

KKT Water Chiller for

MAGNETOM AVANTO
MAGNETOM ESPREE
MAGNETOM Trio, A Tim System



Siemens Medical Solutions AG

The illustrations of products of the Siemens company
are shown with friendly permission by Siemens Medical Solutions.

list of contents

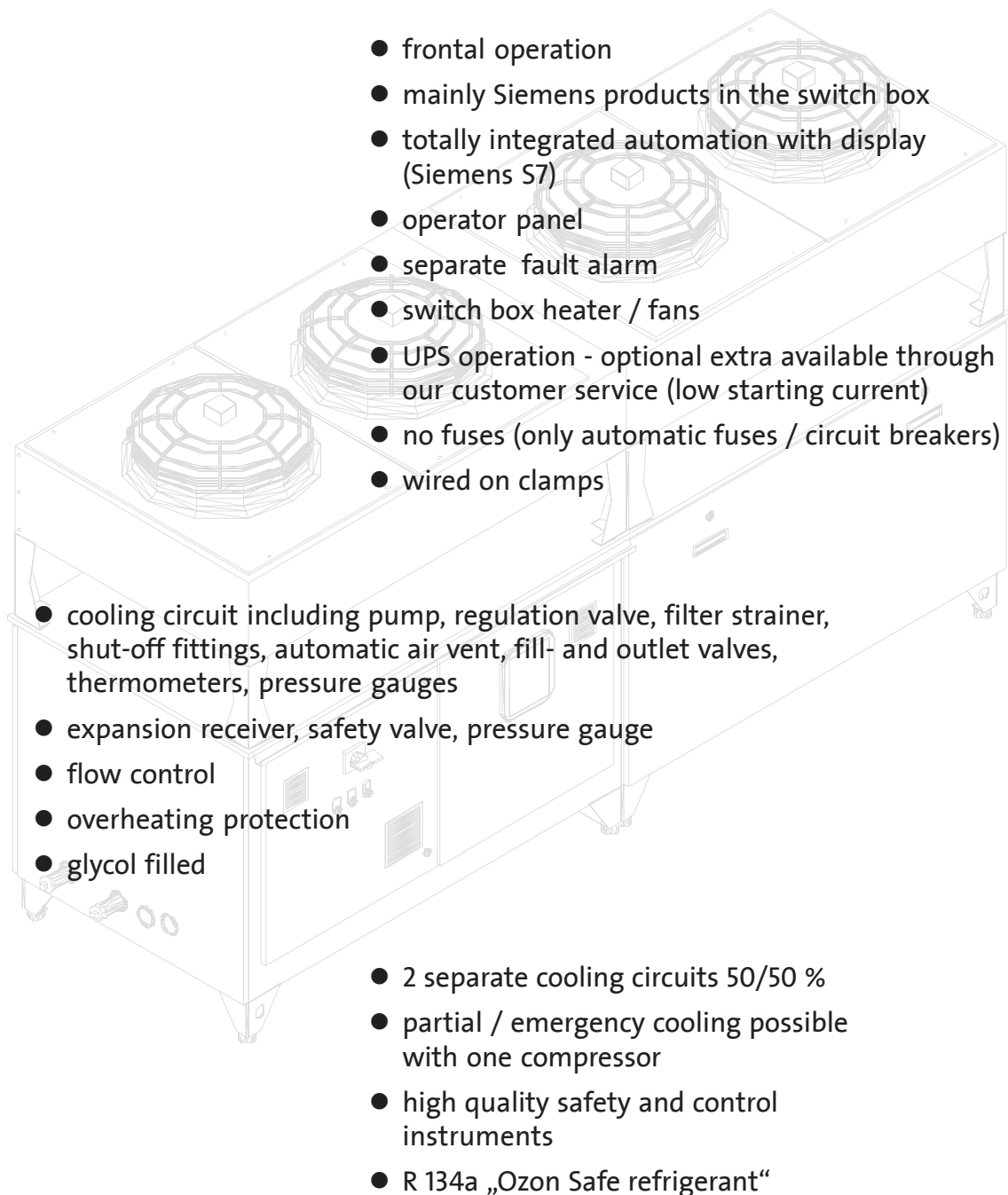


page 5	description KKT waterchiller
page 6	nameplate KCC 215-L-U/S
page 7	technical data KCC 215-L-U/S
page 8	nameplate KCC 215-L-S
page 9	technical data KCC 215-L-U/S
page 10	dimensions KCC 215 (inch)
page 11	dimensions KCC 215 (mm)
page 12	key: cold water / glycol diagram
page 13	cold water / glycol diagram
page 14	key: refrigerant diagram / compact design
page 15	refrigerant diagram / compact design
page 16	waterchiller installation / I
page 17	waterchiller installation / II
page 18	IFP (manufacturer = Kutting)
page 19	IFP (manufacturer = Kutting)
page 20	overvolting protection
page 21	overview of waterchiller transfer station / remote control panel
page 22	transport




description KKT Waterchiller - Outdoor Version

The KKT Waterchillers are conceived, developed and produced as a compact system for the MAGNETOM AVANTO / ESPREE / TRIO. They are suitable for outdoor installations. Power supplies of 380V - 480V/50-60Hz. UL approved version is 480V/60Hz. Ambient temperatures up to 118.4° F [48°] C. Installation up to 6,562 feet [2,000 m] above sea level possible.

Produced and tested in accordance with Siemens Medical Engineering specifications.



nameplate KCC 215-L-U/S

	KKT KRAUS ®	Industriestraße 23a D-91207 Lauf Tel. +49(0)9123/174-01 Fax +49(0)9123/824-41	
	REFRIGERATION & AIR CONDITIONING		
			0036
LISTED			
 COMMERCIAL PROCESSING WATER COOLER			
22DA			
Outdoor Use			
Manufacturer	KKT Kraus Klimatechnik GmbH		
Model	KCC 215-L-U/S		
Produce-No.			
Date of manufacture			
Electrical rating	480V/60Hz/3		
Minimum supply circuit ampacity	47 A		
Overcurrent protective device	62 A		
	Amp Rating	Quantity	
Compressor	16.0 A	2	
Condenser Fan Motor	1.6 A	4	
Water Pump	5.4 A	1	
Refrigerant	R134a		
System 1	12 Kg	26.0lb	
System 2	12 Kg	26.0lb	
Design pressure			
High side	14.2bar	206psig	
Low side	6.3bar	92psig	
High Pressure switch off	19.0bar	275psig	

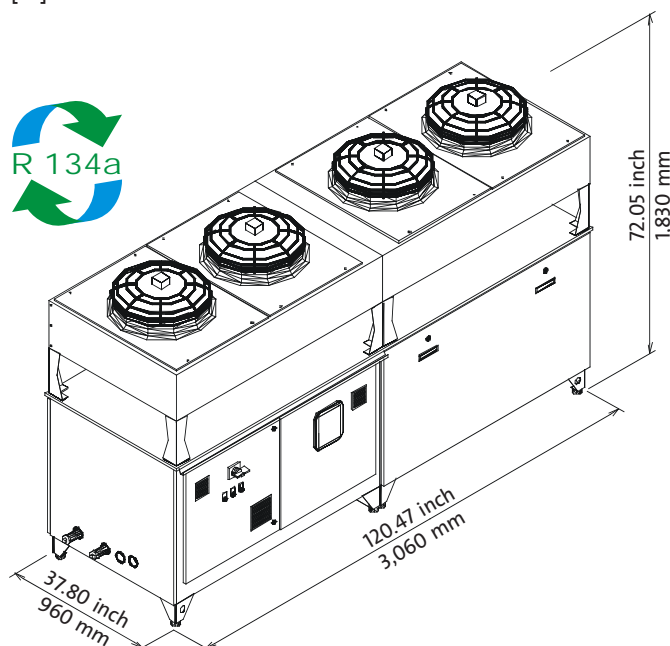
technical data

Waterchiller Typ KCC 215-L-U/S outdoor use
 designed for MAGNETOM AVANTO / ESPREE / Trio, A Tim System



standard device	standard construction		note
nominal cooling capacity (Btu/hr [kW])	205,000	[60.0]	
refrigeration medium	R 134a		
quantity of compressors	2		
compressor capacity (HP [kW])	18.2	[13.4]	Fabr.: DWM Type: ZR 16
volume of condenser airflow (m³/s [m³/h])	10.0	[36,000]	
number of axial fans (piece)	4		
condenser fan motor (HP [kW])	1.54	[1.15]	
max. ambient air temperature (°F [°C])	+118	+48	
min. ambient air temperature (°F [°C])	-4.0	[-20]	
cooling medium	PCW/AFN	PKW/AFN	AFN = 38% ethylene glycol rate
min. cooling medium out (°F [°C])	+66.2	[+19.0]	
max. cooling medium out (°F [°C])	+71.6	[+22.0]	
temperature stability (K)	±0.8		
min. volume of cooling medium (gpm [l/min])	34.34	[130.0]	
ext. pump pressure (psig [bar])	58.0	[4.0]	Fabr.: Speck Type: IN-V10-50
pump power (HP [kW])	4.0	[3.0]	
noise level (dB[A])	61		abt. 32.8 ft [10m] distance/ 118°F [48°C]
	55		abt. 32.8 ft [10m] distance/ 90°F [32°C]
	50		abt. 32.8 ft [10m] distance/ 70°F [21°C]
power supply (V/Ph/Hz)	480/3/60		tolerance -14/+10%V/±1 Hz
control voltage (VDC)	24		
full load amps (A)	58.5		
form of protection	IP 54		
internal piping volume (gals. [l])	4.49	[17.0]	
plumbing	2"		
shipping weight (lbs [kg])	3,527 [1,600]		
operation weight (lbs [kg])	2,425 [1,100]		



[...] = alternate units



Warning:
 The 38% glycol rate depends
 not on the local ambient
 temperature !!!

**Do not use propylene glycol or
 automotive antifreeze.**

nameplate KCC 215-L-S

	KKT KRAUS [®] REFRIGERATION & AIR CONDITIONING	Industriestraße 23a D-91207 Lauf Tel. +49(0)9123/174-01 Fax +49(0)9123/824-41	
			0036
COMMERCIAL PROCESSING WATER COOLER OUTDOOR USE			
Manufacturer	KKT Kraus Klimatechnik GmbH		
Model	KCC 215-L-S		
Produce-No.			
Date of manufacture			
Electrical rating	380-480V/50Hz/3		
Minimum supply circuit ampacity	55 A		
Overcurrent protective device	75 A		
Refrigerant	R134a		
System 1	12.0kg	26.5lb	
System 2	12.0kg	26.5lb	
High pressure switch off	19.0bar	275psig	

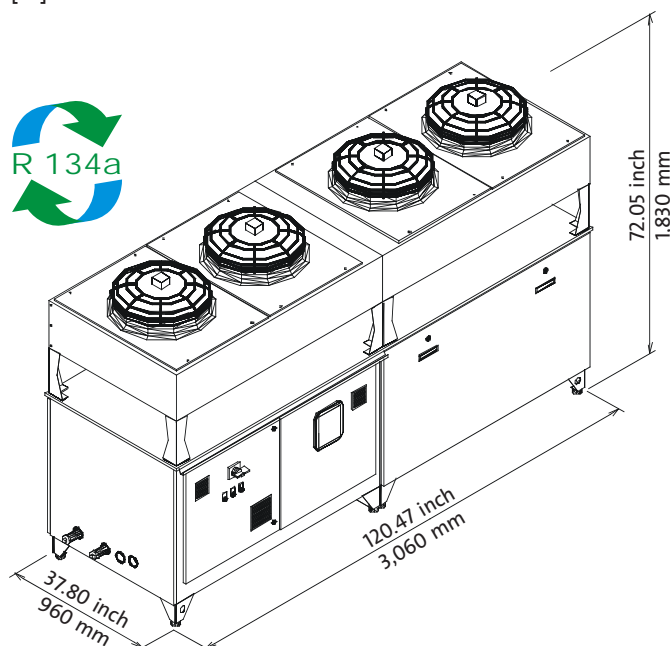
technical data

Waterchiller Typ KCC 215-L-S outdoor use
 designed for MAGNETOM AVANTO / ESPREE / Trio, A Tim System



standard device	standard construction		note
nominal cooling capacity (Btu/hr [kW])	205,000	[60.0]	
refrigeration medium	R 134a		
quantity of compressors	2		
compressor capacity (HP [kW])	21.7	[16.0]	Fabr.: DWM Type: ZR 19
volume of condenser airflow (m³/s [m³/h])	10.0	[36,000]	
number of axial fans (piece)	4		
condenser fan motor (HP [kW])	1.54	[1.15]	
max. ambient air temperature (°F [°C])	+118	+48	
min. ambient air temperature (°F [°C])	-4.0	[-20]	
cooling medium	PCW/AFN	PKW/AFN	AFN = 38% ethylene glycol rate
min. cooling medium out (°F [°C])	+66.2	[+19.0]	
max. cooling medium out (°F [°C])	+71.6	[+22.0]	
temperature stability (K)	±0.8		
min. volume of cooling medium (gpm [l/min])	34.34	[130.0]	
ext. pump pressure (psig [bar])	58.0	[4.0]	Fabr.: Speck Type: IN-V10-70
pump power (HP [kW])	4.0	[3.0]	
noise level (dB[A])	61		abt. 32.8 ft [10m] distance/ 118°F [48°C]
	55		abt. 32.8 ft [10m] distance/ 90°F [32°C]
	50		abt. 32.8 ft [10m] distance/ 70°F [21°C]
power supply (V/Ph/Hz)	380-480/3/50		tolerance -14/+10%V/±1 Hz
control voltage (VDC)	24		
full load amps (A)	55.0		
form of protection	IP 54		
internal piping volume (gals. [l])	4.49	[17.0]	
plumbing	2"		
shipping weight (lbs [kg])	3,638 [1,650]		
operation weight (lbs [kg])	2,535 [1,150]		

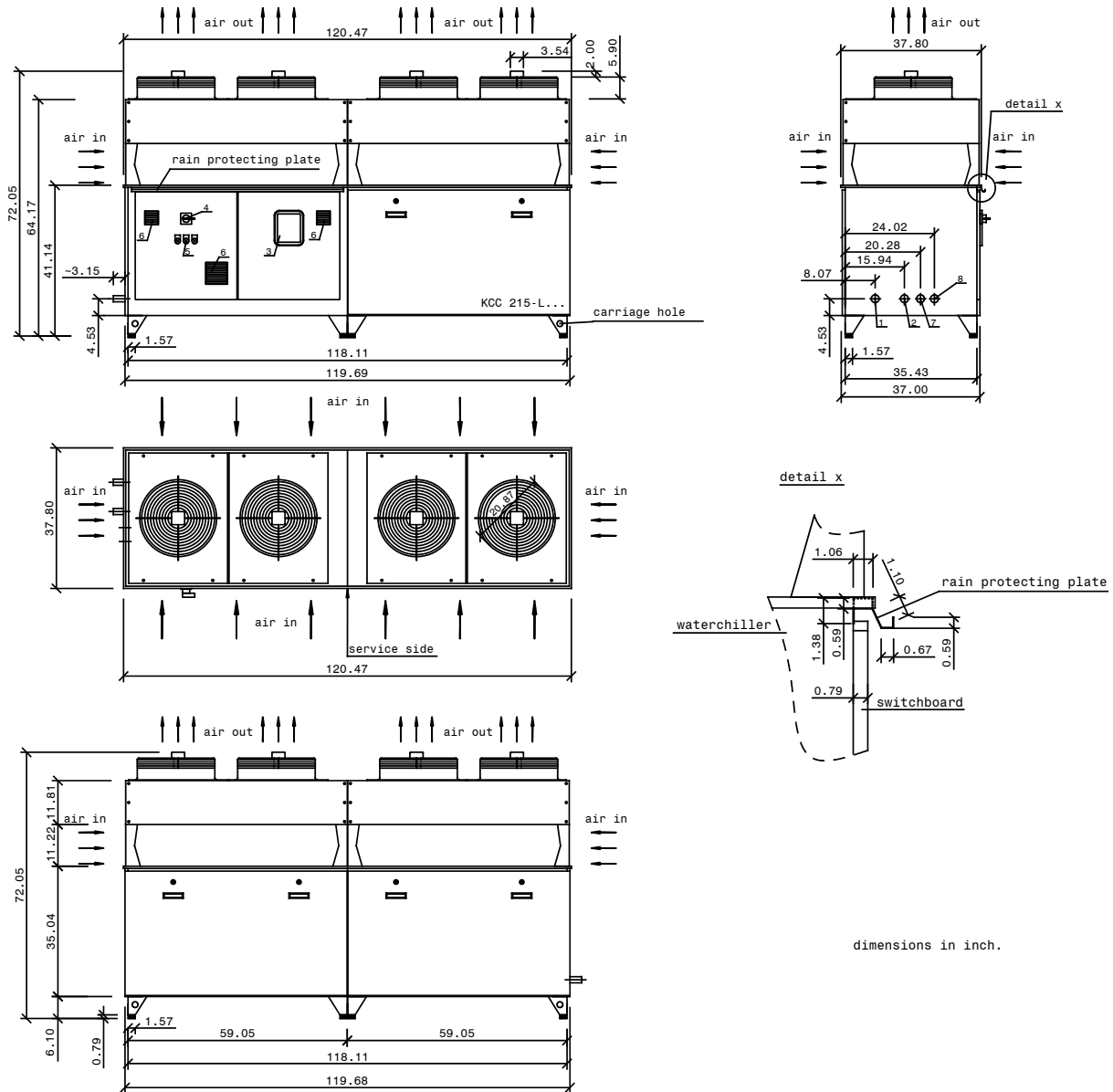
[...] = alternate units



Warning:
 The 38% glycol rate depends
 not on the local ambient
 temperature !!!

**Do not use propylene glycol or
 automotive antifreeze.**

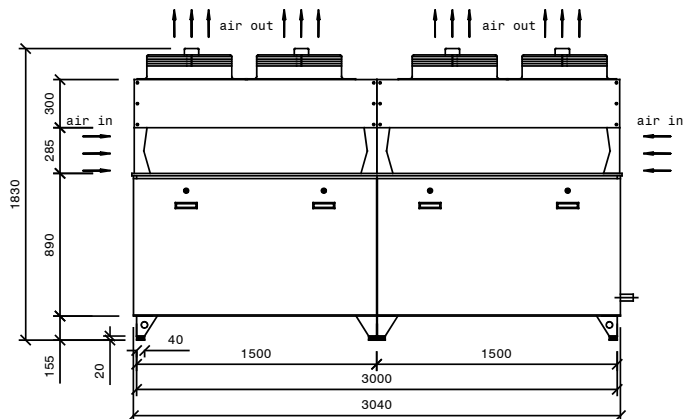
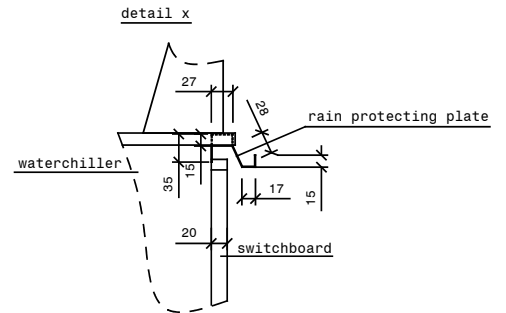
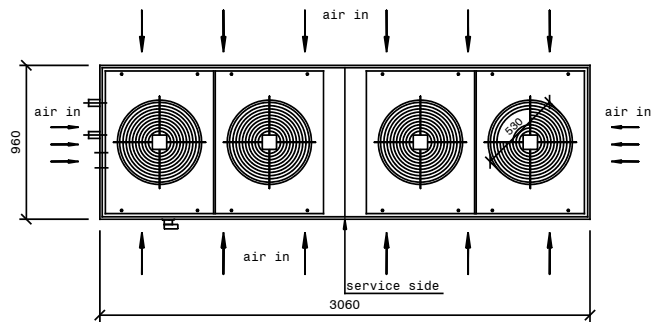
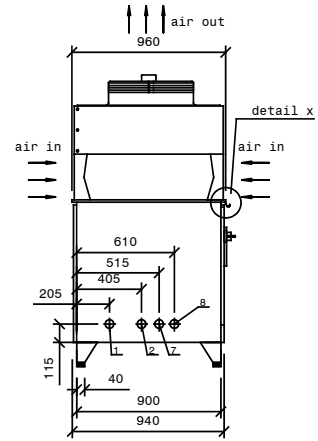
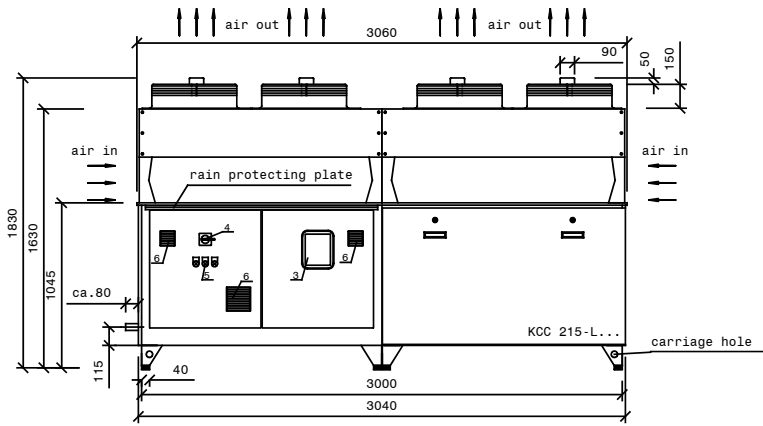
dimensions KCC 215 (inch)



dimensions in inch.

- | | |
|---------------------------------------|---|
| 1 = water return from IFP (2") female | 5 = controll lamps |
| 2 = water supply to IFP (2") female | 6 = switchboard ventilation |
| 3 = DDC-display | 7 = cable passage "main power" |
| 4 = main switch | 8 = cable passage "data transfer cable" |

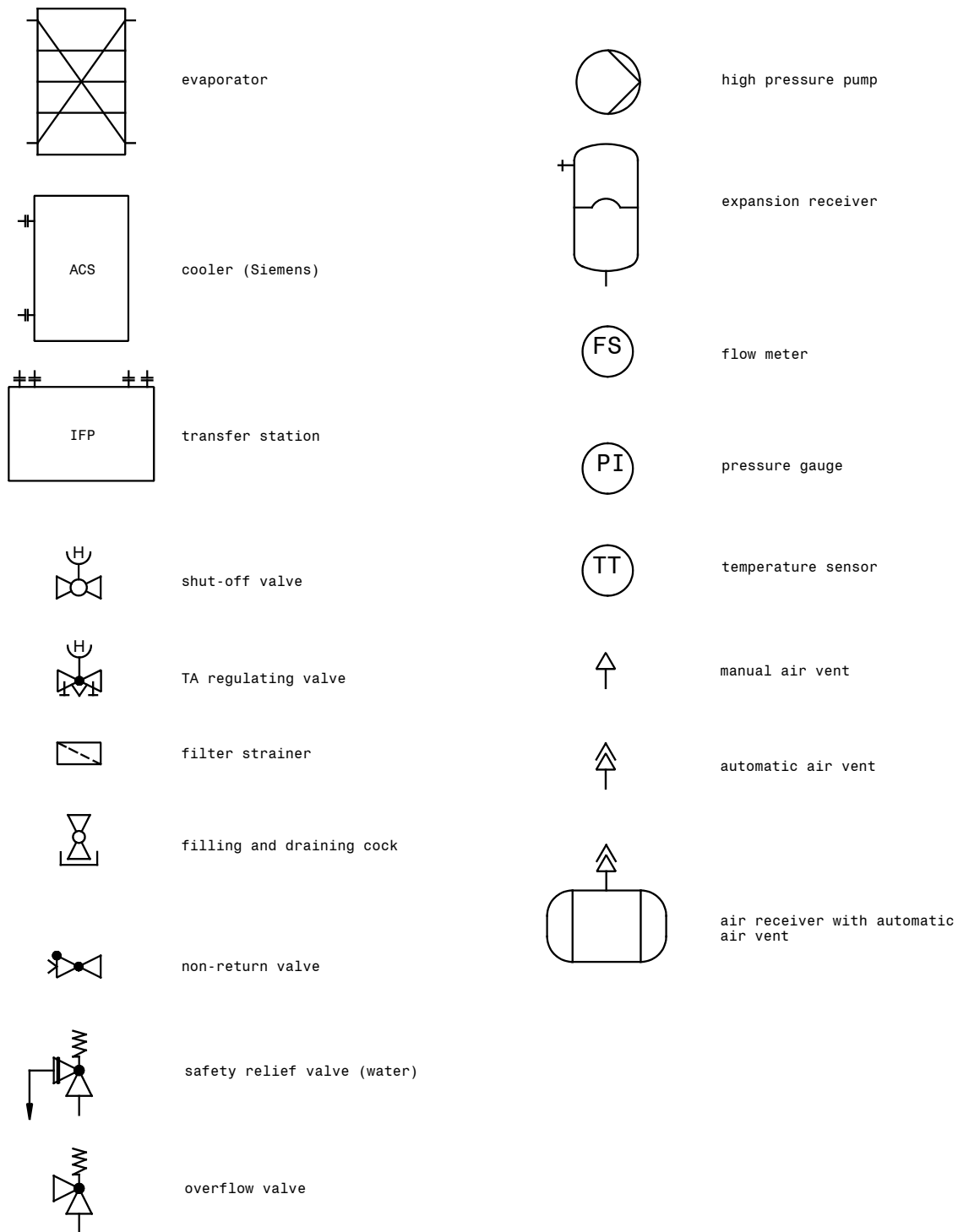
dimensions KCC 215 (mm)



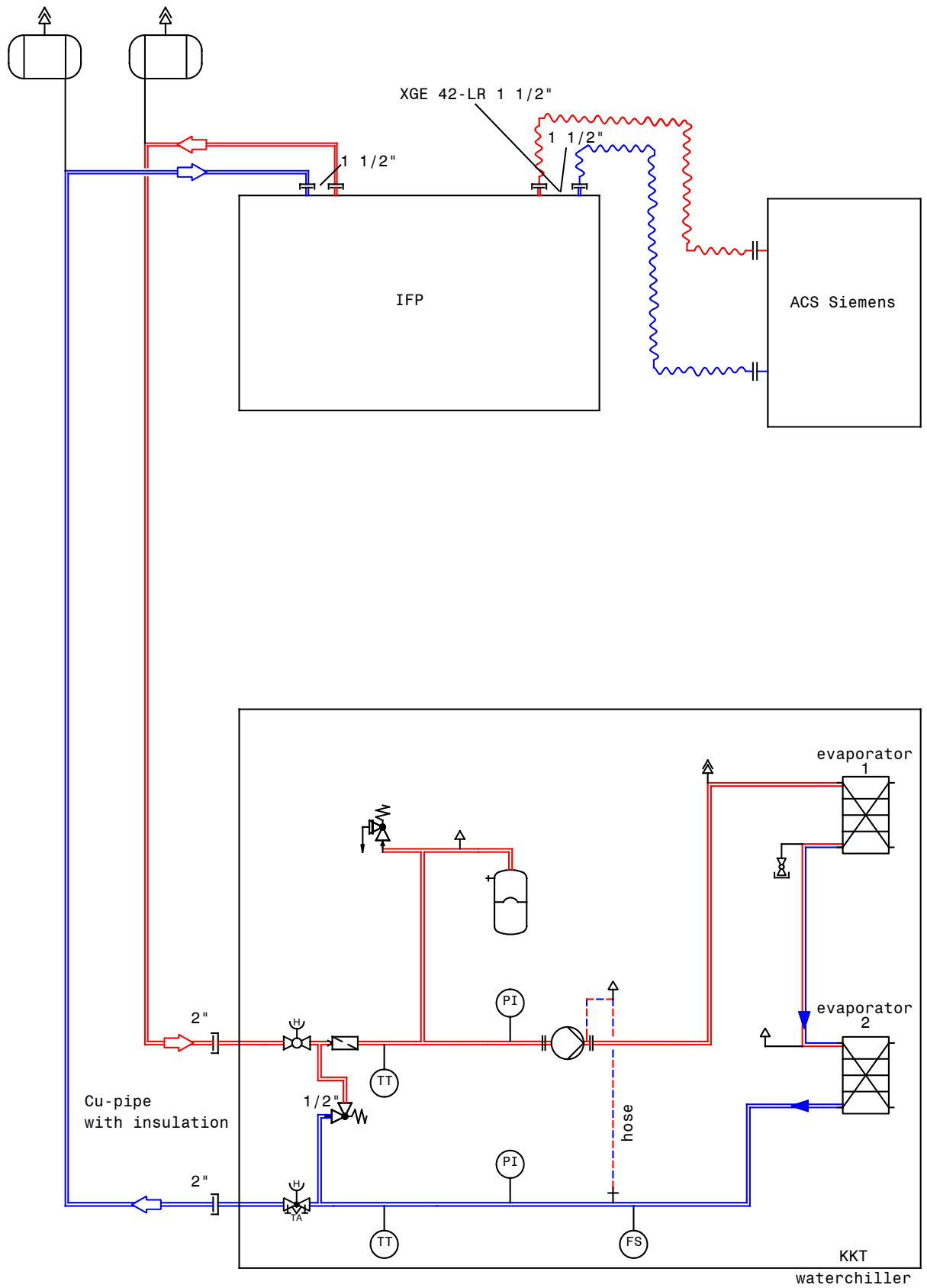
dimensions in mm.

- | | |
|---------------------------------------|---|
| 1 = water return from IFP (2") female | 5 = controll lamps |
| 2 = water supply to IFP (2") female | 6 = switchboard ventilation |
| 3 = DDC-display | 7 = cable passage "main power" |
| 4 = main switch | 8 = cable passage "data transfer cable" |

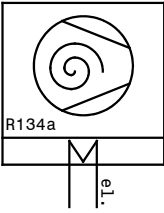

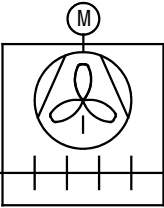

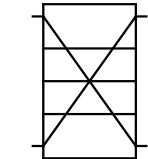
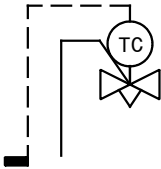



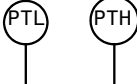






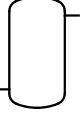



key: cold water- / glycol diagram



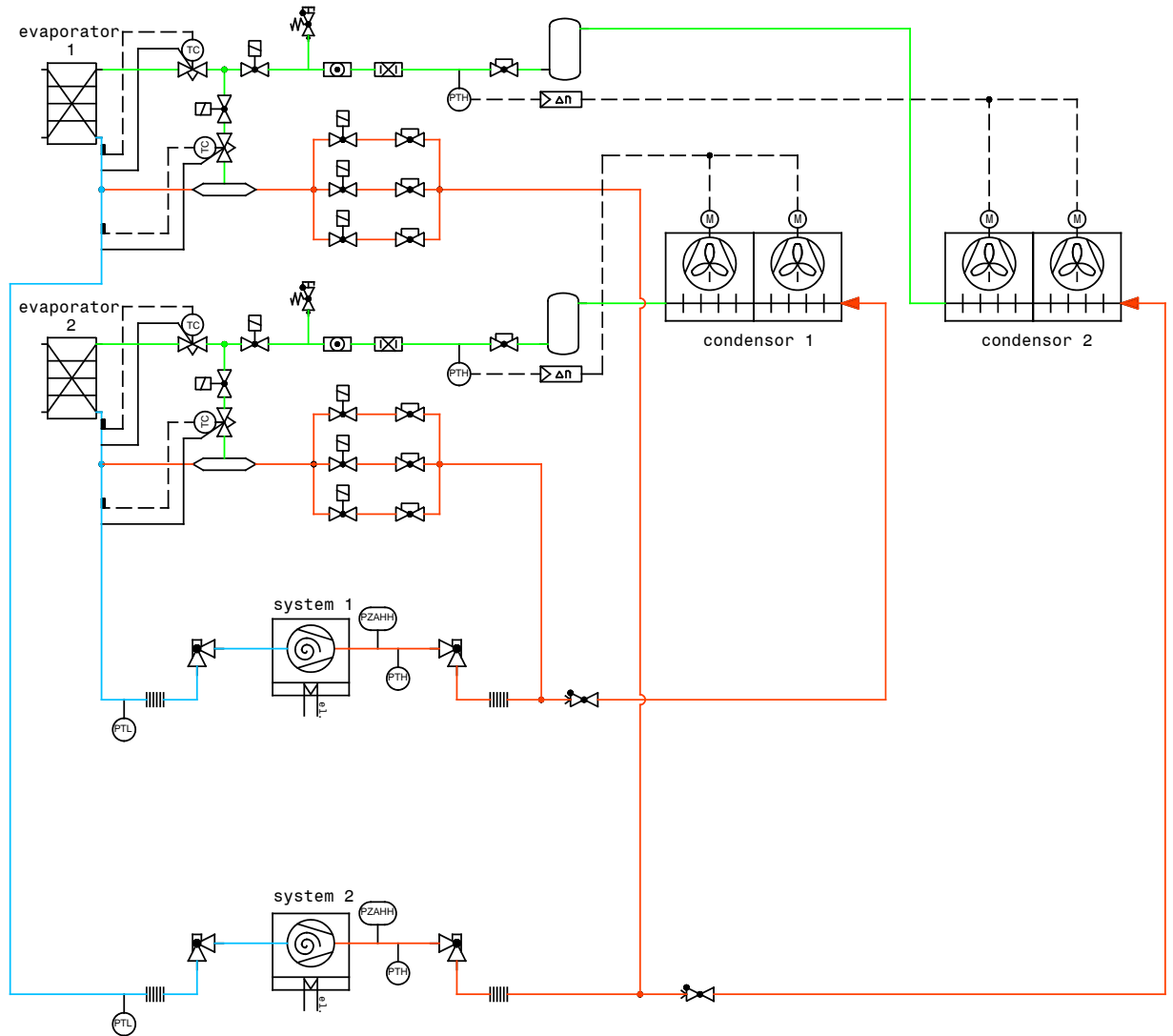
cold water- / glycol diagram



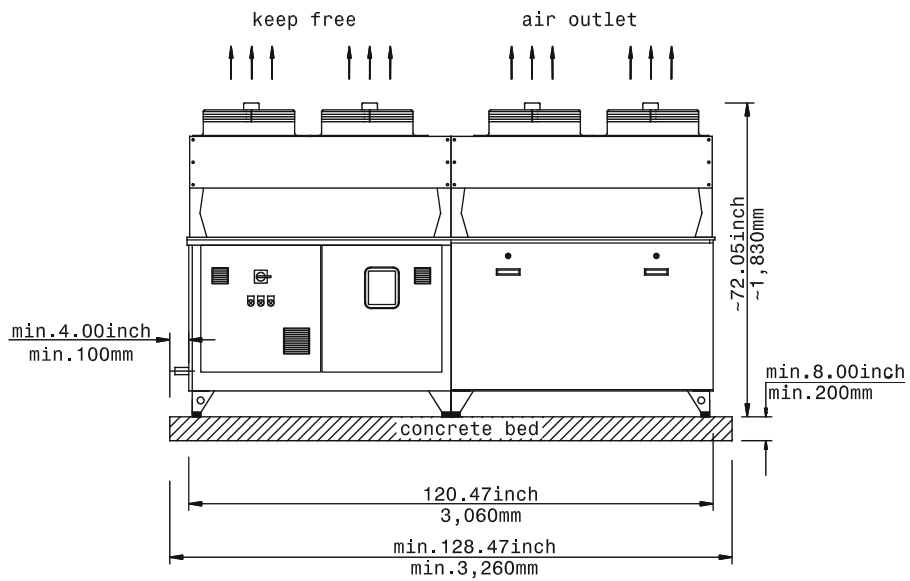
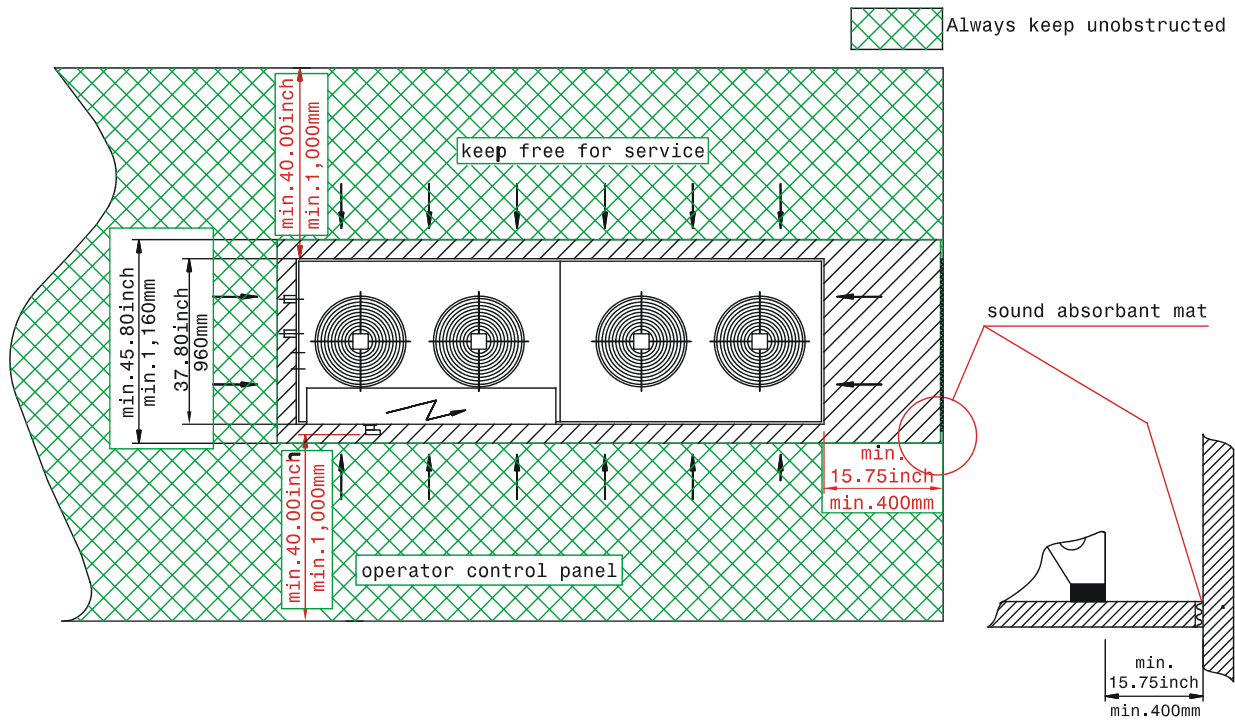
key: refrigerant diagram

	<p>compressor with crank-tub-heater</p>		<p>Rotalock valve</p>
	<p>condenser with fan</p>		<p>solenoid valve</p>
	<p>evaporator</p>		<p>thermostatic expansion valve</p>
	<p>refrigerant shut-off valve with cap</p>		<p>speed controller</p>
	<p>vibration absorber</p>		<p>low-/high pressure receiver</p>
	<p>refrigerant non-return valve</p>		<p>high pressure switch</p>
	<p>refrigerant dehydrator</p>		<p>pipe mixing section</p>
	<p>inspection gauge with moisture indicator</p>		<p>hot gas line</p>
	<p>receiver</p>		<p>liquid line</p>
	<p>Schrader valve</p>		<p>suction gas line</p>

refrigerant diagram



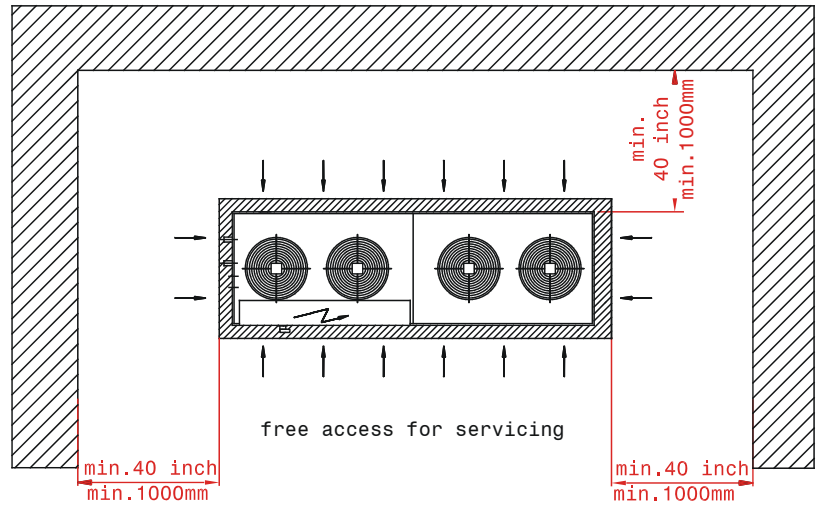
waterchiller installation / I



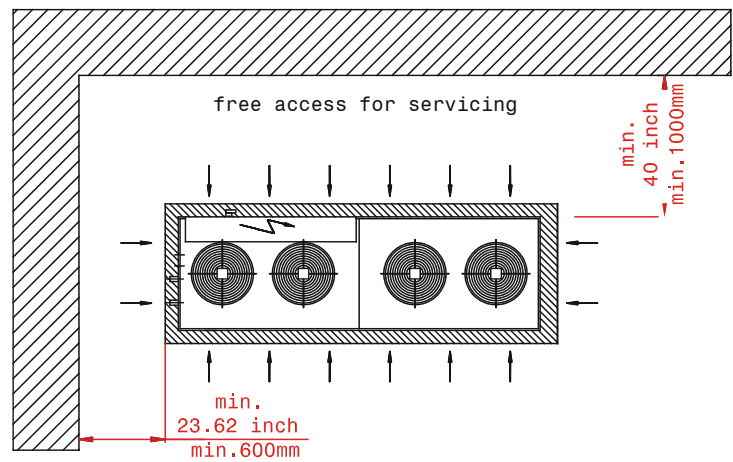
Dimensions for the concrete bed should be adjusted according to local circumstances.

waterchiller installation / II

installation example A

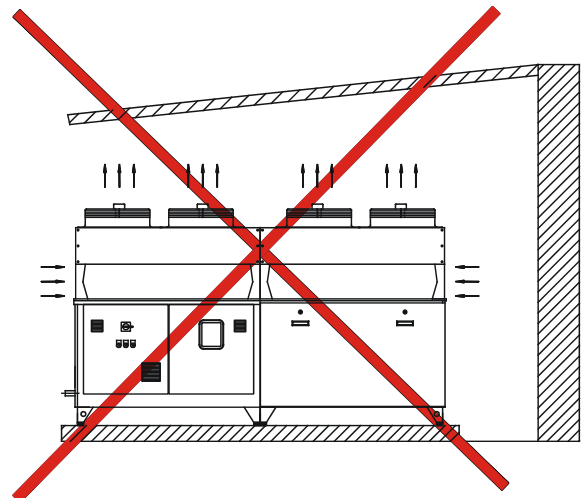


installation example B

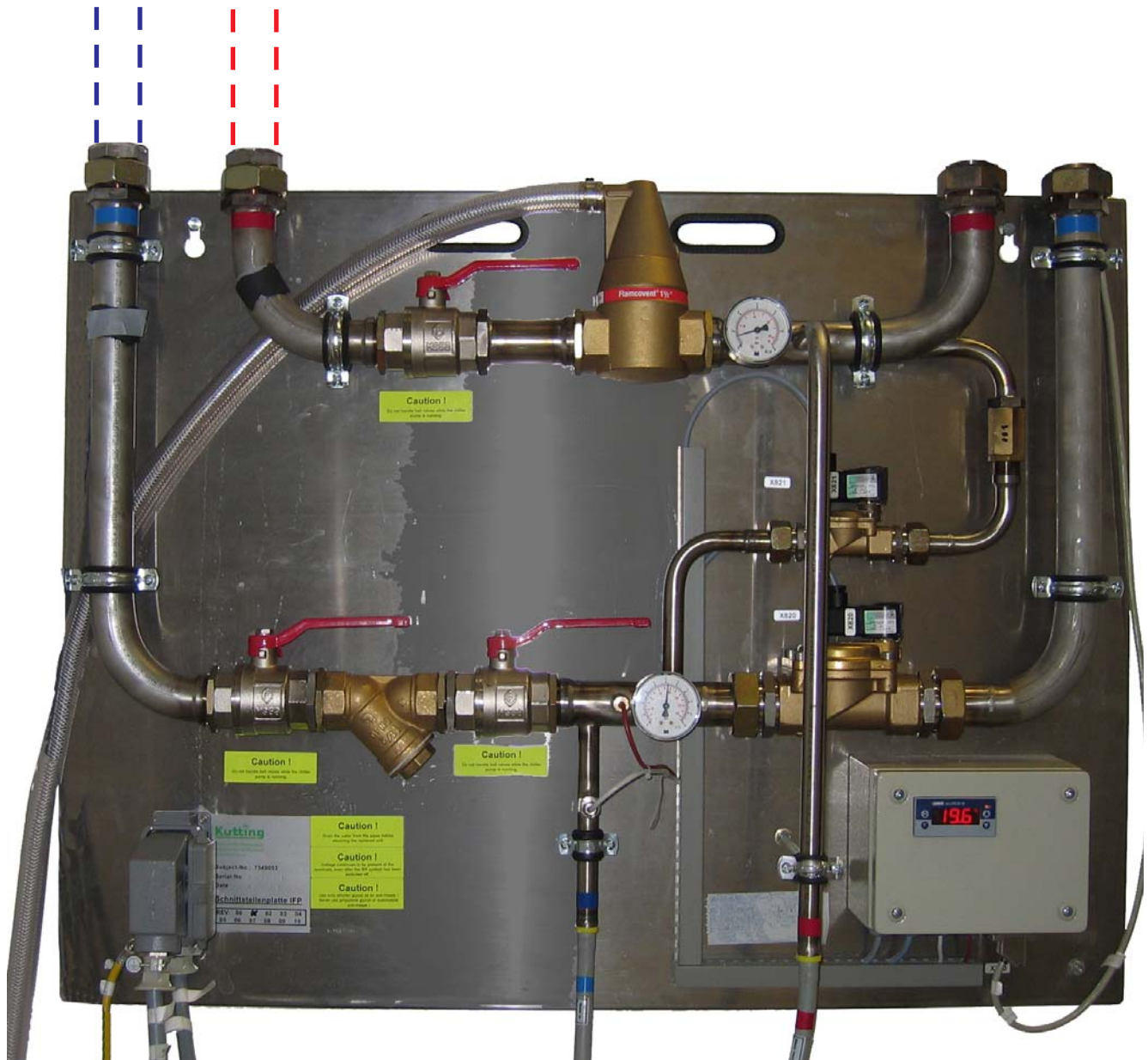


installation example C

Air outlet keep free!

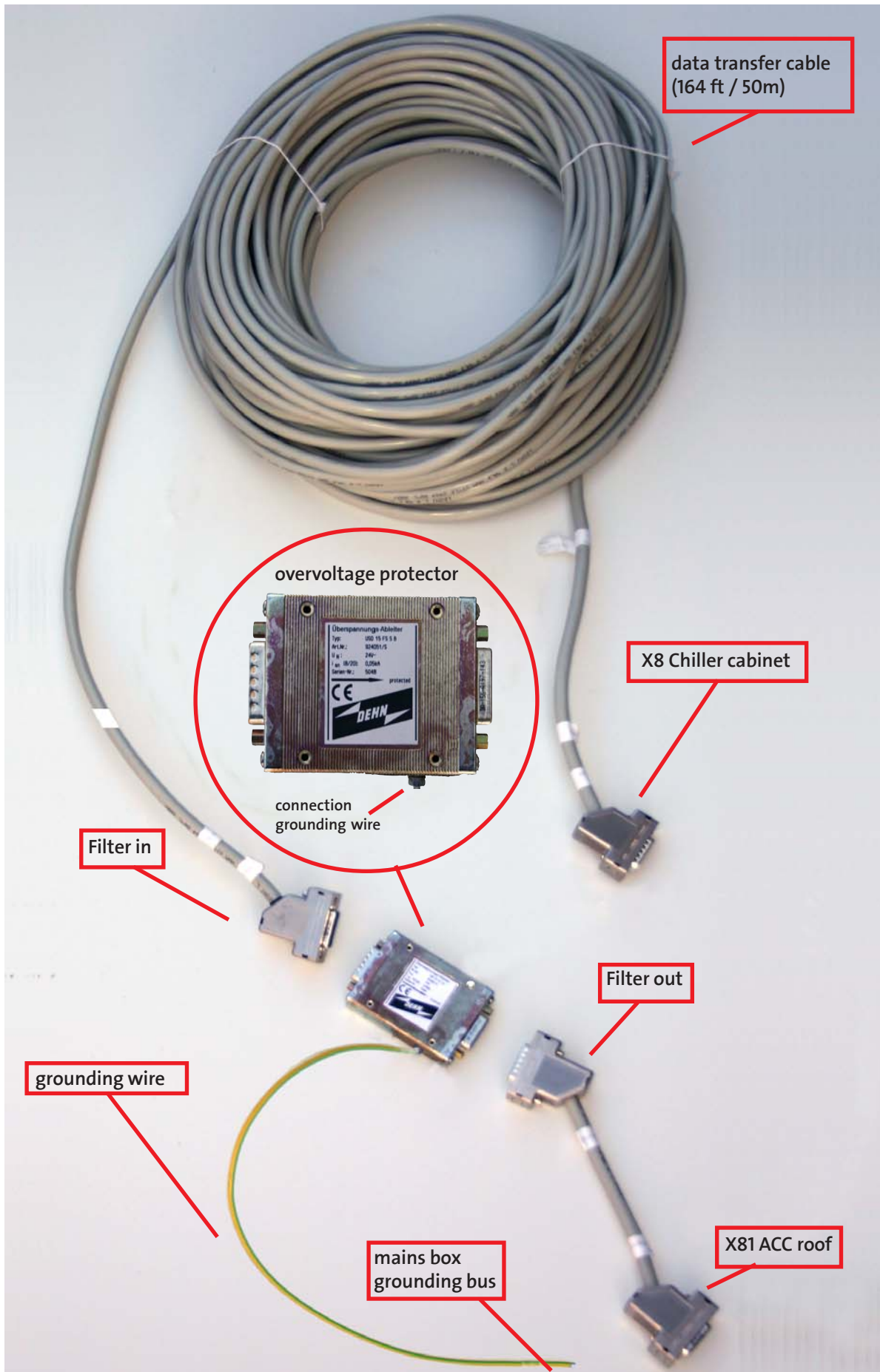


connector fittings
located inside KKT-Chiller

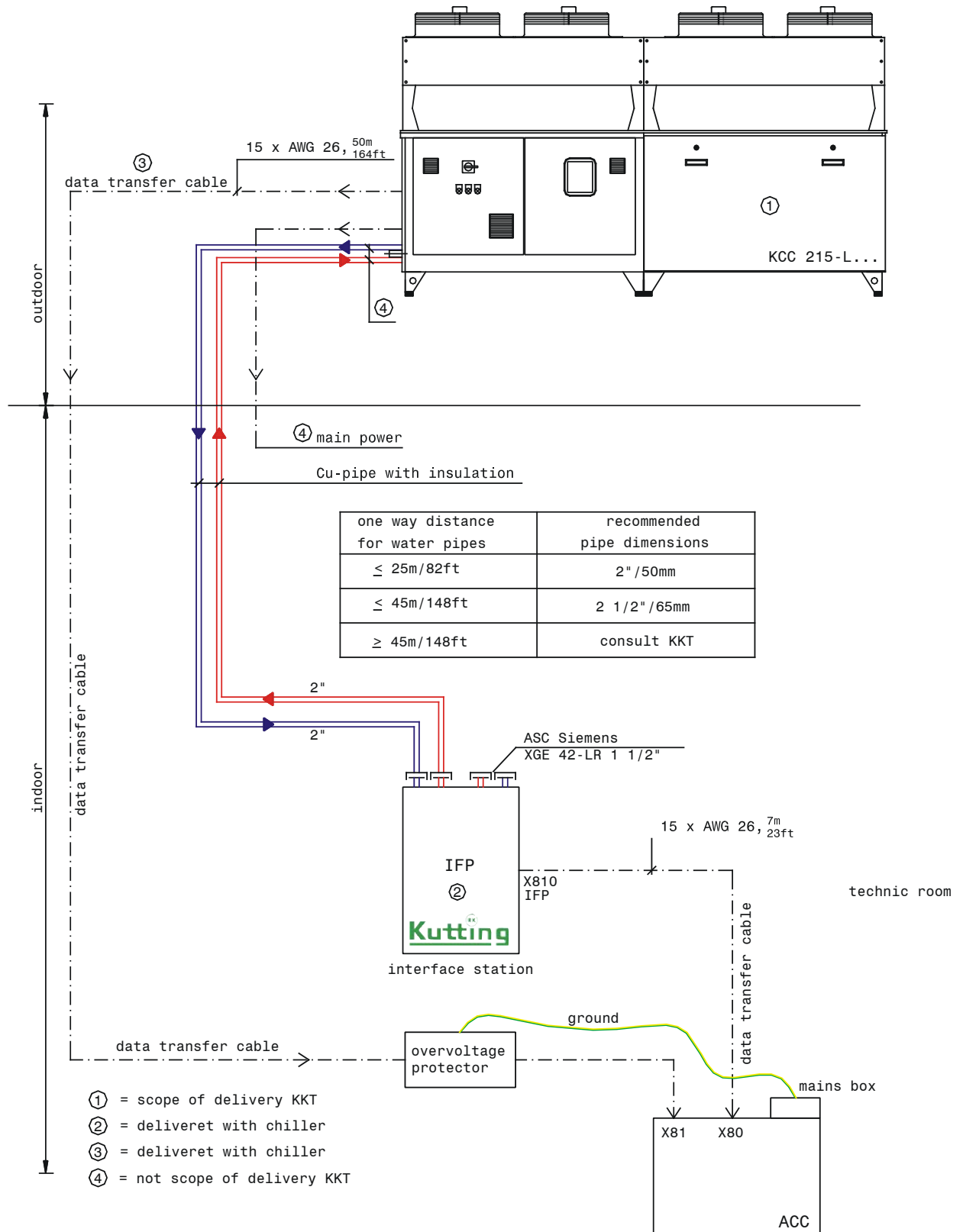


for further information contact **Siemens Customer Support**

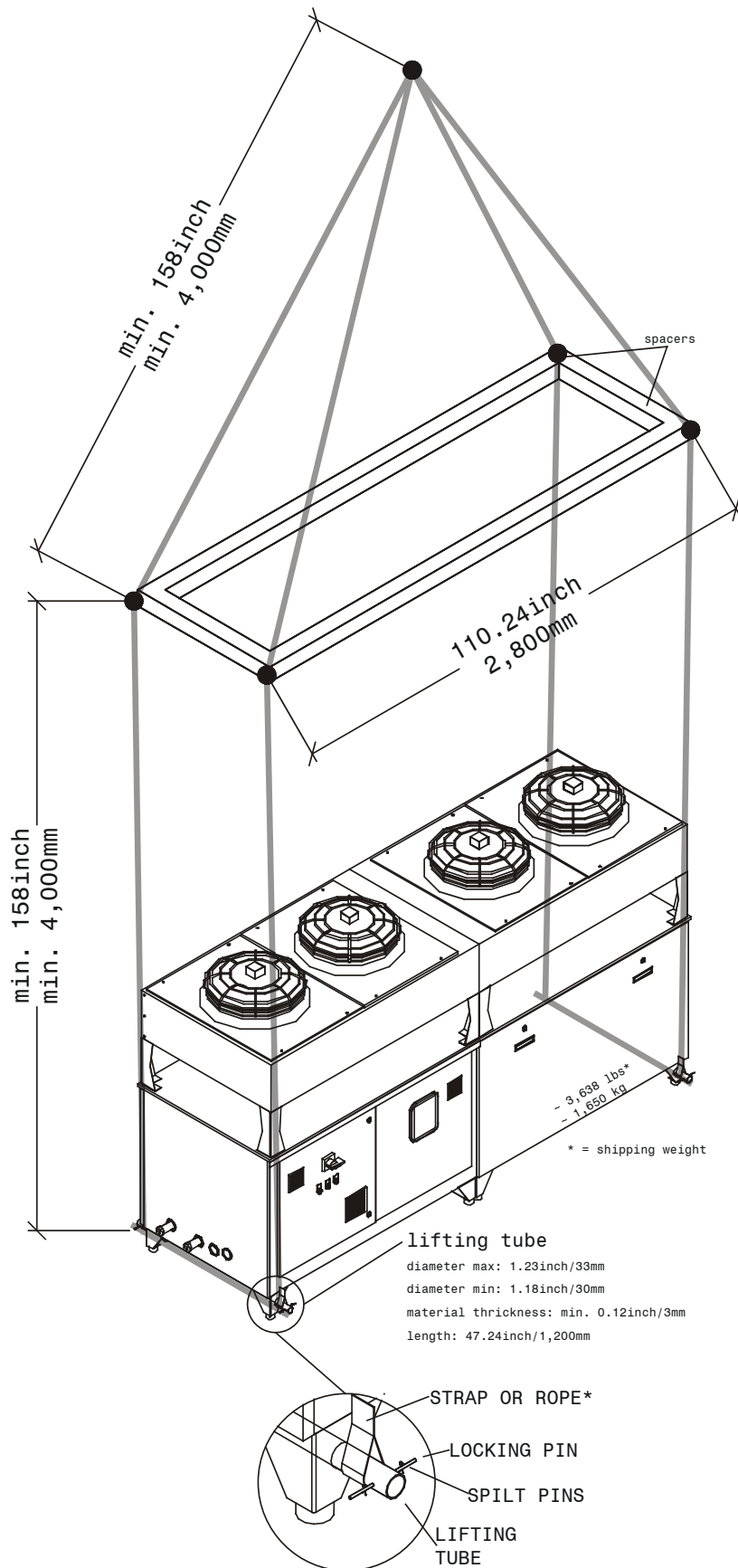
overvoltage protection



overview of waterchiller transfer station / remote control panel



transport



***Attention: don't use metal rope !!**

Technical development
may cause changes of configuration

KKT-KRAUS
Refrigeration & Air Conditioning
Industriestraße 23a
D 91207 Lauf a. d. Pegnitz

Mail kkt@kkt-kraus.com

Phone +49 9123 174 01
Fax +49 9123 82441

© KKT-KRAUS Refrigeration & Air Conditioning

H:\PM\Geräte\Avanto\Prospekt\Avanto0107.pmd