



# FLIER – 50Hz DES MAJOR SERIES

## Air Cooled Packaged Air Conditioners

### 30 - 50 TON (R-410a)



# Air Cooled Packaged Air Conditioners

## DESCRIPTION

Models DES 360,420,480 & 600 Nominal MBH

Units are single package high efficiency rooftop air conditioners. Models 360 to 480 have three independent refrigerant circuits while model 600 has four independent refrigerant circuits for efficient part load operation. DES units are designed for roof top slab mounted ground level or on steel platform installation above floor or roof. A wide range of factory mounted options and field installed accessories make the units suitable for almost every application.

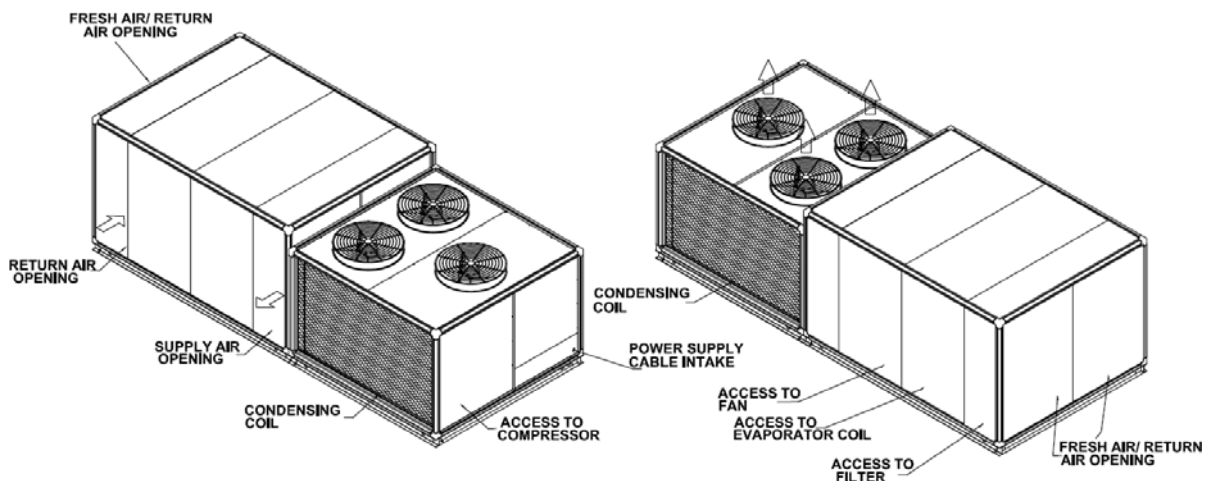
Units are designed to operate satisfactorily in wide range of ambient temperatures from 125°F (52°C) down to 50°F (10°C) as standard.

DES packaged air conditioners are rated in accordance with AHRI 340/360

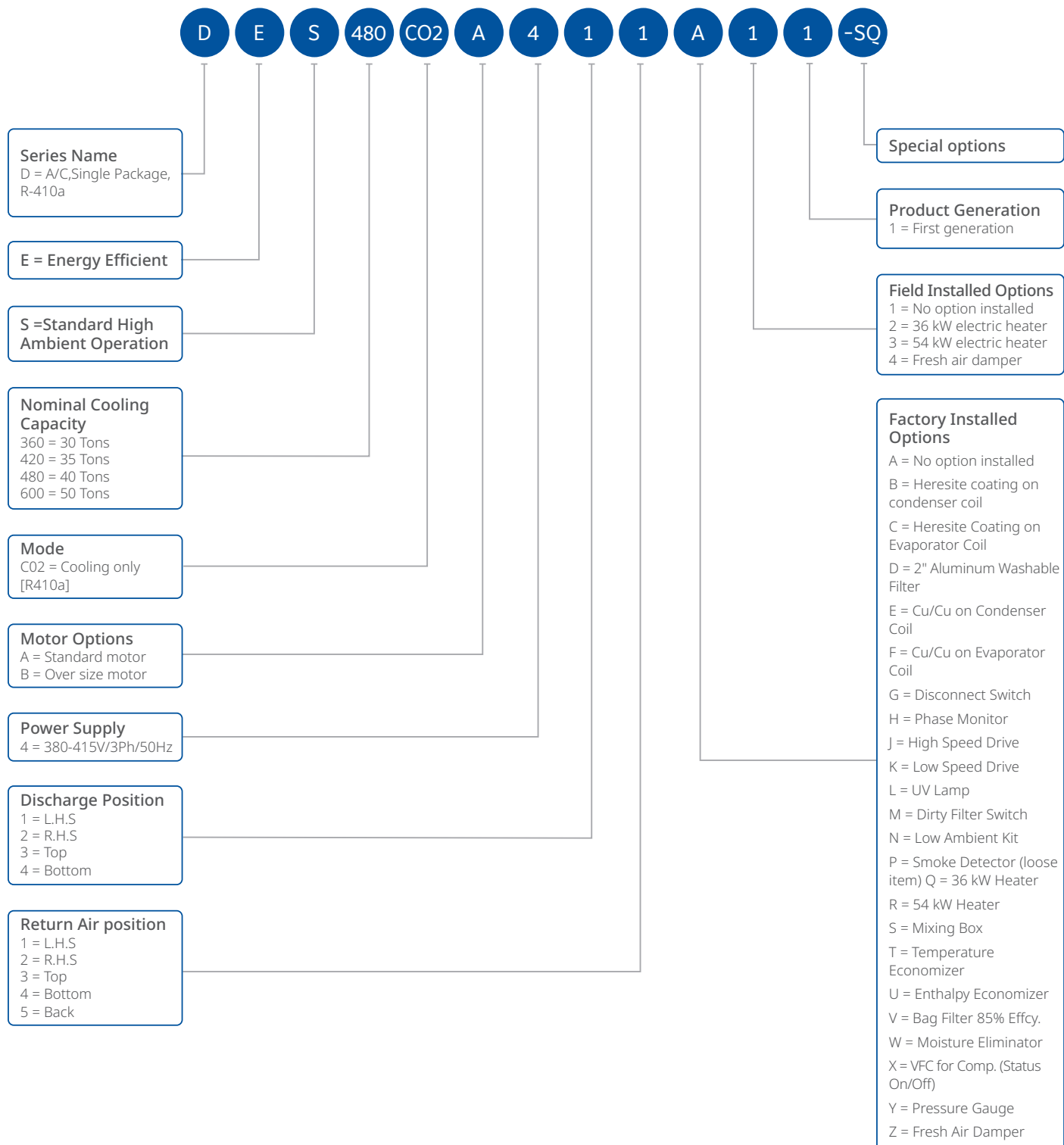
### All standard units include:

- Double skin construction with pre-painted outer skin that meets ASTM B 117, 750 hour salt spray standard.
- Multi-stage cooling provided by three or four independent refrigeration circuits with expansion valves, filter drier, high and low pressure switches and freeze protection.
- High efficiency hermetic scroll compressors.
- Side air discharge configuration.
- Belt drive blower motor with variable pitch pulley.
- Totally Enclosed Fan Cooled (TEFC) Evaporator fan motors with Class F Insulation.
- Totally Enclosed Air over (TEAO) Condenser fan motors with Class F Insulation.
- Fresh air intake connection.
- Copper tubes / Aluminum fins coils.
- 2 inch disposable filter with easy access.
- Rigging holes in base rails for overhead lifting.
- Single point power connection.
- Complete factory package-tested, charged and wired.

## TYPICAL UNIT CONFIGURATION



## PIN NUMBER GUIDELINES



## PRODUCT DATA

Model			DES 360	DES 420	DES 480	DES 600
Cooling Performance	Gross Capacity (1)	MBH	346.8	404.5	458.0	567.8
		kW	101.6	118.5	134.2	166.4
	Net Capacity (1)	MBH	335.9	388.6	438.4	538.1
		kW	98.4	113.9	128.5	157.7
	Total Power Input (1)	HP	43.5	51.6	60.3	81.5
		kW	32.5	38.5	45.0	60.8
Cooling Performance	Net EER (1)	Btuh / W	10.4	10.1	9.8	8.9
	Gross Capacity (2)	MBH	294.6	354.5	397.3	494.5
		kW	86.3	103.9	116.4	144.9
	Net Capacity (2)	MBH	283.7	338.6	377.7	464.8
		kW	83.1	99.2	110.7	136.2
Cooling Performance	Total Power Input (2)	HP	54.6	62	72.5	98.5
		kW	40.7	46.3	54.1	73.4
	Net EER (2)	Btuh / W	7.0	7.3	7.0	6.3
Air Flow Rate	Rated	CFM	12,000	13,500	15,000	18,000
	Minimum		9,500	10,500	12,500	14,000
	Maximum		14,000	15,000	17,000	19,000
Heating Capacities	Option 1	MBH	122.7	122.7	122.7	122.7
		kW	36	36	36	36
	Option 2	MBH	184.2	184.2	184	184
		kW	54	54	54	54
Evaporator Coil	Tube / Fins		Enhanced Copper / Aluminum			
	Fins	fpi	10	14	14	14
		mm	2.5	3.5	3.5	3.5
	Area	ft <sup>2</sup>	31.7	31.7	31.7	38
		m <sup>2</sup>	2.9	2.9	2.9	3.5
Condenser Coil	Tube / Fins		Enhanced Copper / Aluminum			
	Fins	fpi	16	12	12	12
		mm	4	2.1	2.1	2.1
	Area	ft <sup>2</sup>	50.7	50.7	50.7	50.7
		m <sup>2</sup>	4.7	4.7	4.7	4.7
Blower Fan & Motor	Fan Type		Forward Curved Centrifugal - DIDW			
	Fan Qty		2	2	2	2
	Motor Type		4 Pole, Class F Insulation, Totally Enclosed Fan Cooled			
	Motor Size std	HP	10	10	15.0	15.0
		kW	7.5	7.5	11	11
	Motor Size xtd	HP	15.0	15.0	20.0	20.0
		kW	11	11	15	15
Condenser Fan & Motor	Type		4 Blades Heavy duty Propeller Fan			
	Quantity		3	4	4	4
	Motor Type		6 Pole, Class F Insulation, Totally Enclosed Air Over			
	Motor size	HP	1.50	1.5	1.5	1.5
		kW	1.1	1.1	1.1	1.1
	Quantity		3	4	4	4
Compressor	Type		Hermetic Scroll			
	# of Compressor		3	3	3	4
Refrigerant	Type		R-410a			
	No of Circuits		3	3	3	4
	Charge	lbs	36.17	46.7	51.93	60.18
		kgs	16.4	21.2	23.6	27.3
Dimensions	Height	Inches	69.9			
	Width		88			
	Length		205			
Filters	24x24x2 Inches	Qty	6			
	12x20x2 Inches		5			
Weights	Basic Unit	lbs	3520	3630	3720	4150
		kgs	1596	1646	1687	1882

1:Rated according to T1 conditions (Ambient 35°C (95°F), EAT 27°C (80.6°F)/19°C(66.2°F))

2:Rated according to T3 conditions (Ambient 46°C (115°F), EAT 29°C (84.2°F)/19°C (66.2°F))

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