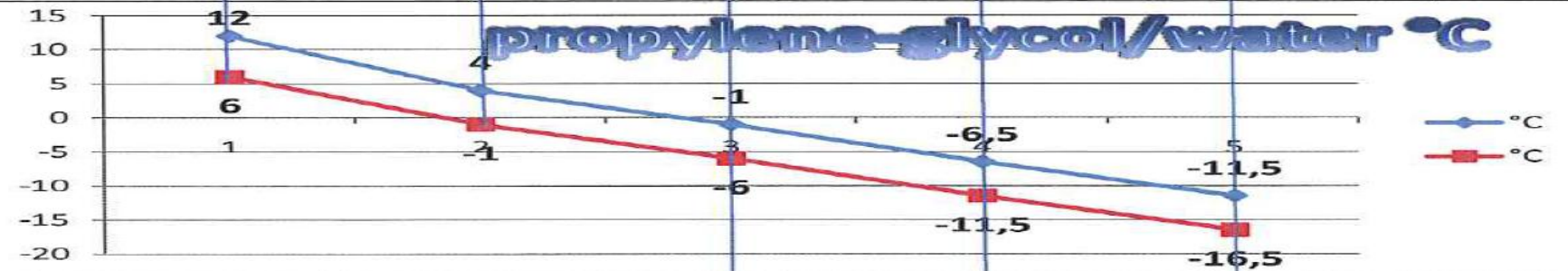
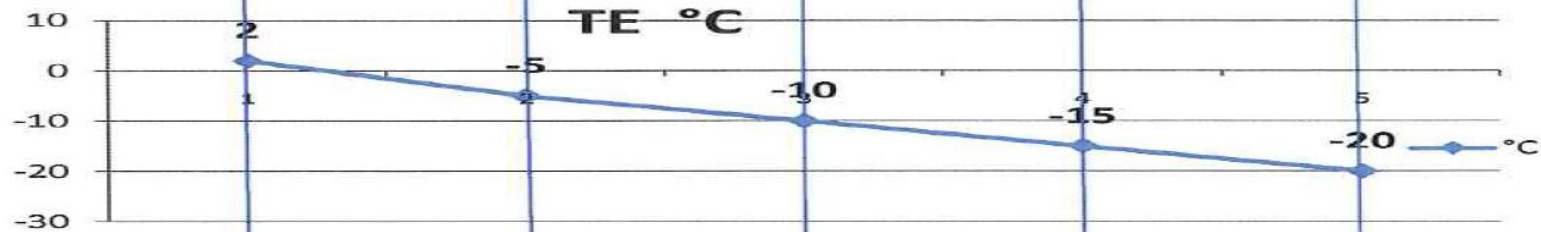
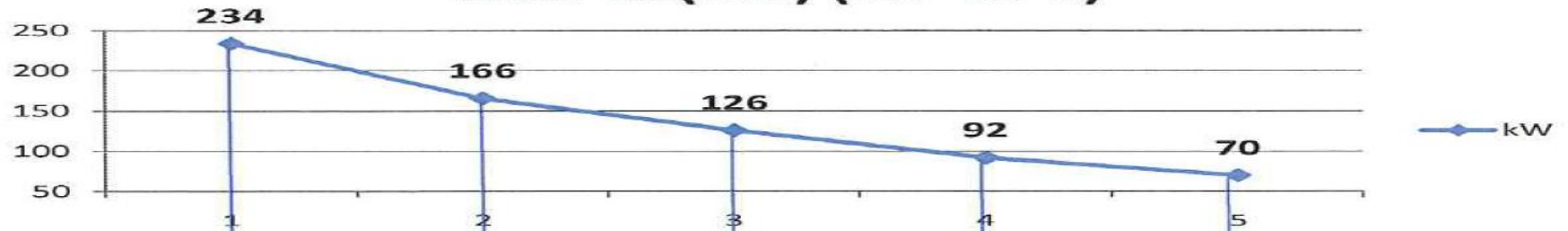
-15

-20

Compressor		N8K				
Unit type		PSHE-7S/4HH-184-1/1				
Capacity	kW	234	166	126	92	70
Evaporating temperature	°C	2	-5	-10	-15	-20
Medium		water	Propyleneglycol/water			
Concentration	%	100	30/70	35/65	40/60	45/55
Freezing temperature	°C	0	-13	-17	-21,5	-27,5
Temperature inlet	°C	12	4	-1	-6,5	-11,5
Temperature outlet	°C	6	-1	-6	-11,5	-16,5
Flow	m3/h	33,5	29,5	23	17	13,5
Pressure drop	kPa	10	10	6	6	10

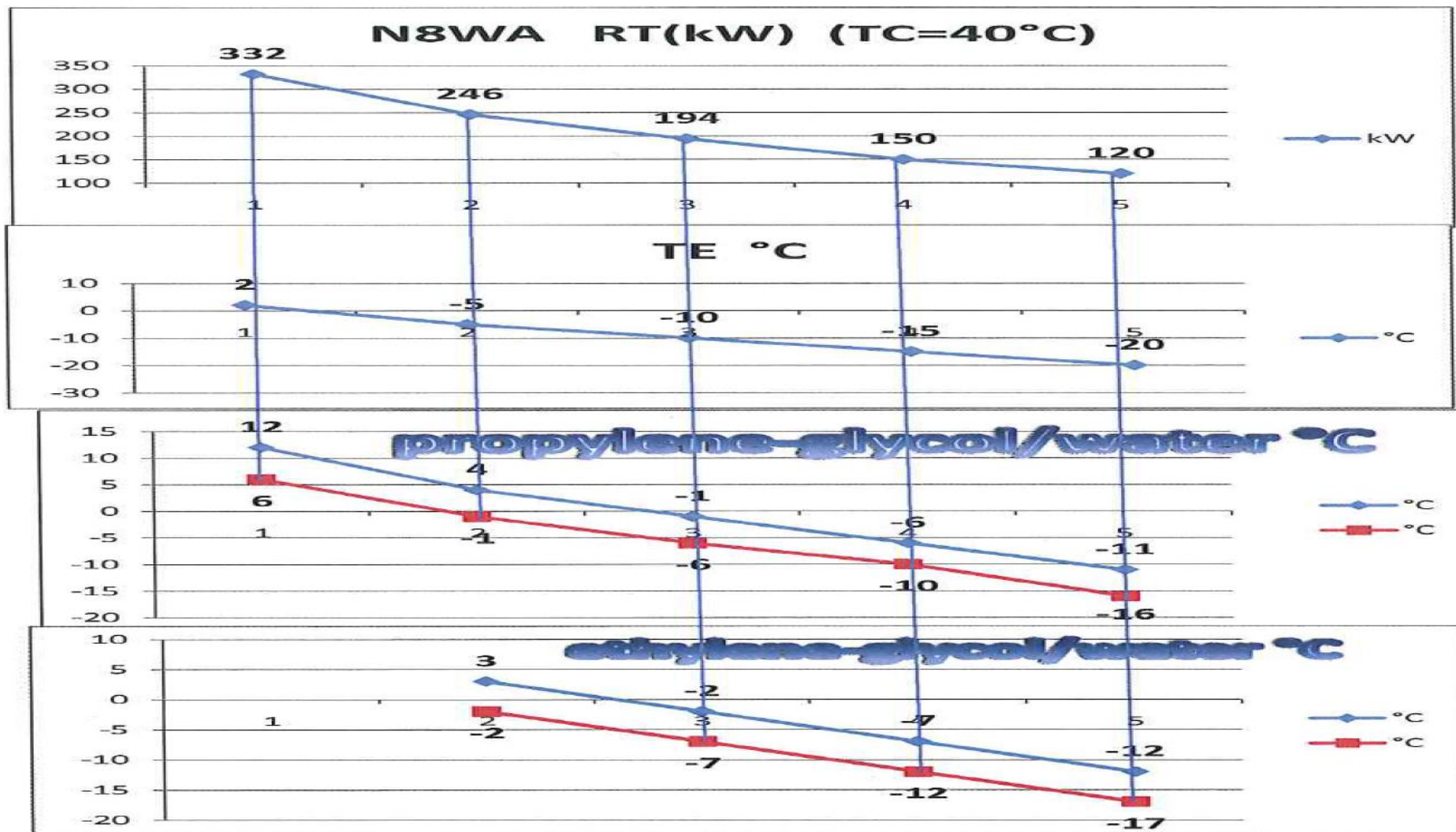
Medium			Ethyleneglycol/water			
Concentration	%		27/63	32/68	37/63	42/58
Freezing temperature	°C		-13,5	-17	-22	-27
Temperature inlet	°C		3	-2	-7,5	-12,5
Temperature outlet	°C		-2	-7	-12,5	-17,5
Flow	m3/h		31	23,7	18	14
Pressure drop	kPa		8	5	5	5

N8K RT(kW) (TC=40°C)



Compressor		N8WA				
Unit type		PSHE-7S/4HH-254-1/1				
Capacity	kW	332	246	194	150	120
Evaprating temperature	°C	2	-5	-10	-15	-20
Medium		water	Propyleneglycol/water			
Concentration	%	100	30/70	35/65	40/60	45/55
Freezing temperature	°C	0	-13	-17	-21,5	-27,5
Temperature inlet	°C	12	4	-1	-6	-11
Temperature outlet	°C	6	-1	-6	-10	-16
Flow	m3/h	47	44	35,5	28	23
Pressure drop	kPa	10	15	10	10	12

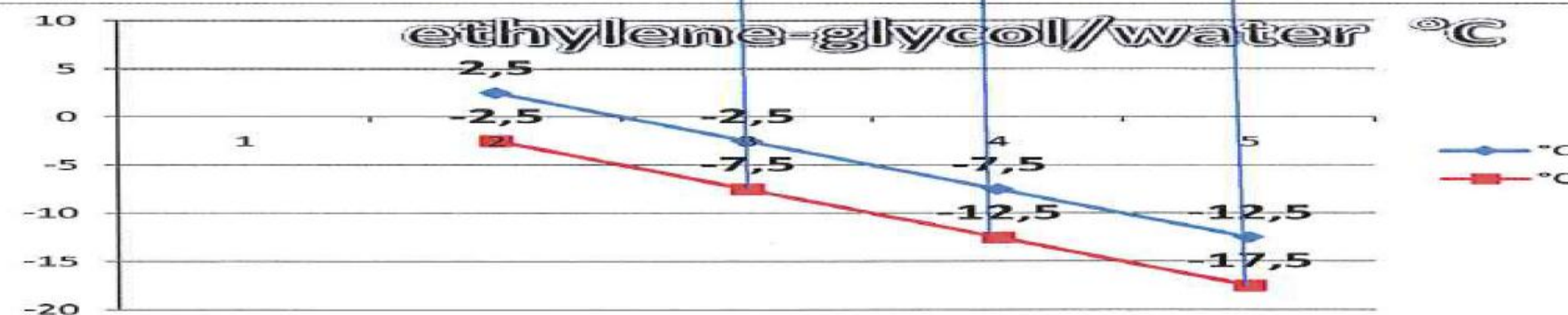
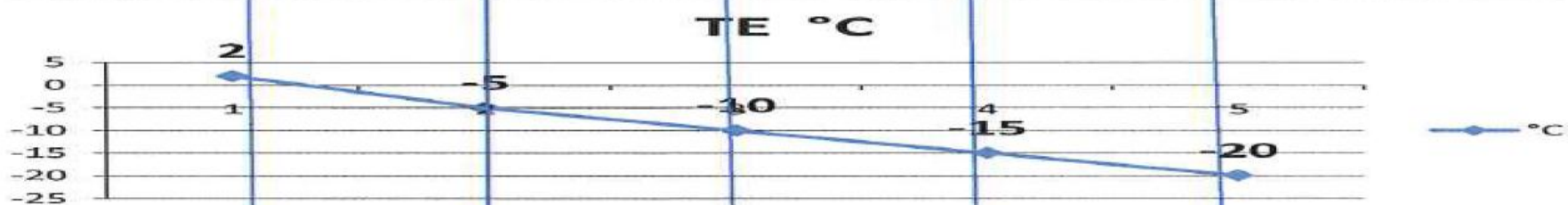
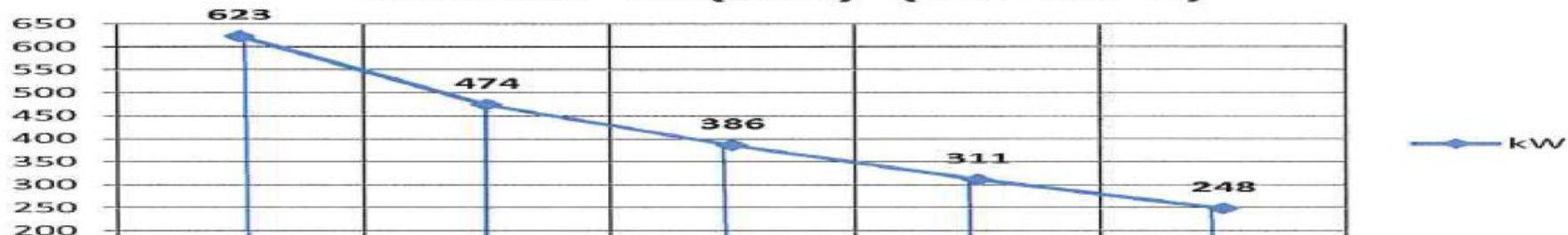
Medium			Ethyleneglycol/water			
Concentration	%		27/63	32/68	37/63	42/58
Freezing temperature	°C		-13,5	-17	-22	-27
Temperature inlet	°C		3	-2	-7	-12
Temperature outlet	°C		-2	-7	-12	-17
Flow	m3/h		46	37	29,5	24,5
Pressure drop	kPa		10	8	6	6



Compressor		FM160				
Unit type		PSHE-7/5HH-310-1/1				
Capacity	kW	623	474	386	311	248
Evaporating temperature	°C	2	-5	-10	-15	-20
Medium		water	Propyleneglycol/water			
Concentration	%	100	30/70	35/65	40/60	45/55
Freezing temperature	°C	0	-13	-17	-21,5	-27,5
Temperature inlet	°C	12	3	-1,5	-6,5	-11,5
Temperature outlet	°C	6	-2	-6,5	-11,5	-16,5
Flow	m3/h	89	85	70	58	48
Pressure drop	kPa	15	15	12	15	20

Medium			Ethyleneglycol/water			
Concentration	%		27/63	32/68	37/63	42/58
Freezing temperature	°C		-13,5	-17	-22	-27
Temperature inlet	°C		2,5	-2,5	-7,5	-12,5
Temperature outlet	°C		-2,5	-7,5	-12,5	-17,5
Flow	m3/h		88	74	61	50
Pressure drop	kPa		15	12	10	10

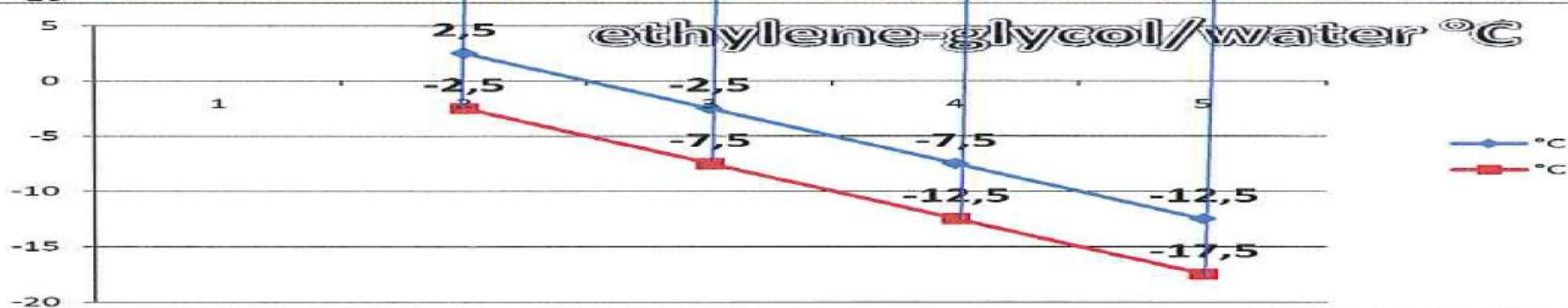
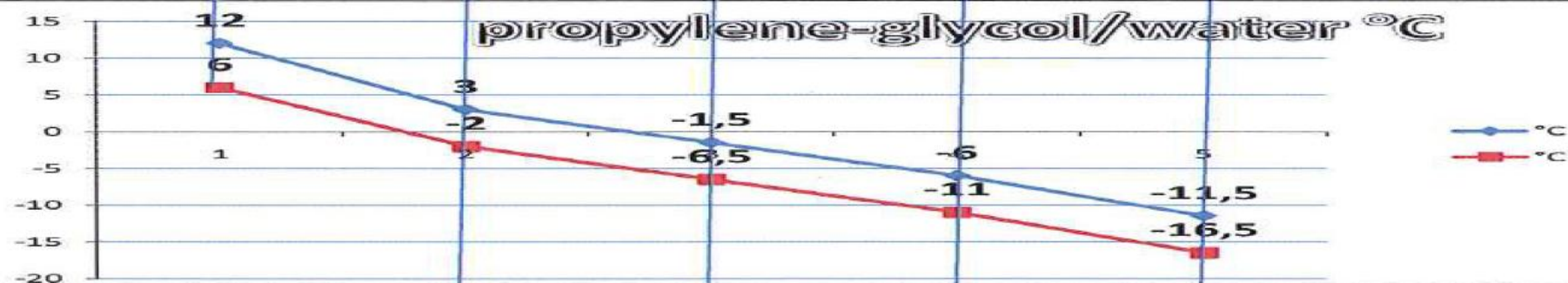
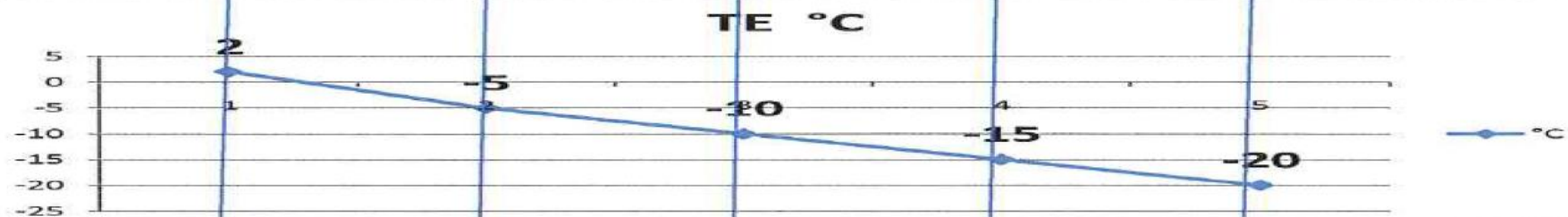
FM160 RT(kW) (TC=40°C)



Compressor		N200V				
Unit type		PSHE-7/5HH-602-2*1/1				
Capacity	kW	1253	955	776	627	502
Evaprating temperature	°C	2	-5	-10	-15	-20
Medium		water	Propyleneglycol/water			
Concentration	%	100	30/70	35/65	40/60	45/55
Freezing temperature	°C	0	-13	-17	-21,5	-27,5
Temperature inlet	°C	12	3	-1,5	-6	-11,5
Temperature outlet	°C	6	-2	-6,5	-11	-16,5
Flow	m3/h	2x 89	2x85	2x70	2x58	2x48
Pressure drop	kPa	15	15	12	15	20

Medium			Ethyleneglycol/water			
Concentration	%		27/63	32/68	37/63	42/58
Freezing temperature	°C		-13,5	-17	-22	-27
Temperature inlet	°C		2,5	-2,5	-7,5	-12,5
Temperature outlet	°C		-2,5	-7,5	-12,5	-17,5
Flow	m3/h		2x88,5	2x73,5	2x62	2x51
Pressure drop	kPa		15	12	10	10

N200V RT(kW) (TC=40°C)



CHILLER RANGE

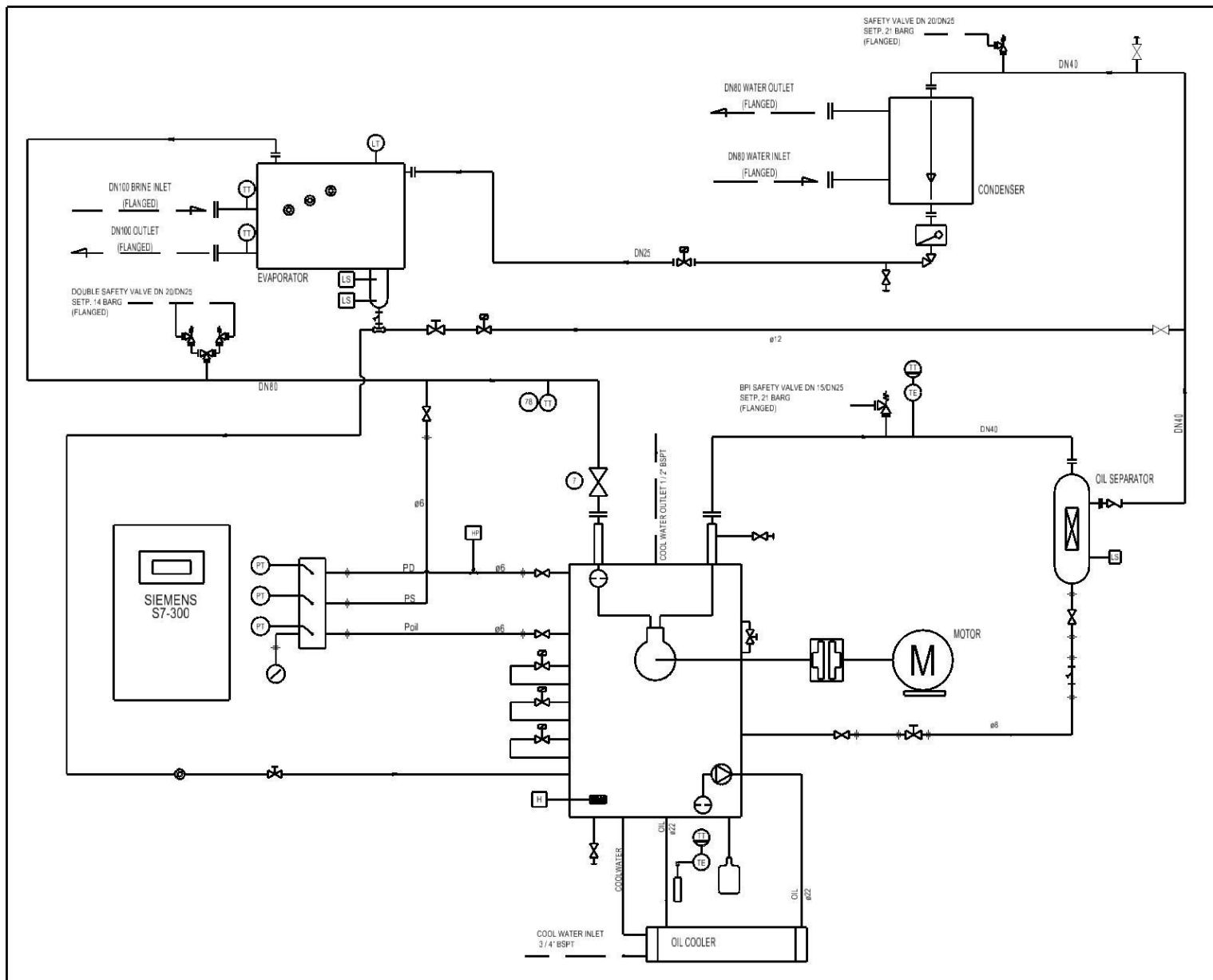
WATER INLET = +12°C
WATER OUTLET = + 6°C

NH3 EVAPORATING TEMPERATURE = +2°C
NH3 CONDENSING TEMPERATURE = +40°C

SH = 0°C
SC = 0°C

TYPE	RT(kW)	UNIT WEIGHT (kg)	UNIT SIZE LxWxH(mm) () : for transport	NH3 CHARGE (kg)
N8K	234	3500	2800x900x1970	33
N8WA	332	4000	3050x1050x2300	60
N8L	586	5000	4000x1350x2800	95
FM160L	623	7000	3200x2300x2300	97
N200VL	1254	10000	3400x2330x2700	168

PISTON CHILLER PID



PISTON CHILLER COMPONENTS

COMPONENTS	TYPE	DETAILS	MAKE
COMPRESSOR	N8K N8WA N8L	1450rpm 1450rpm 1450rpm	MYCOM
MOTOR	PLS225MR PLS250MP PLS315S	55kW 4P 90kW 4P 160kW 4P	MYCOM
COMBINED EVAPORATOR	PSHE + integrated separator	D750 x L757 D750 x L960 D820 x L1180	

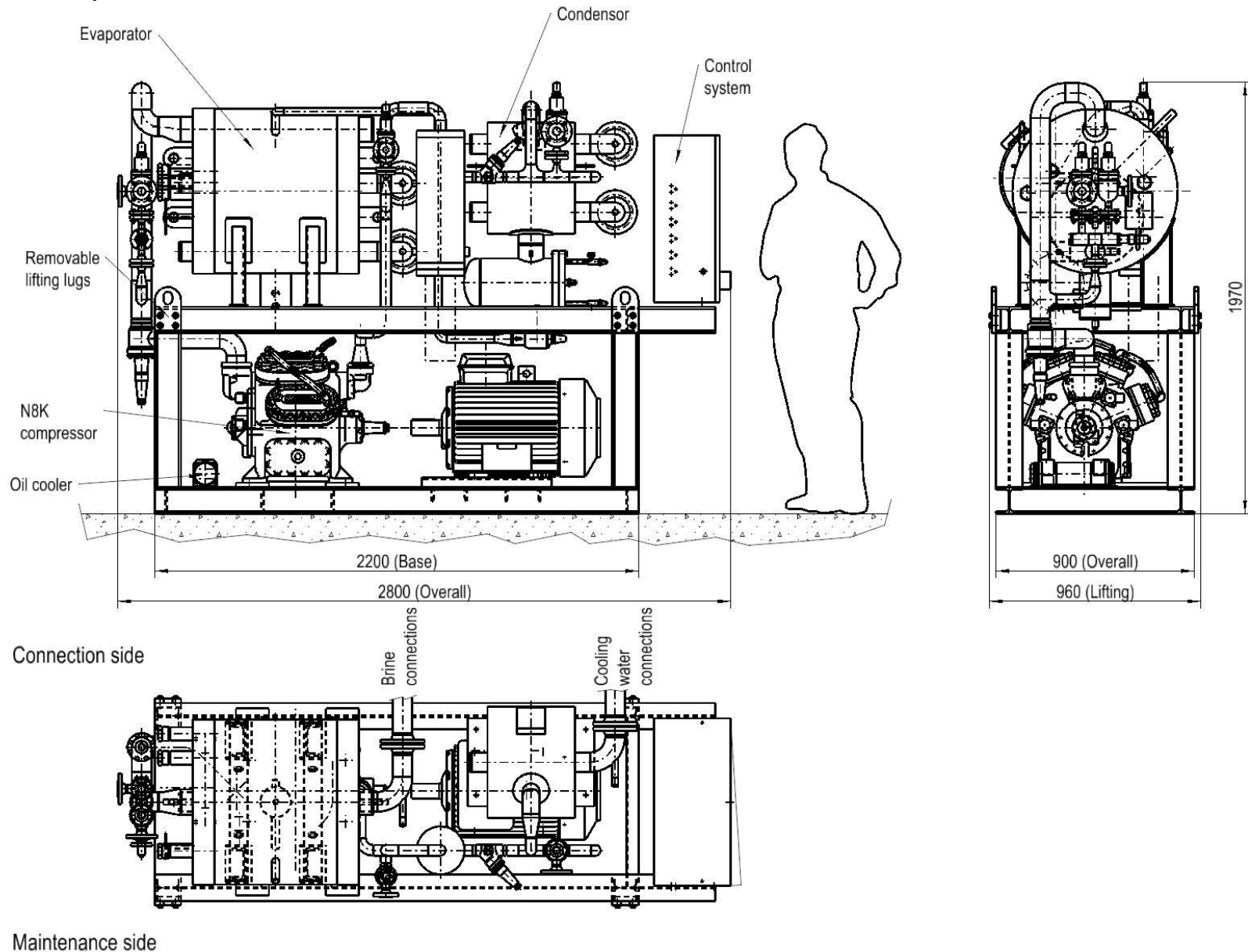
PISTON CHILLER COMPONENTS

COMPONENTS	TYPE	DETAILS	MAKE
CONDENSOR	PSHE	D508 x L400 D508 x L500 D610 x L580	
HP FLOAT VALVE	HS-35-H HS-35-M HS-35-L		WITT
OIL SEPARATOR	COALESCOR FILTRATION	MAA2050, LS MAA2565, LS MAA2565, LS	MYCOM
CONTROL PANEL	S7-300		SIEMENS

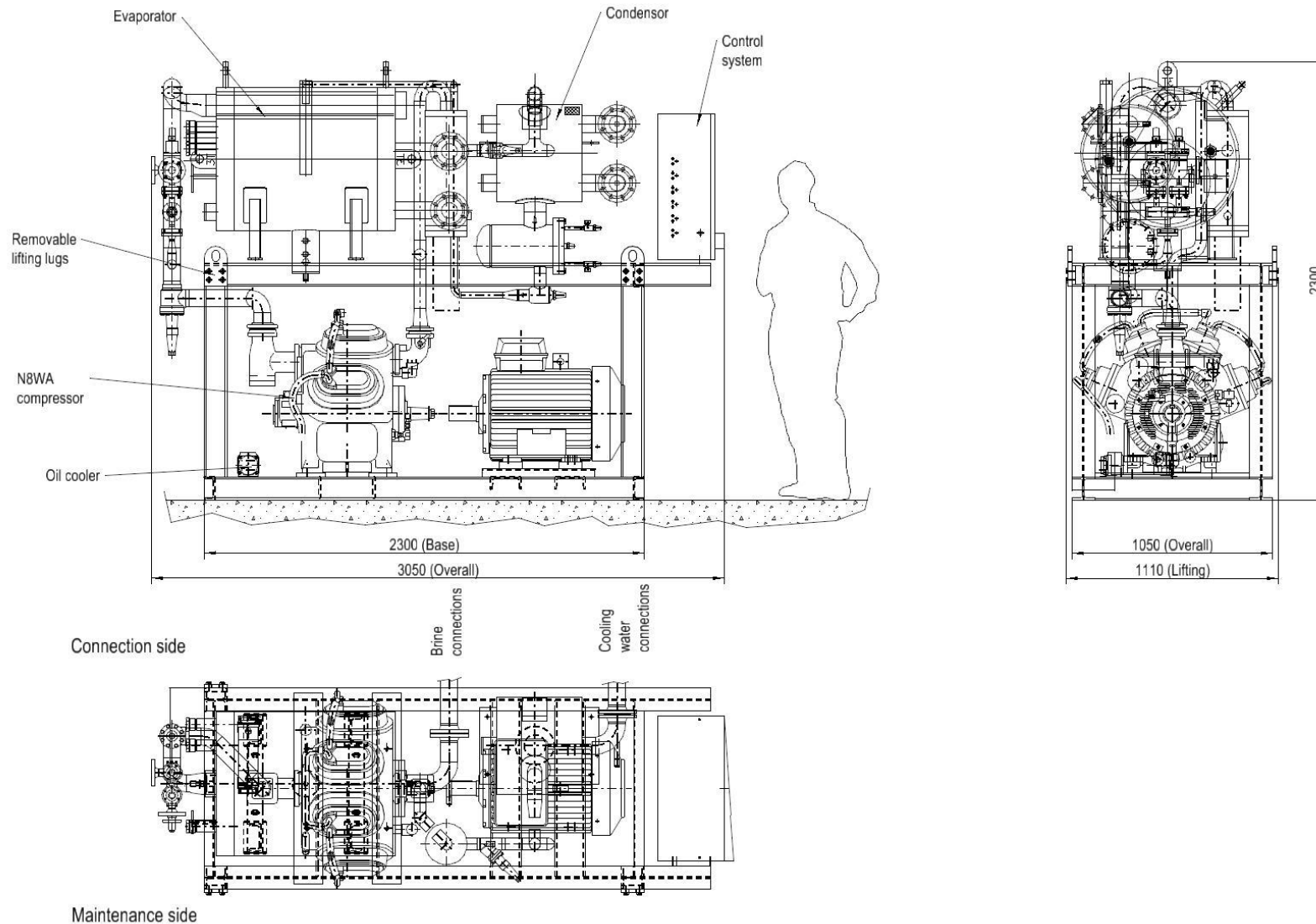
PISTON CHILLER INSTRUMENTS

ITEM	TYPE	DETAILS	MAKE
Water temp. evap. (IN,OUT)	TT	-50/+50°C	Wika
Oil level evap. (L,H)	LS	HBSO	HB
NH3 level evap. (H)	LS	HBSR	HB
Oil pressure (PO)	PT	AKS33 -1/30barg	Danfoss
Suction pressure (PS)	PT	AKS33 -1/10barg	Danfoss
Discharge pressure PD	PT	AKS33 -1/30barg	Danfoss
HP switch	PS	KP7ABS	Danfoss
Suction temp.	TT	-50/+50°C	Wika
Discharge temp.	TT	PT100	Jumo
Oil temp.	TT	PT100	Jumo
Oil level H oil sep.	LS	HBSO	HB

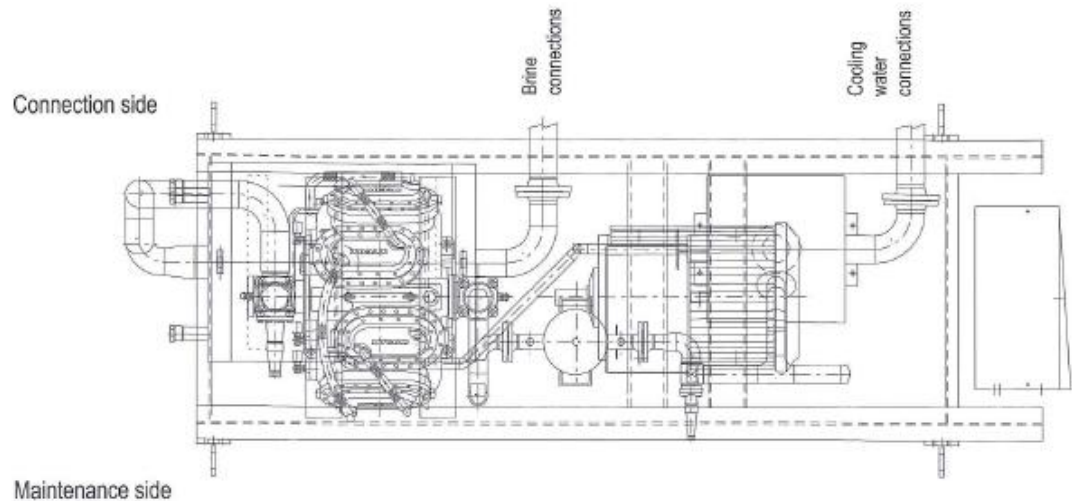
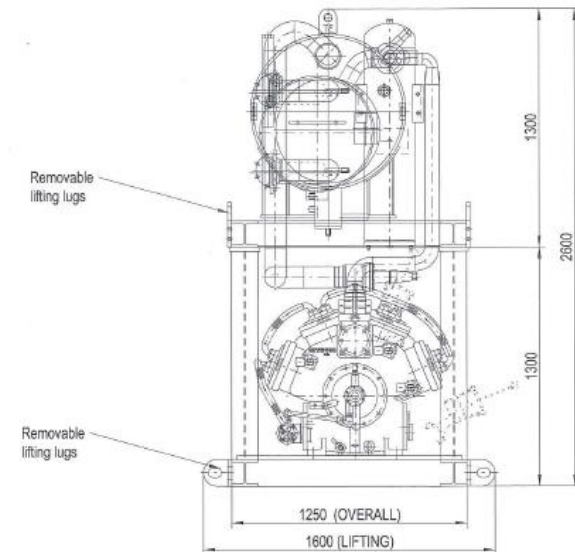
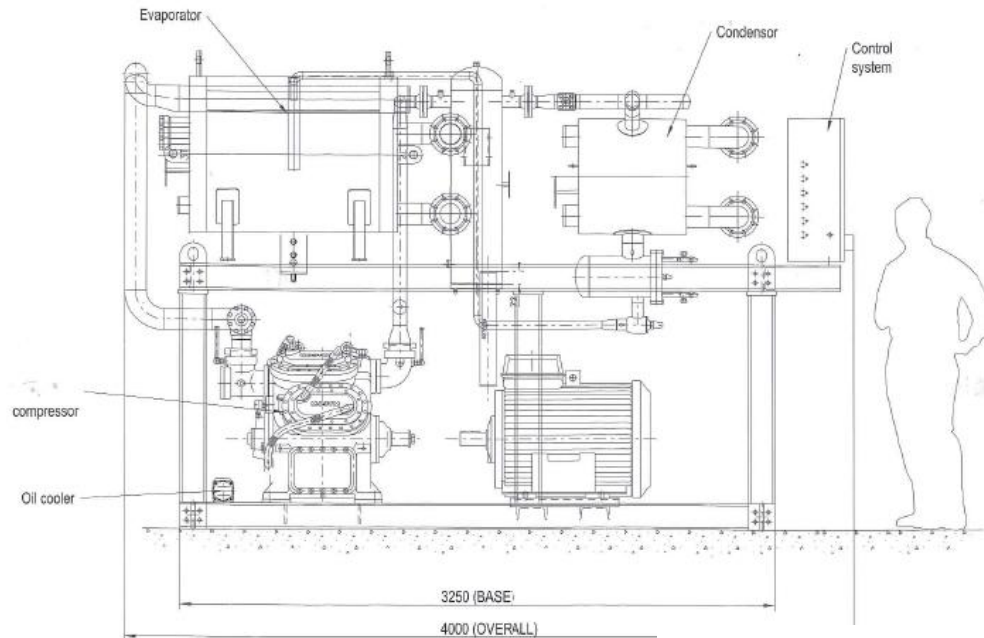
N8K CHILLER LAY-OUT



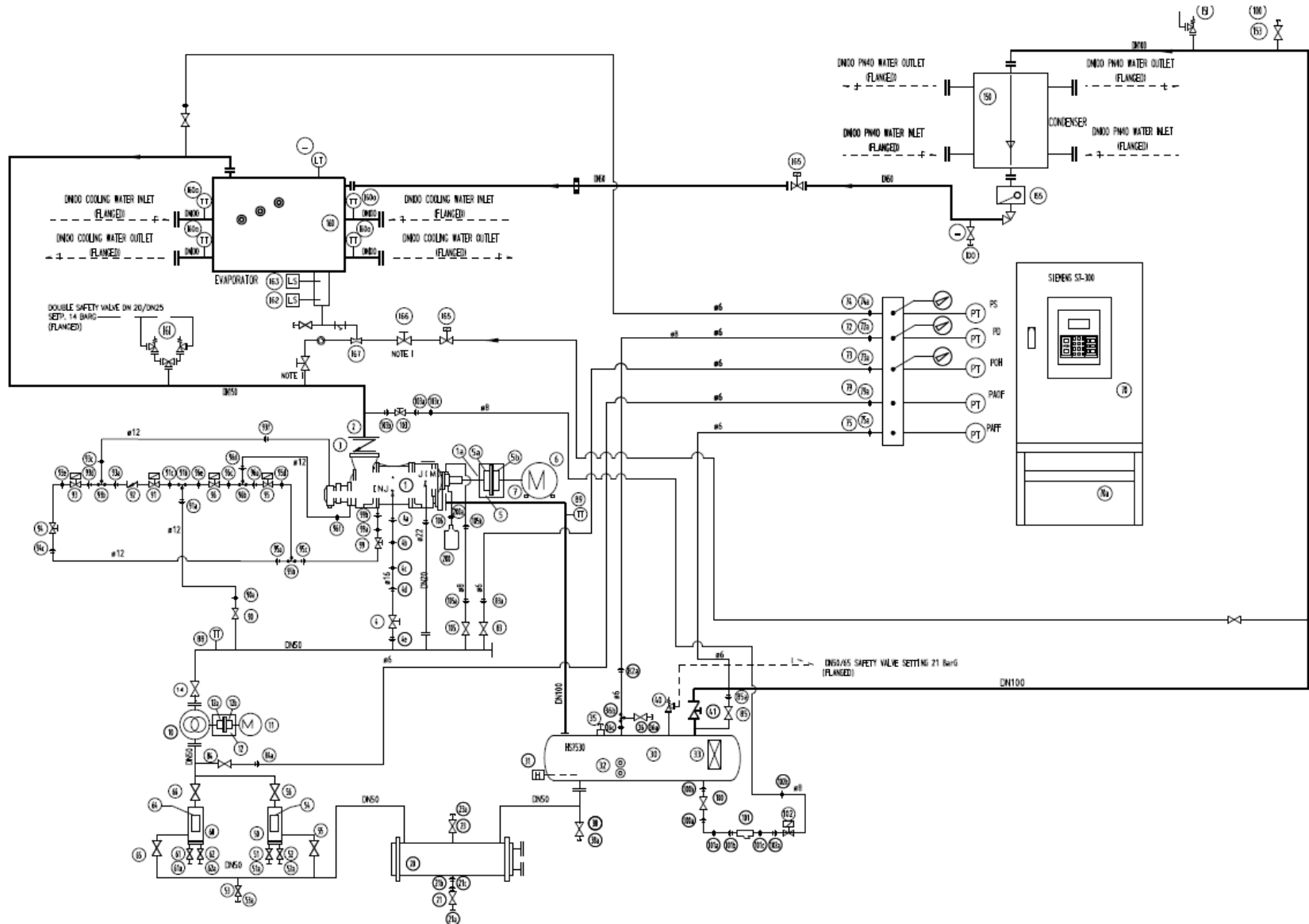
N8WA CHILLER LAY-OUT



N8L CHILLER LAY-OUT



SCREW CHILLER PID



SCREW CHILLER COMPONENTS

COMPONENTS	TYPE	DETAILS	MAKE
COMPRESSOR	FM160L N200VLD	2950rpm 2950rpm	MYCOM
MOTOR	PLS315S PLS315S	160kW 2P 280kW 2P	MYCOM
COMBINED EVAPORATOR	PSHE + integrated separator	D820 x L1180 D820 x L1970	
CONDENSOR	PSHE	D610 x L580 D610 x L1050	

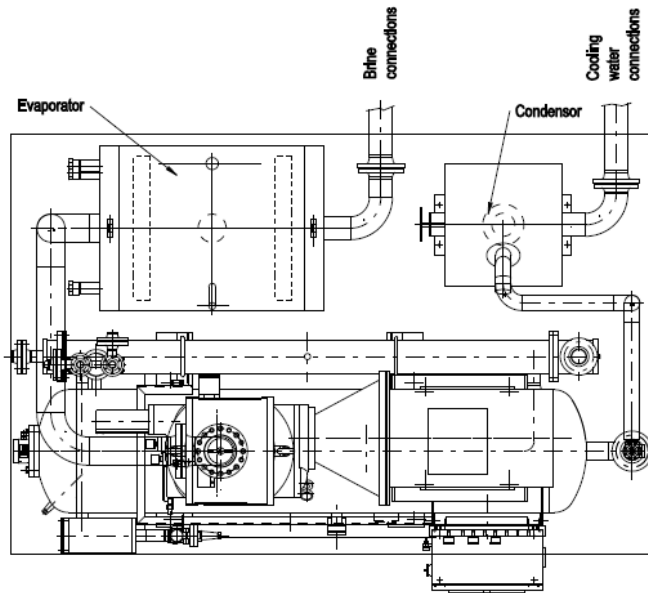
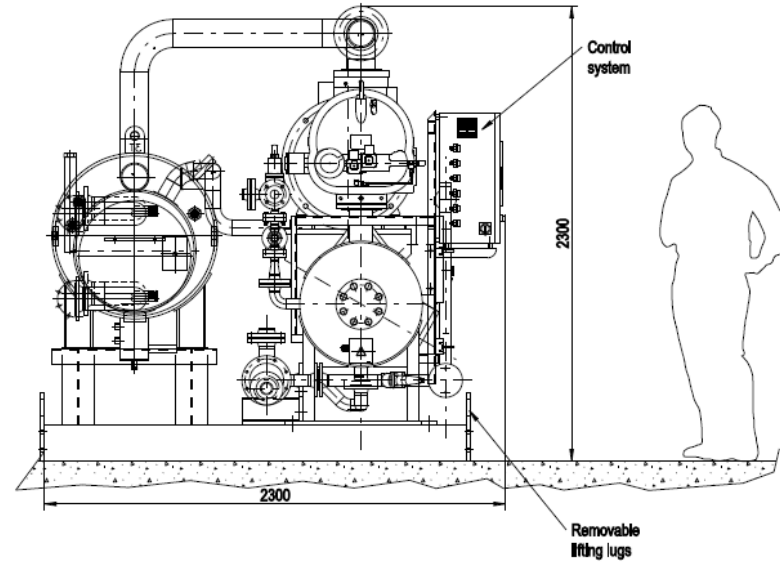
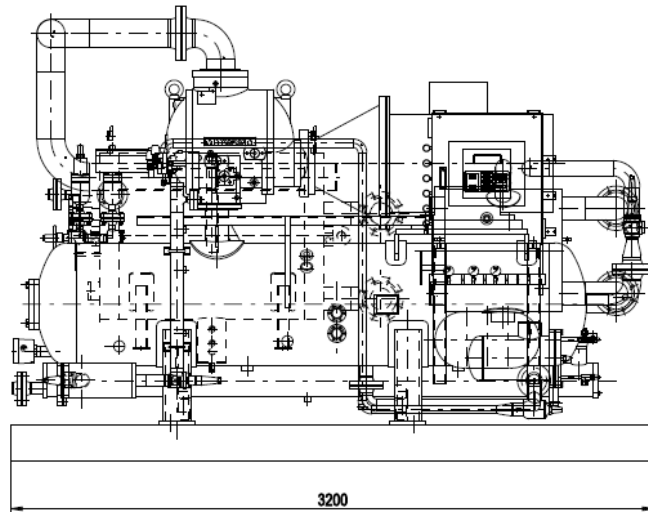
SCREW CHILLER COMPONENTS

COMPONENTS	TYPE	DETAILS	MAKE
HP FLOAT VALVE	HS-35-L HS-45-H		WITT
OIL SEPARATOR	COALESCOR	HS6023 HS7530	MYCOM
CONTROL PANEL	S7-300		SIEMENS

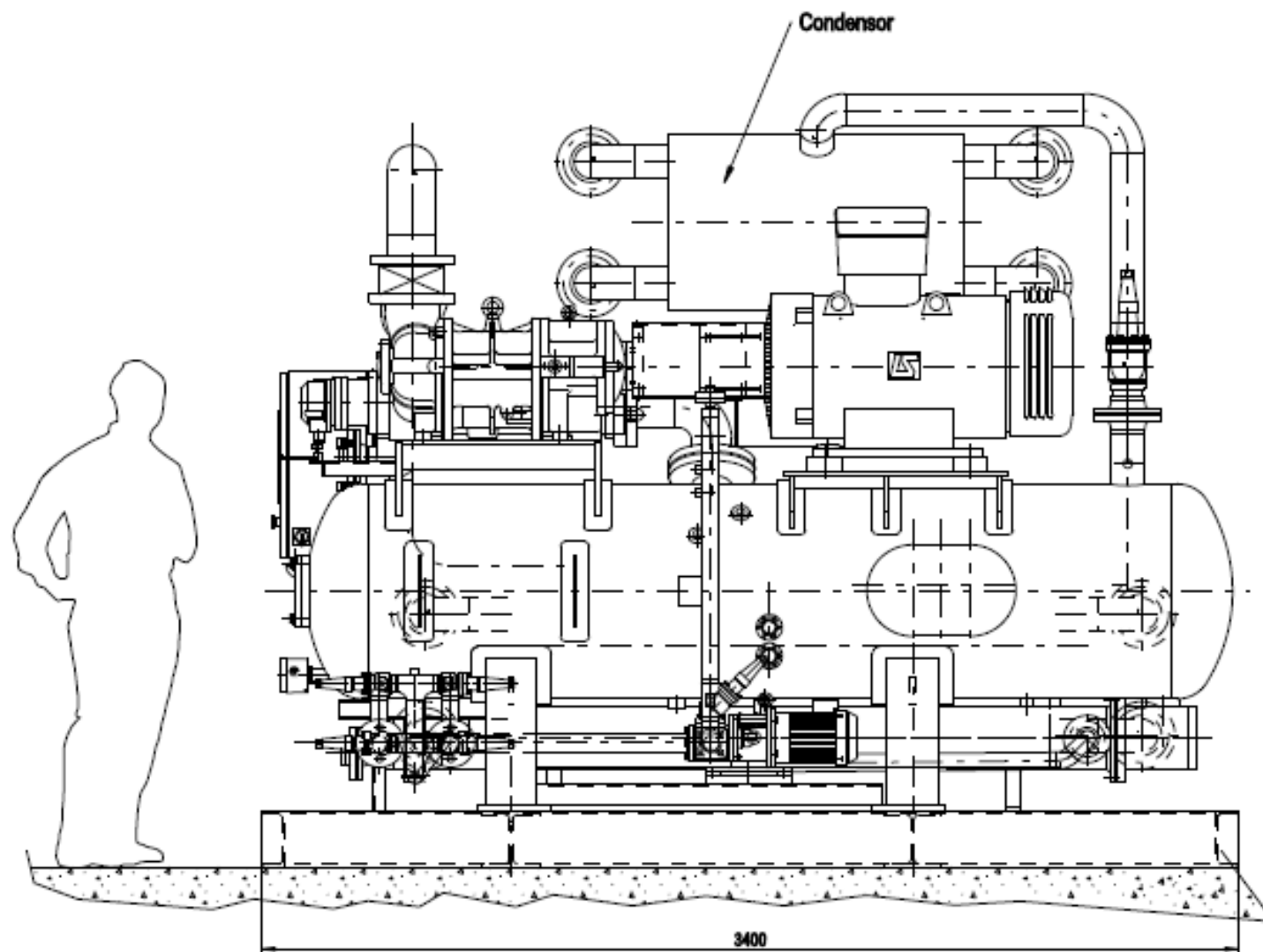
SCREW CHILLER INSTRUMENTS

ITEM	TYPE	DETAILS	MAKE
Water temp. evap. (IN,OUT)	TT	-50/+50°C	Wika
Oil level evap. (L,H)	LS	HBSO	HB
NH3 level evap. (H)	LS	HBSR	HB
Oil pressure (POH,DPOF)	PT	AKS33 -1/30barg	Danfoss
Suction pressure (PS)	PT	AKS33 -1/10barg	Danfoss
Discharge pressure (PD,PAFF)	PT	AKS33 -1/30barg	Danfoss
HP switch	PS	KP7ABS	Danfoss
Suction temp.	TT	-50/+50°C	Wika
Discharge temp.	TT	0/150°C	Wika
Oil temp.	TT	0/150°C	Wika
Oil level H oil sep.	LS	HBSO	HB

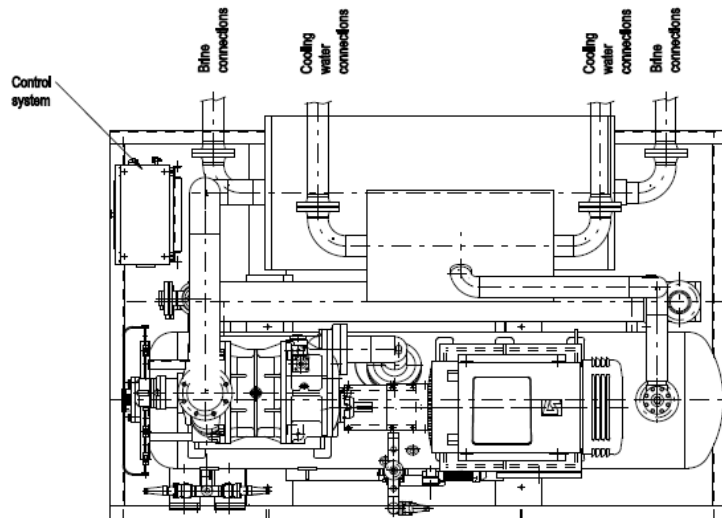
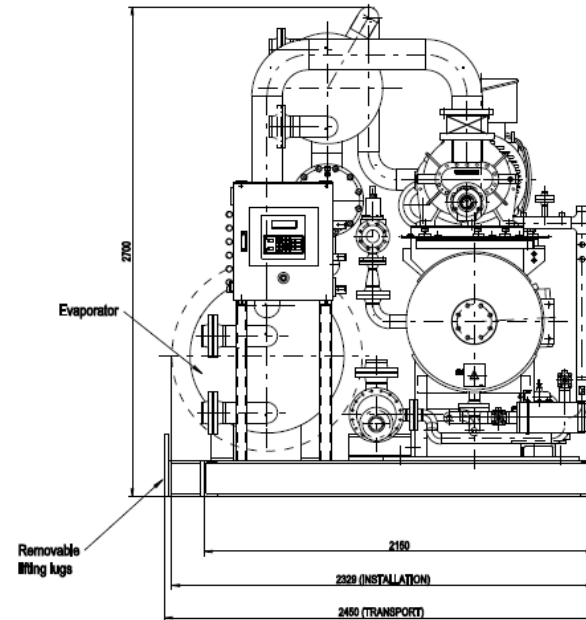
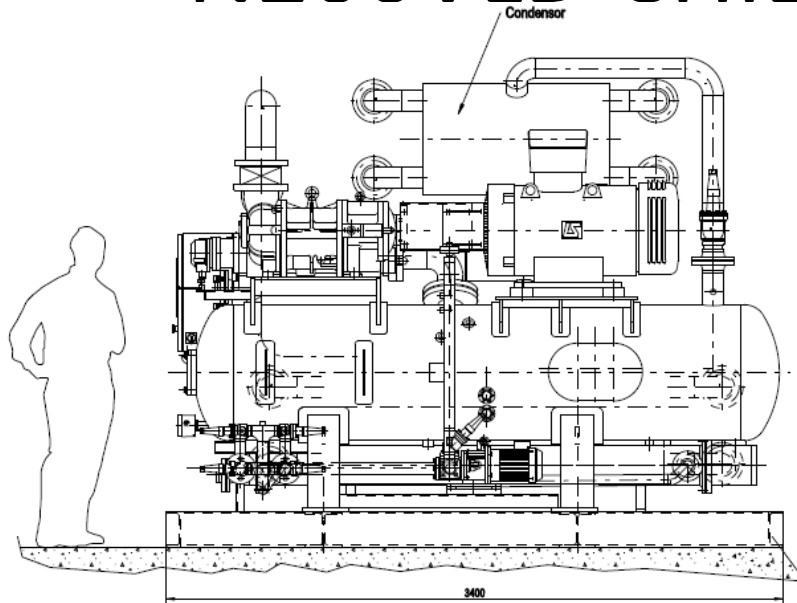
FM160L CHILLER LAY-OUT



N200VLD CHILLER LAY-OUT



N200VLD CHILLER LAY-OUT



Q-PLATE / VAHTERUS



**Combined Heatexchanger and
Flooded droplet seperator**

Q-plate combined

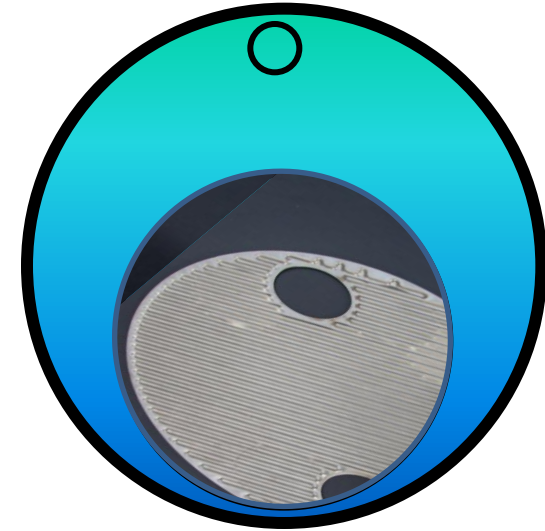
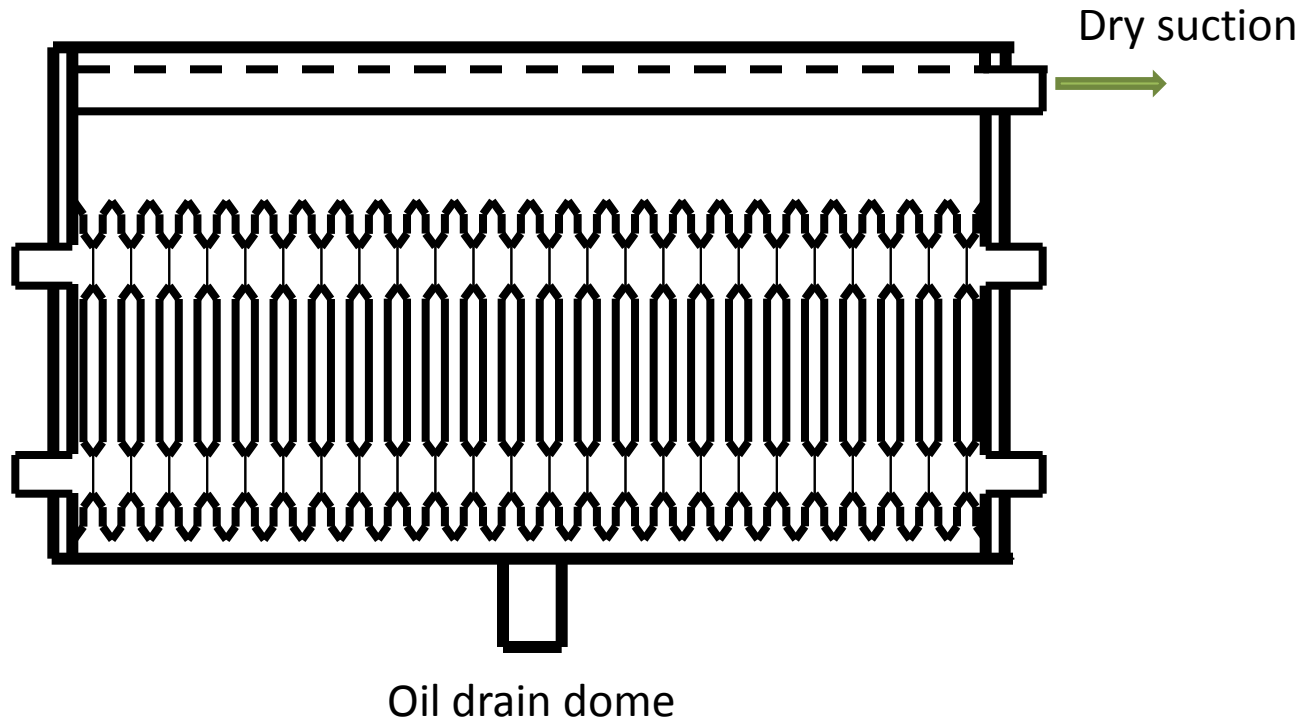
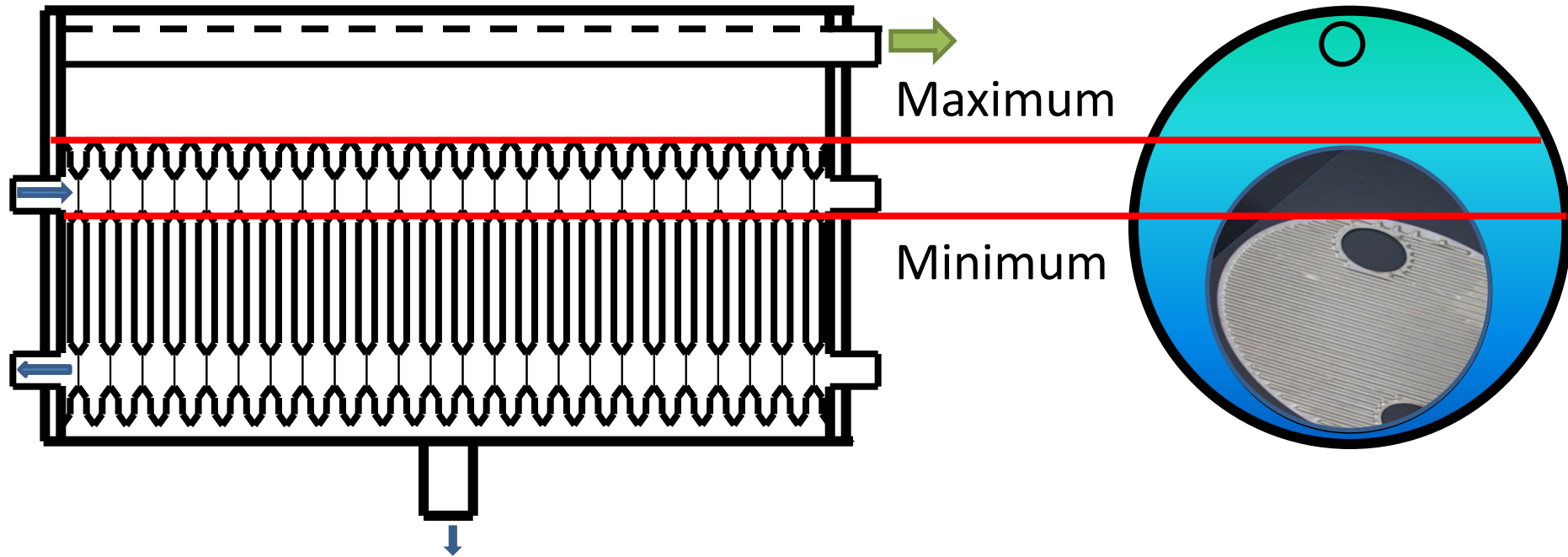


Plate pack in extended shell including separation area for refrigerant

Refrigerant charge



Dry suction pipe



COMBINED PLATE IN SHELL EVAPORATOR –SUCTION SEPARATOR

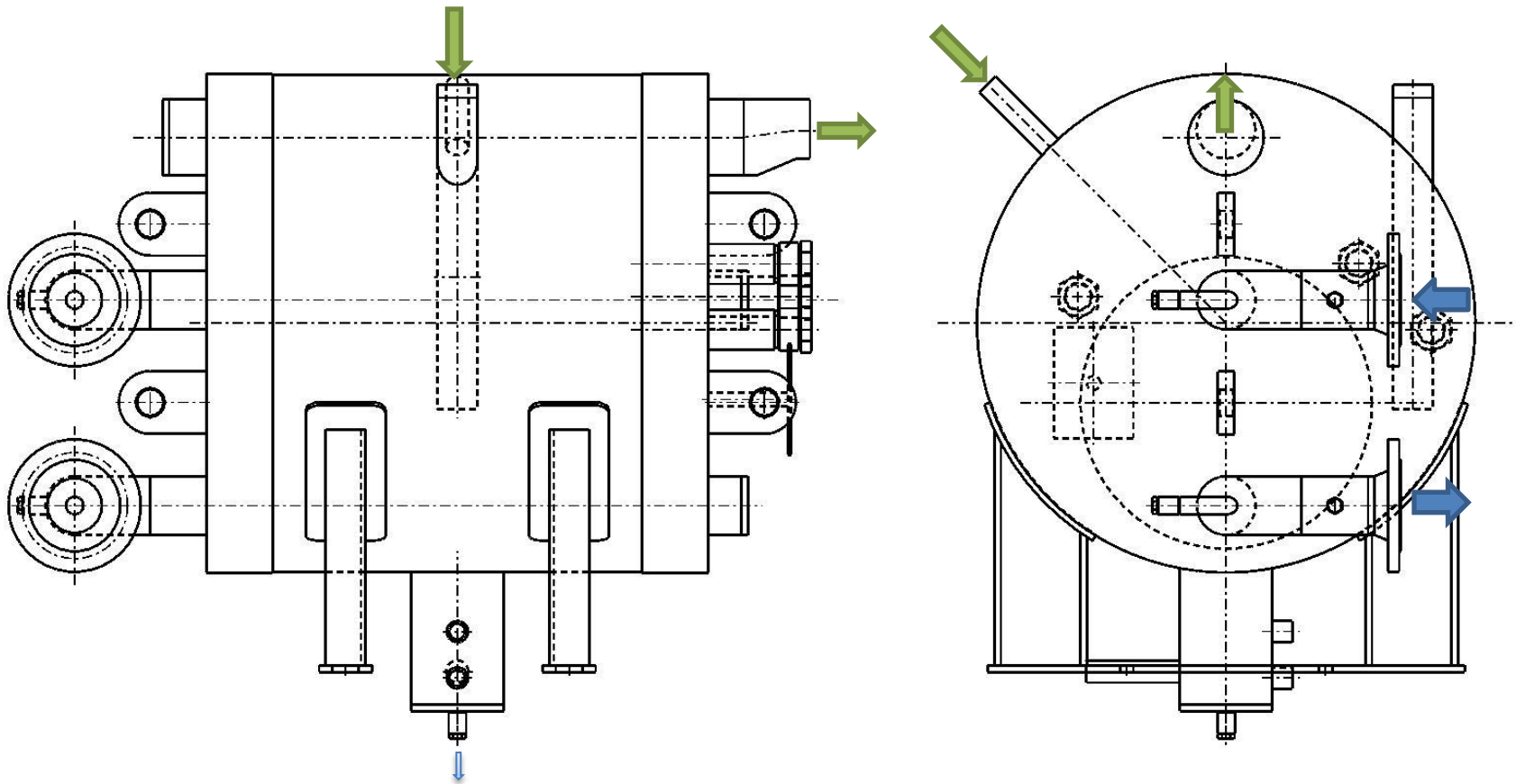
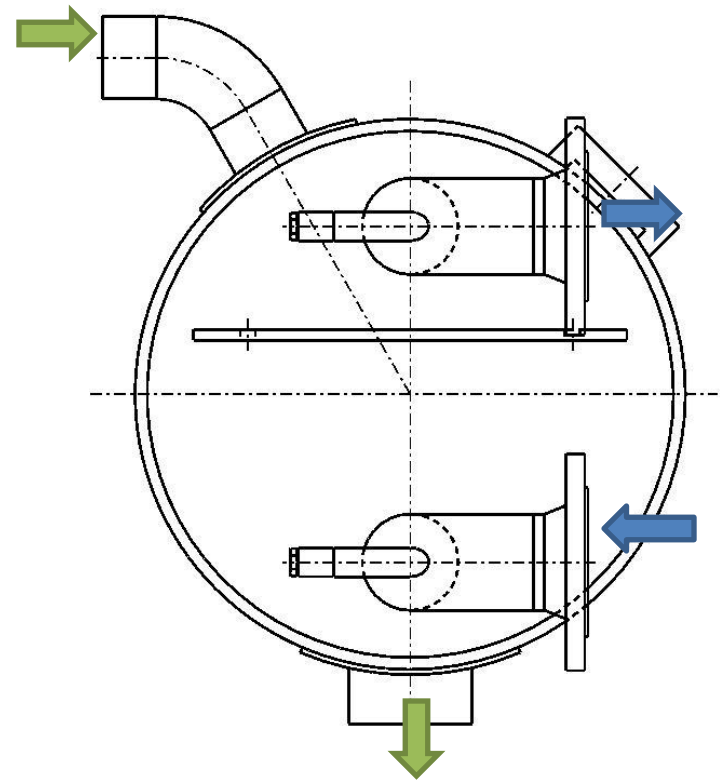
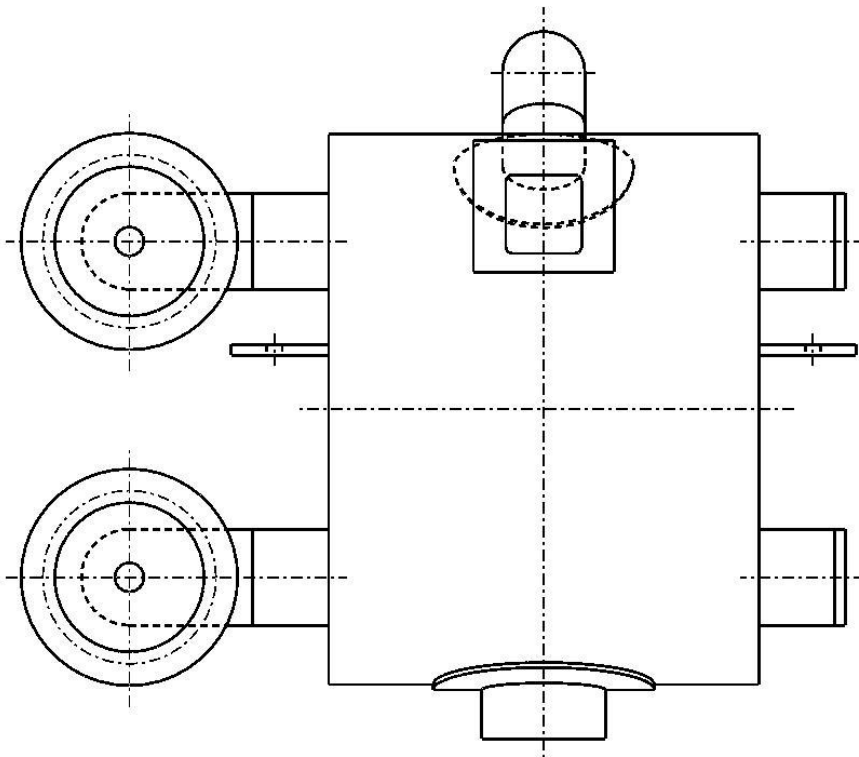


PLATE IN SHELL CONDENSOR



‘PSHE combined evaporator’ BENEFITS :

- Suitable for limited spaces
- Excellent droplet separation
gasspeeds of 0.1 to 0.2 m/s
- Reduced refrigerant charge compared to
conventional flooded
- Easy to install and insulate
- Savings due to size: piping and insulation
- Customized construction

‘PSHE combined evaporator’ benefits :

- No maintenance costs
- No gasket replacement after 5 to 7 years
- Fully welded
- High pressures and temperatures
- Suitable for all refrigerants
- Safety for products and people
- Proven technology

MYCOM CHILLER BENEFITS :

- Complete compressor-chiller-condensor unit factory assembled
- Transportable with normal truck
- Small foot print
- Reduced NH3 charges (<>conventional flooded) 130g to 180g/kW cooling capacity depending on unit size
- Most simple control of system with high reliability
- Reduced maintenance costs
- Proven technology

FIELD CASE

CUSTOMER	COFELY CH	
PLANT	BIOLOG RATGHEB	
LOCATION	UNTERSTAMMHEIM	
INSTALLATION	2011	
TYPE	N8K	
QTY	2	
TE	-10	°C
TC	36	°C
T-eg/water-in	-2	°C
T-eg:water- out	-7	°C
CAPACITY	126	kW
BKW	37	kW
COP-C	3,4	
operating hours	300	





