

물 품 규 격 서

『명지대학교 반도체특성화대학사업단 일체형 공랭식 자동 냉각기(칠러) 구입』

품명	모델 및 규격(사양)
액정 타블렛	1. 모델: 현대이엔지 HD-7.5A(7.5RT) 1대, 현대이엔지 HD-02A(2RT) 1대 2. 규격 및 사양 1) 주요 성능 필요 사항 (공통) • Temperature range: +5 °C to +20 °C • Temperature stability: ±1 °C / minute or less • Inflow pressure range: 2 bar to 5 bar • Range of differential pressure: 1.5 bar to 3.5 bar • Overall cooling Capacity: 18kW (1호기 기준) • 주요 조건: 온도 20°C, 유량 30L/min (첨부3) 2) 세부 사양 I (성능 및 소비 전력) • 1호기 (현대이엔지 HD-7.5A: Chiller for CX) - Overall cooling Capacity ≥ 18kW - 전기 시설: 380V / 3상, ≤ 7.5kW • 2호기 (현대이엔지 HD-02A: Chiller for EX) - Overall cooling Capacity ≥ 6kW (1호기의 1/3 수준) - 전기 시설: 220V / 단상, ≤ 3kW 3) 세부 사양 II (설치환경: 공간 및 반입구) • 설치 장소: 실내 설치를 위한 일체형 구조 (실험실 내부 교육 환경에 설치) • 반입 Elevator 제약 - 입구 폭: 99cm - 실내 공간: 세로 150cm x 가로 150cm 4) 세부 SPEC (첨부. 1~3) • 용도: 반도체 검사장비 PCW 공급 목적 (설비명 : V93000, ADVANTEST 社) • 세부 SPEC: 원문 참조 (첨부) 3. 기타사항: 직납 및 설치 완료 조건 - 납품 및 설치기한: <u>2026.11.30.(월)까지</u> - 납품 및 설치장소: 명지대학교 자연캠퍼스(용인) 제3공학관 19207호 반도체테스트랩 - 칠러를 기존에 설치된 반도체 테스트 장비와 호스를 사용하여 PCW Line Hook-up 작업 포함 - 모델 및 사양 관련 문의처: 반도체특성화사업단 김경택 교수(031-324-1273) *첨부1: Site Water spec(PCW) *첨부2: Cooling Unit Capacity Site Water spec(PCW) *첨부3: Normal Operationg Point

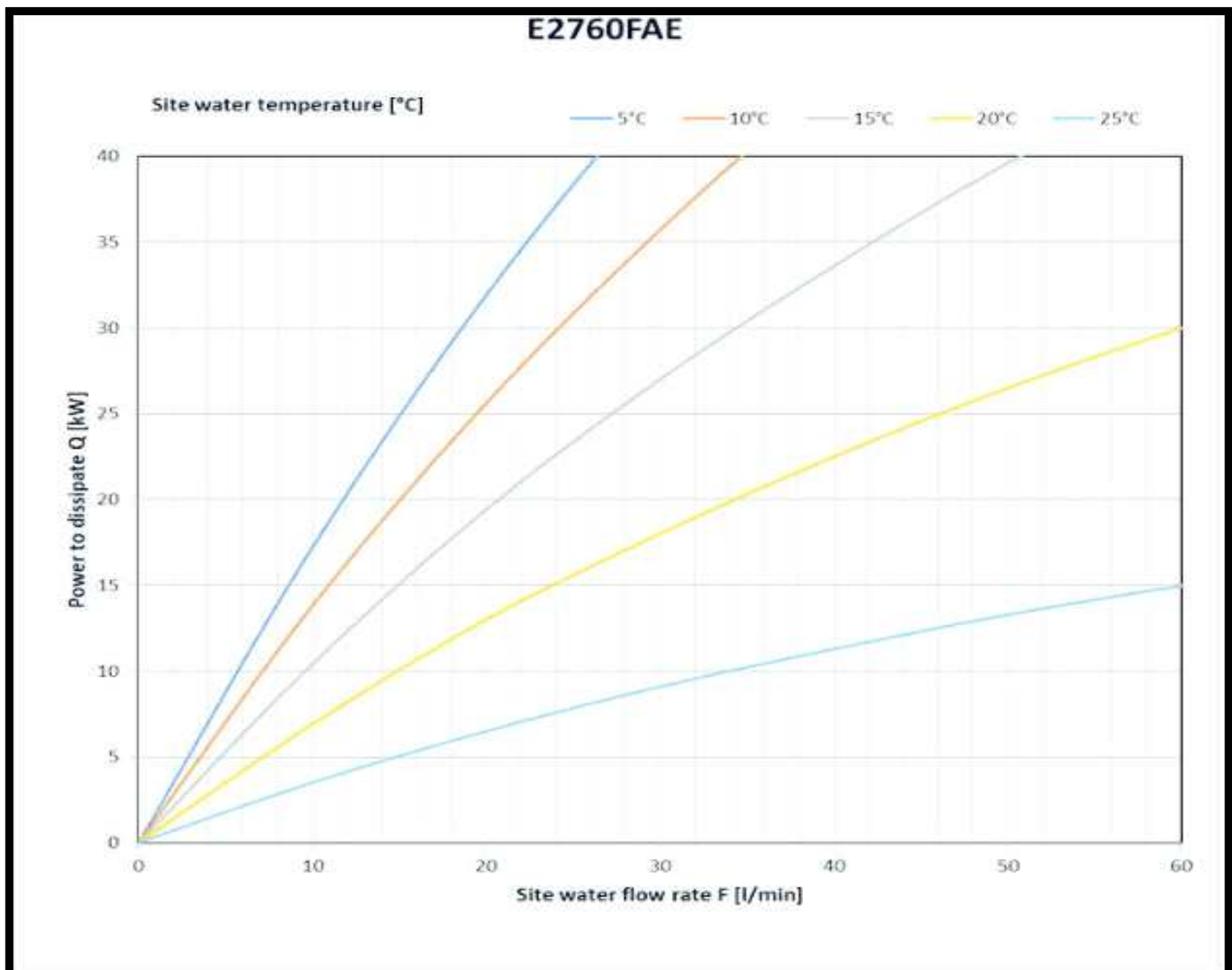
첨부1. Site water spec (PCW)

Operating range	
Site water specification	
Site water	Supply specification
Temperature range	+5 °C to +20 °C (+41 °F to +68 °F)
Temperature stability	±1 °C (1.8 °F)/minute or less
Inflow pressure range	2,000 hPa to 5,000 hPa = 2 bar to 5 bar (29.0 psi to 72.5 psi) If the site water pressure exceeds the maximum value, a pressure reducer has to be applied.
Range of differential pressure	1,500 hPa to 3,500 hPa = 1.5 bar to 3.5 bar (21.8 psi to 50.7 psi)
Flow rate	The minimum allowed site water flow rate will depend on the number and type of boards installed in the test head. The final assessment must always be made in conjunction with the available site water temperature and the water temperature programmed for the secondary cooling loop. This temperature is nominally to be set to +30 °C (+86 °F) as per default. For operating the secondary cooling loop at +25 °C (+77 °F) refer to the PSS-L-E documentation.
If your system cooling scenario is similar to the following scenario your cooling unit may run into regulation problems which could cause temperature fluctuation around the set point.	
• System heat load ≤ 2.5 kW • Site water temperature < +10 °C (50 °F) • Site water pressure > 3,500 hPa = 3.5 bar (50 psi) • Pressure differential > 500 hPa = 0.5 bar (7 psi)	
If fluctuations are occurring, Advantest recommends to install a pressure and flow rate reducer.	

첨부2. Cooling Unit Capacity

Weights and dimensions of installed cooling unit				
System component	Weight [kg] ([lb])	Height [m] ([ft])	Width [m] ([ft])	Depth [m] ([ft])
Cooling unit E2760FAE	83 (183.0) ¹⁾	0.832 (2.73)	0.363 (1.19)	0.815 (2.67)
Capacity				
System component	Overall cooling capacity			
Cooling unit E2760FAE	18 kW			

첨부3. Normal Operating Point



The information of this graph is given as a table below.

Power to dissipate Q [kW]					
Site water flow rate F [l/min]	Site water temperature				
	5°C	10°C	15°C	20°C	25°C
0	0	0	0	0	0
10	17,2	13,8	10,4	6,9	3,5
20	31,9	25,6	19,4	13	6,5
30	44,3	35,7	27	18	9,1
40	55,2	44,6	33,6	22,5	11,3
50	65	52,5	39,6	26,5	13,3
60	73,8	59	44,7	30	15
70	81	65,5	49,4	33	16,6

 = nominal operating point