



# DUNNAIR

Established 1961

## WSR16

### R410a Refrigerant

### Water Cooled Split Ducted

#### TECHNICAL SPECIFICATION

Total Cooling Capacity	15.8 kW	Refrigerant	R410A
Electrical Input (Cooling)	4.1 kW	Refrigerant Charge	3.8 kg
E.E.R.(Cooling)	3.85	Minimum Water Flow	0.8 l/s
Running Amps (Total)	13.2A	Water Coil Pressure Drop	40 kPa
Fan Motor Full Load Amps	5.0 A	Filter (Option)	EU1
Electrical Supply Required	3 Ph.415V.50Hz	Electric Heat (Option)	12.0 kW

#### COOLING CAPACITY (kW)

AIR FLOW RATE (L/S)			850		
COIL E.A.T.	DB °C		23	27	31
	WB °C		17	19	21
Entering Water Temperature (E.W.T) °C	20	T	16.8	17.7	18.5
		S	12.2	14.0	15.7
		FL	1.0	1.0	1.0
		HR	21.0	21.8	22.8
	25	T	16.0	17.0	18.7
		S	12.3	13.7	15.8
		FL	1.0	1.0	1.0
		HR	20.2	21.1	23.0
	30	T	15.0	15.8	17.6
		S	11.4	13.2	15.4
		FL	1.0	1.0	1.0
		HR	19.0	19.9	21.9
	35	T	14.0	14.8	15.4
		S	11.0	12.8	14.5
		FL	1.0	1.0	1.0
		HR	18.1	18.9	19.5
	40	T	13.4	13.7	14.4
		S	10.7	12.4	14.1
		FL	1.0	1.0	1.0
		HR	17.4	17.7	18.6

T = Total Capacity (kW)

S = Sensible Capacity (kW)

FL = Water Flow rate (l/s)

E.A.T.= Entering Air Temperature (°C)

— = Nominal Capacity (kW)

HR = Heat Rejection

Note: 1. Capacities are indicative and do not include allowance for fan motor heat loss. For fan motor heat loss, please refer to Air Handling Performance.  
 2. Water flow rate and cooling capacity are based on 5°C water temperature difference.

#### HEATING CAPACITY (kW)

##### WSR Reverse Cycle Version

AIR FLOW RATE (L/S)			850		
WATE FLOW RATE (L/S)			1.00		
COIL E.A.T.	DB °C		18	21	25
Entering Water Temperature (E.W.T) °C	10	HC	15.0	14.7	14.1
		Hab	10.9	10.6	10.2
		LWT	6.4	6.5	6.6
		INPT	4.1	4.1	4.0
	15	HC	16.1	16.0	15.3
		Hab	12.0	11.8	11.2
		LWT	11.1	11.2	11.4
		INPT	4.2	4.2	4.0
	20	HC	17.2	17.0	16.2
		Hab	12.9	12.8	12.1
		LWT	15.9	15.9	16.1
		INPT	4.2	4.2	4.1
	25	HC	18.6	18.4	17.7
		Hab	14.2	13.9	13.3
		LWT	20.5	20.6	20.8
		INPT	4.5	4.5	4.4

HC = Heating Capacity (kW)

Hab = Heat Absorbed (kW)

L.W.T.= Leaving Water Temperature (°C)

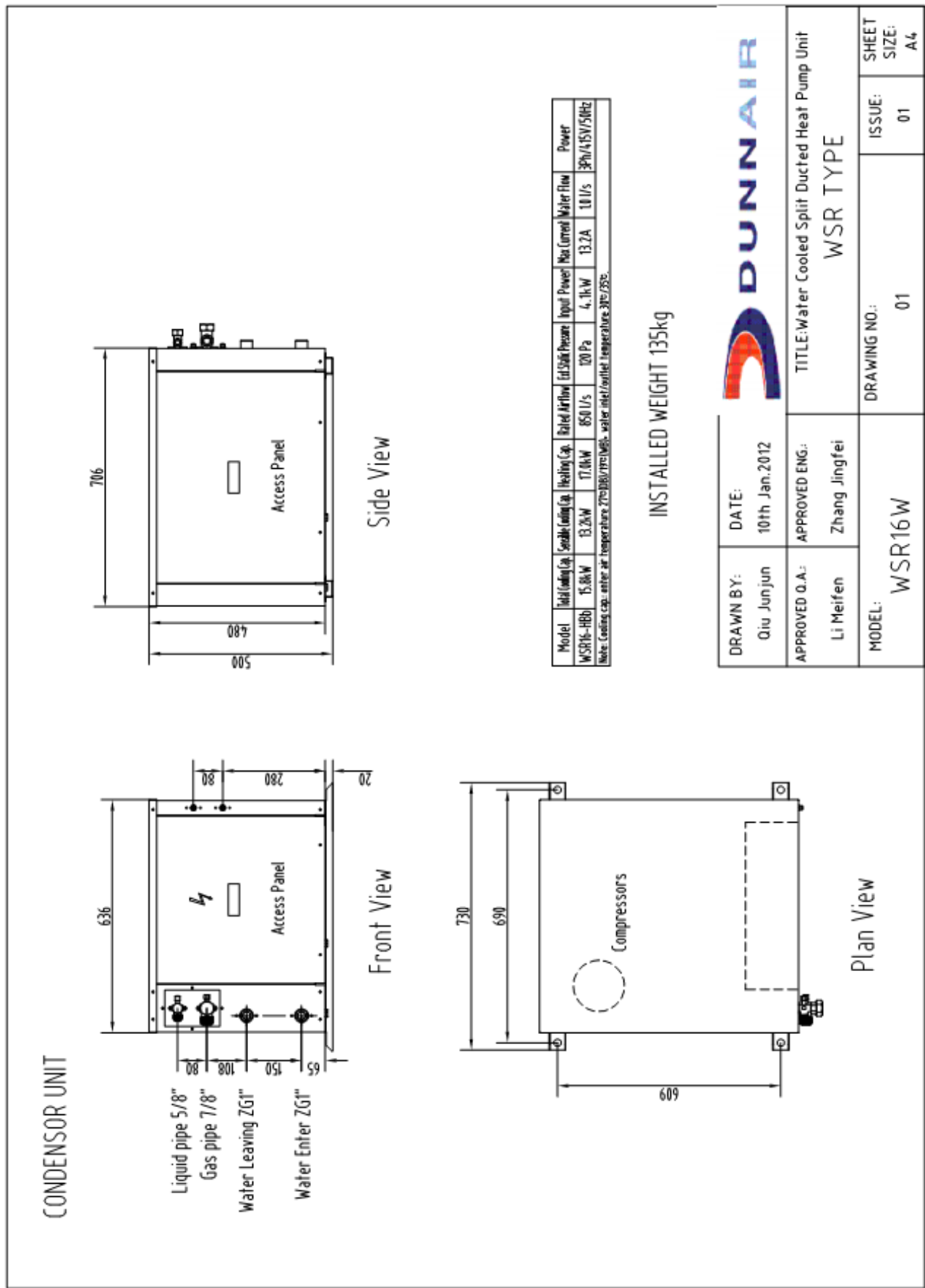
E.A.T.= Entering Air Temperature (°C)

INPT = Compressor Input Power (kW)

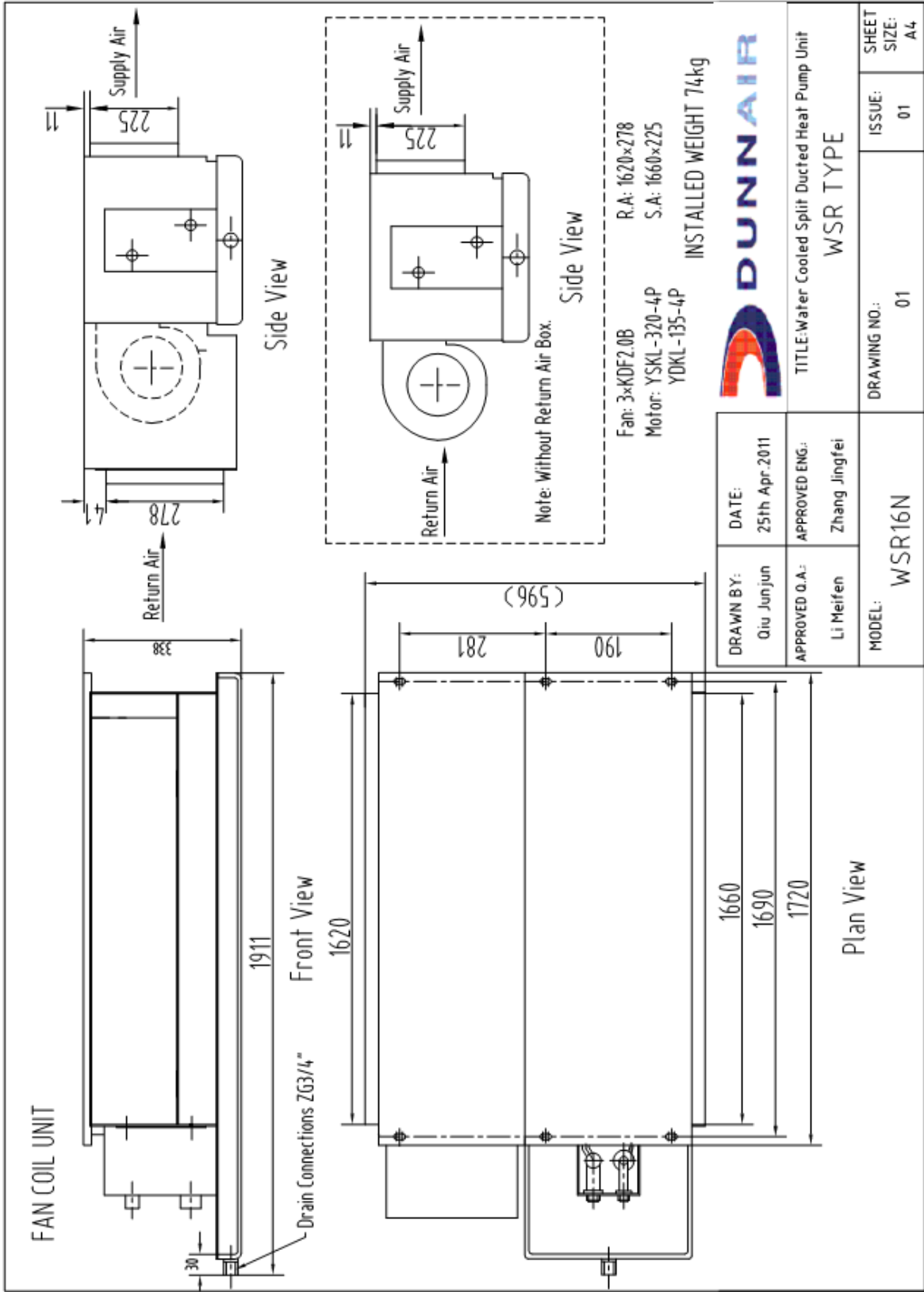
— = Nominal Capacity (kW)

**Note: Units are available as cooling only, cooling only with electric heater and heat pump types.**

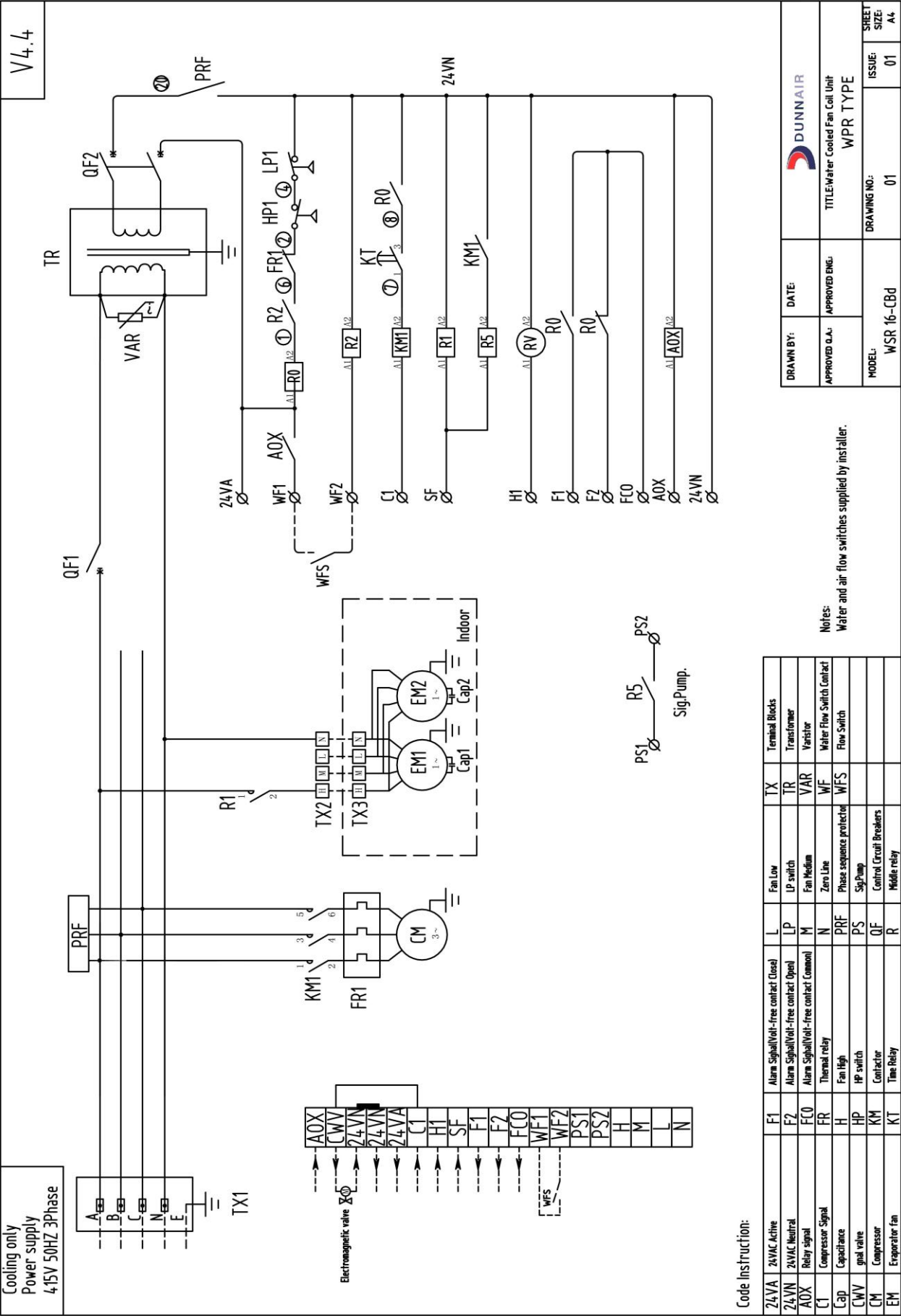
DIMENSIONS (mm) – Outdoor Unit

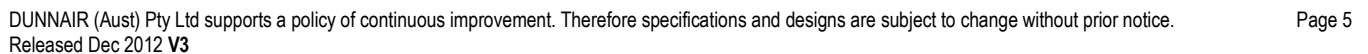


DIMENSIONS (mm) – Indoor Unit

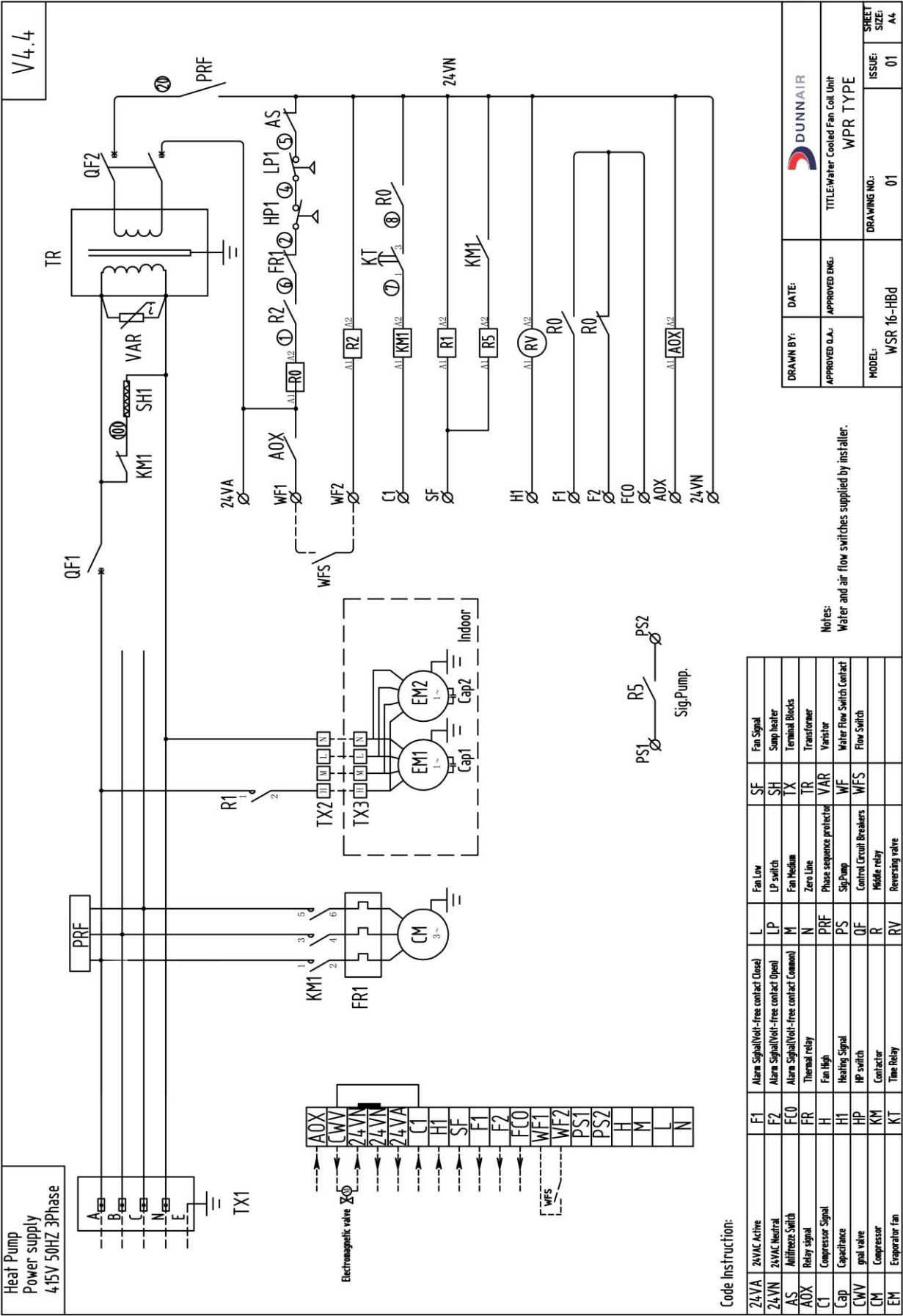


WIRING DIAGRAM - Cooling Only Type



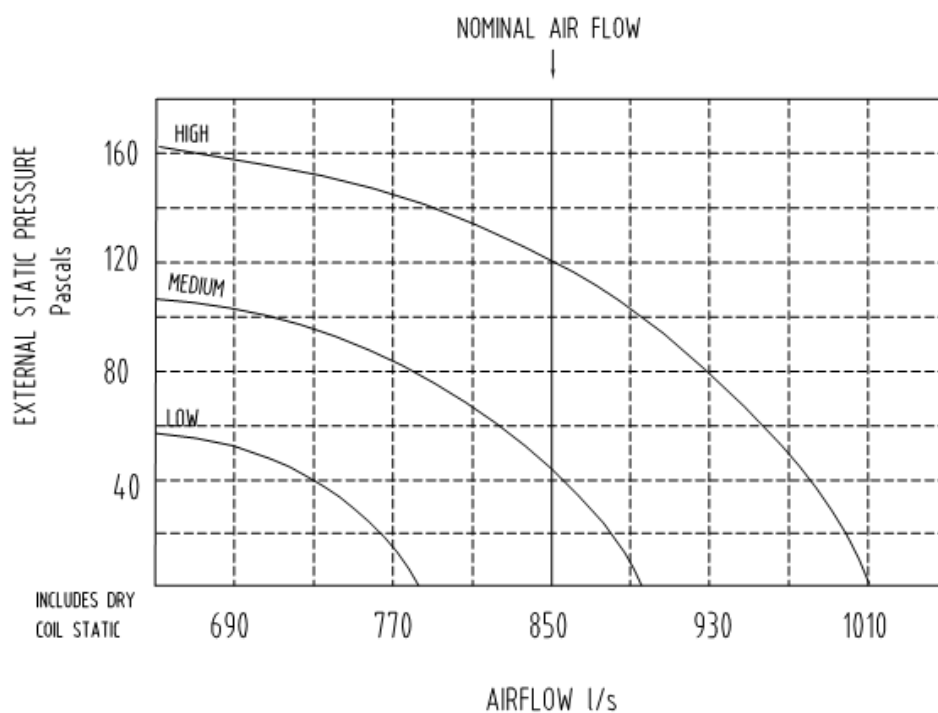
$$\overline{VL_4.4}$$


WIRING DIAGRAM - Heat Pump Type



## AIR HANDLING PERFORMANCE

### Fan Curve (Without Filter)



DRAWN BY: Qiu Junjun	DATE: 28th.May.2011		
APPROVED Q.A.: Li Meifen	APPROVED ENG.: Zhang Jingfei	TITLE: Water Cooled Split Ducted Heat Pump Unit WSR TYPE	
MODEL: WSR16		DRAWING NO.: 01	ISSUE: 01 SHEET SIZE: A4

### Note:

1. In tropical (high humidity) conditions, care must be taken to select an air flow which gives a suitable coil face air velocity, to prevent water carry over.
2. For applications with low resistance, be sure not to exceed the fan motor full load Amps.
3. Applications using full or high proportions of fresh air should be referred to DUNNAIR engineering office to establish of unit model.
4. EU1 rate filter pressure loss 15Pa.

AIR HANDLING PERFORMANCE

Sound Levels

