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Discipline : <i>Cooling Tower</i>			Document nr.
Section : Tower Pack© Module			12.4.2
			G08200197

1. INTRODUCTION

ACTS Tower Module is part of the APS Tower Pack® cooling tower. A Tower Pack® consists of up to four Cooling towers modules, two ACTS fluid pump, controls & distribution panel and fluid distribution headers. One tower Module consists of two 20ft. containers stacked on top of each onsite. The upper part contains the tower fill, water distribution system, drift eliminator and fans. The bottom part contains the sump and storage space for hoses. The connections between the Tower Module and the pump skid are via 200mm flexible hose with quick connect Perrot Coupling.

2. KEY-DATA

Design flow	263 m3/h	
Installed Motor Rating	2 x 15 /11 ^(*) kW @ 400V 3ph_50Hz	
Dimensions	Top	Bottom
length	6,350 mm	5,970 mm
width	2,360 mm	2,360 mm
height	2,550 mm	2,550 mm
Weight transport	3,500 kg	1,950 kg
maximum	5,000 kg	8,950 kg

3. IDENTIFICATION



YAMD (top) YAMC (bottom)



YBAD (top) YAZX (bottom)

Notes :

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4. TECHNICAL SPECIFICATIONS

ITEM	UNITS	VALUE
Design Performance Data		
Cooling Thermal Duty	kW	2,450
Water Flow Rate	l/s _ m ³ /h	73 _ 263
Water Inlet temperature	°C	35
Water Outlet temperature	°C	27
Wet bulb Temperature	°C	21
Evaporation Loss - We	l/s _ m ³ /h	1 _ 3.58
Drift Loss (estimated) ****)	%	< 0.0005
Water Supply Pressure	kPa	24
Water Loading on Fill	(m ³ /h)/m ²	19.22
L/G Ratio		1.5436
Mass transfer Coefficient (KaV/L)		1.703
Operating Limits		
Minimum Water Flow **)	l/s _ m ³ /h	55.5 _ 200
Maximum Water Flow	l/s _ m ³ /h	97.2 _ 350
Water Inlet Temperature	°C	55
Maximum Ambient Dry-Bulb Temperature	°C	45
Fan Data		
Fan Type		Axial
Motor Fan Coupling		Direct
Number of Fans		2
Air Volume per Fan	m ³ /h	80,000
Air Velocity on Fill	m/s	3.2
Synchronous Fan Speed	rpm	750 / 500 ^(*)
Absorbed Power at Duty Point per Fan	kW	10
Installed Power per Fan	kW	15 / 11 ^(*)
Electrical Data		
Supply Voltage 3 phase	V / Hz	400 / 50
Operating Amperage	A	40
Maximum Starting Amperage	A	160 / 120 ^(*)
Electrical connection	Cee –form	63A 3P+E
Noise Data		
Sound Pressure Level at 10 Metre Lp(A) ***)	dB(A)	74 / 69 ^(*)
Sound power level Lw(A) ***)	dB(A)	103 / 98 ^(*)
Construction Detail Top Section		
Overall Length	mm	6,350
Overall Width	mm	2,360
Overall Height	mm	2,550
Weight Empty	kg	3,500
Maximum Weight	kg	5,000
Tower Fill material		PVC
Fill spacing	mm	12
Fill depth	mm	1,000 / 900 ^(*)
Nozzle type		MB 40/23
Number of Nozzles		48
Fluid Connections	DIN	DN200 / PN10
Fluid Hose Adapter	Perrot	Female DN200
		DN150 ^(*)
Plant number		YAMD/YBAD ^(*)
Movex Identification code		CT2500TPKETP

Notes :

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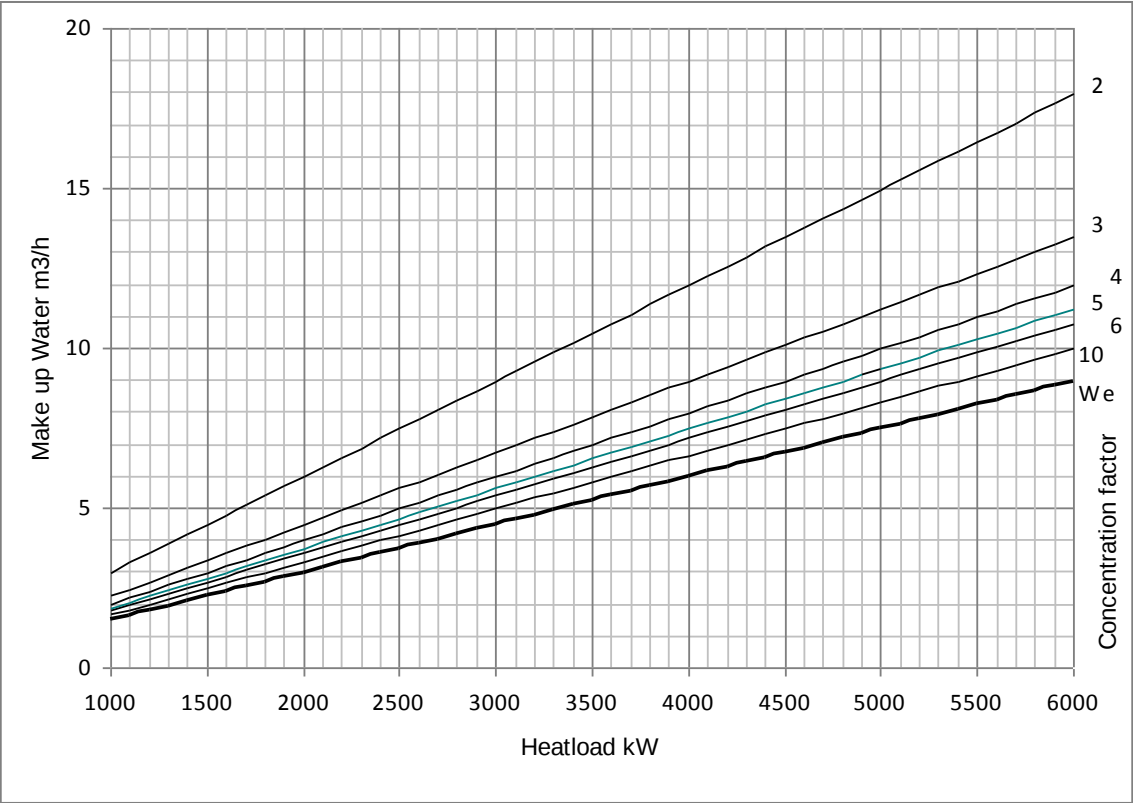
ITEM	UNITS	VALUE
Construction Detail Bottom Section		
Overall Length	mm	6,055
Overall Width	mm	2,360
Overall Height	mm	2,550
Weight Empty	kg	1,950
Maximum Weight	kg	8,950
Maximum Sump Content	litre	7,000
Fluid Connections	DIN	DN200 / PN10
Fluid Hose Adapter	Perrot	Male DN200
Hose Storage	200mm	4 x 5 metre
Plant number		YAMC/YAZX ^(*)
Movex Identification code		CT2500TPKEBP
Applicable Codes and Standards		
European directives		
Machinery Directive		
Low Voltage Directive		
Electromagnetic Compatibility Directive		
British Health and Safety Regulations		HS(G)70
Approved code of Practise		L8
Eurovent guidelines Cooling towers		9/6 -2002
Counter flow Drift Eliminator *)		OM-14-2099
NOTE: Contact Technical Department If Application Conditions Differs From <i>Design</i> Conditions *) Data applies to pant number YBAD build from 2013 onwards **) With alternative Nozzle MB30/18 minimum flow 30.5l/s _ 110 m ³ /h ***) Maximum Noise data at fan operating 100%, sound reductions methods available on request ****) Check Movex for cooling towers plant numbers with certified drift eliminators		

5. PERFORMANCE DATA

5.1 Performance

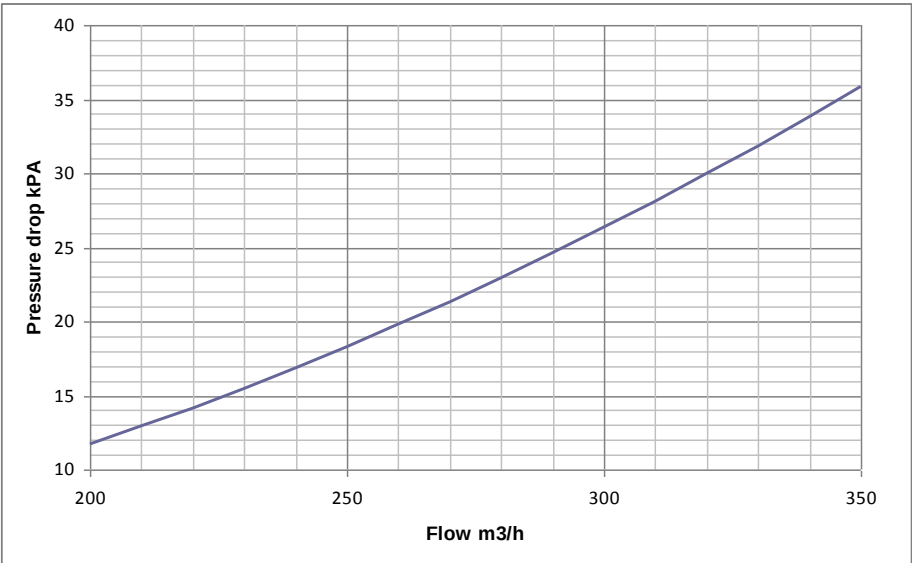
Please consult Aggreko Process Service for performance calculations at given operating conditions.

5.2 Make-up water supply



Note: above graph do not take sensible cooling in to consideration. Actual make up water supply can be up to 20% lower depending on ambient and cooling water temperatures.

5.3 Nozzle Pressure Drop

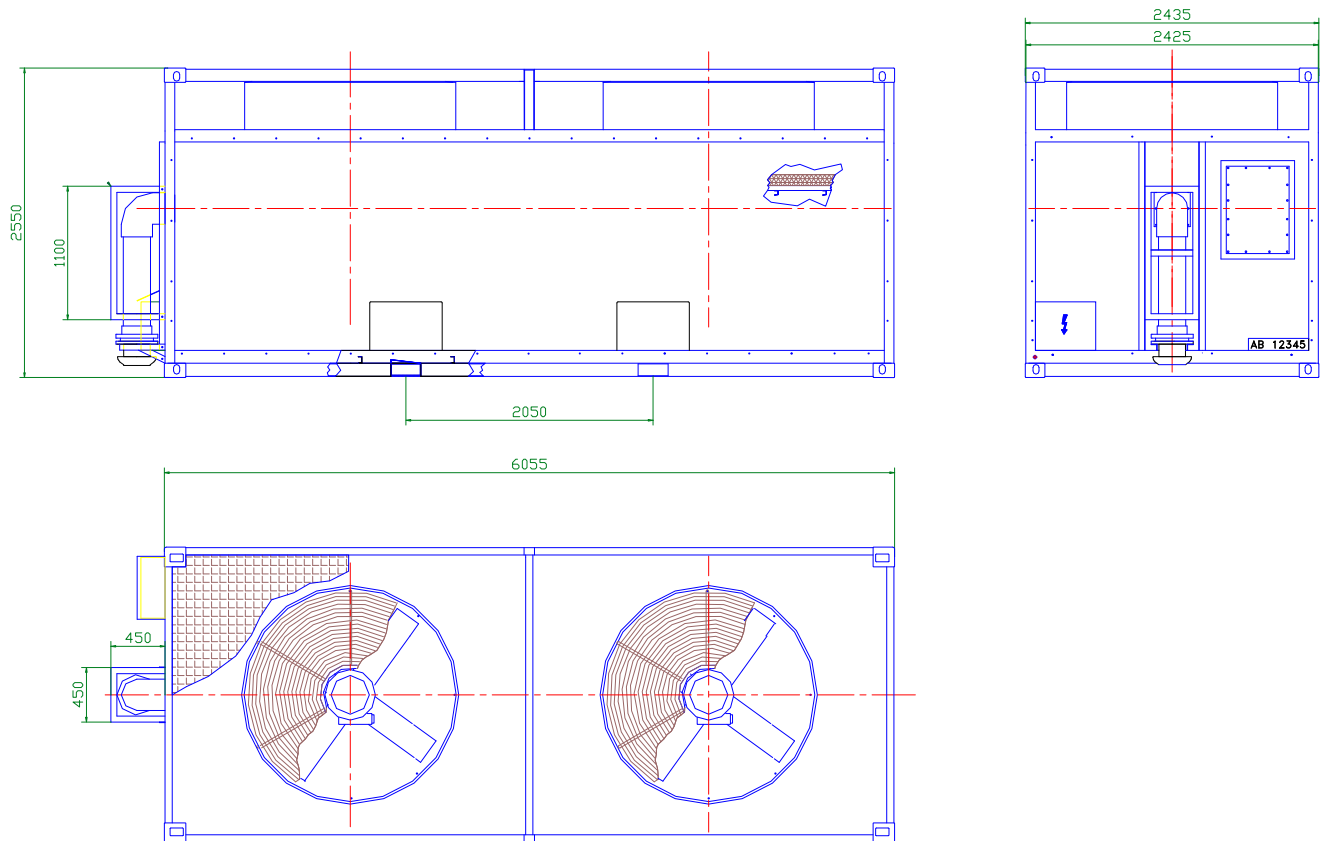


Note, pressure drop at nozzle, to calculate required head add elevation above ground level.

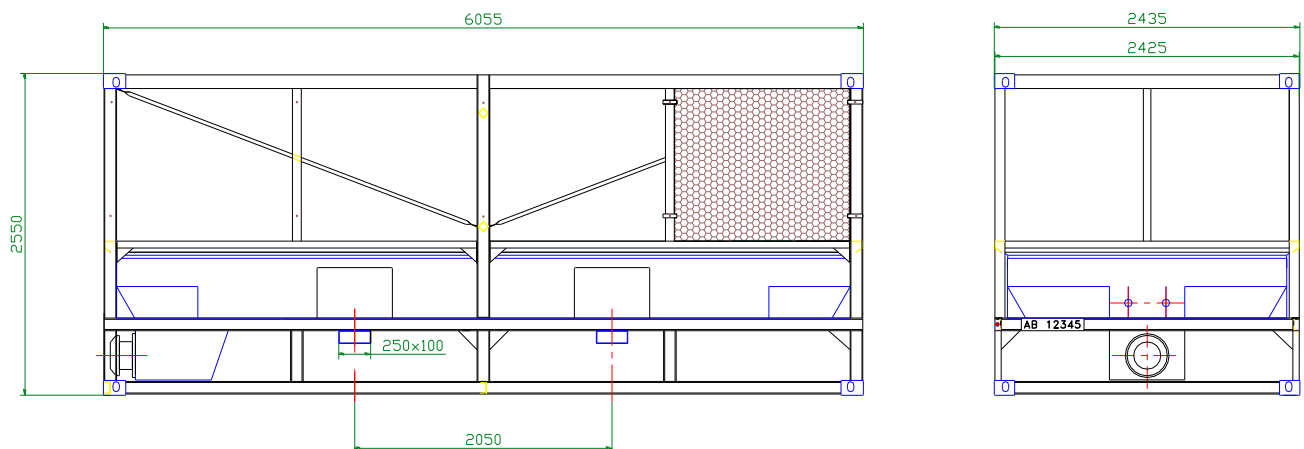
Notes :

6. DIMENSIONS

6.1 Top Section



6.2 Bottom Section



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