



®

40LM - PRODUCT DATA DIGEST

CHILLED WATER FAN-COIL UNITS



QUALITY SYSTEM



MALAYSIA
MS ISO 9001
REG. NO: AR 0239

The New, Versatile and Flexibility in Commercial Air Conditioning System

FEATURES:

- Chilled Water Furred-in model with Plenum Fan Coil units.
- The low silhouette styling of this unit makes it a popular choice for the “in-the-ceiling” or “over the closet” applications in all types of building.
- Horizontal ducted application. The 40LM150 & 200 can easily be converted to vertical ducted application.
- Insulated & painted condensate drain pan and a factory fitted frame complete with filter media.
(Filter media is optional for 40LM150 & 200).
- Integral filter frame capable of adapting 1” or 2” filter media for 40LM150 & 200.
- 40LM120 is standard factory supplied with 3-speed direct drive motor.
- 40LM150 & 200 is standard factory supplied with TEFC Induction motor and taper lock pulleys with wedge belts.
- Standard copper tube aluminium fins (Cu/Al) evaporator coil for maximum heat transfer.
- Carrier Lanced Sine Wave fin pattern ensures energy efficient performance.
- Units shall be manufactured as left-hand side (in the direction of air flow) piping connection as standard.

SPECIFICATIONS

| TYPE | | CHILLED WATER FAN COIL | | |
|------------------|-----------------------------|------------------------------------|----------------|--------------------|
| MODEL | | 40LM120 | 40LM150 | 40LM200 |
| NOMINAL CAPACITY | kW | 35.0 | 44.0 | 58.6 |
| | Btu/hr | 119 420 | 150 000 | 199 940 |
| AIR QUANTITY | RANGE (l/s) | 850 ~ 1640 | 1700 ~ 2600 | 2000 ~ 3400 |
| POWER SUPPLY | V/Ph/Hz | 230/1/50 | 380 - 415/3/50 | 380 - 415/3/50 |
| FAN | TYPE | CENTRIFUGAL FORWARD CURVED BLADES | | |
| | DRIVE | DIRECT DRIVE | BELT DRIVE | BELT DRIVE |
| | QUANTITY | 2 | 1 | 1 |
| | MAX. rpm | 2100 | 1200 | 1200 |
| | DIAMETER (mm) | 250 | 400 | 400 |
| FAN MOTOR | TYPE | PSC, 3 SPEED | TEFC | TEFC |
| | QUANTITY | 1 | 1 | 1 |
| | kW | 1.83 | 2.2 | 3 |
| | FLA (Amps) | 7.3 | 5.08 @ 380V | 6.72 @ 380V |
| | RPM | 1325 | 1500 | 1500 |
| COIL | TYPE | COPPER TUBES, ALUMINIUM PLATE FINS | | |
| | ROW - FPI | 4 - 14 | 4 - 12 | 4 - 12 |
| | FACE AREA (M ²) | 0.61 | 1.01 | 1.36 |
| FILTER | TYPE | WASHABLE | | |
| | SIZE (H x W x D) mm | 398 x 1344 x 12 | 406 x 635 x 25 | 406 x 635/508 x 25 |
| | QUANTITY | 1 | 4 | 2 & 4 |
| CONNECTIONS | SUPPLY (mm) | 25.4 BSP MPT | 38.1 BSP MPT | 50.8 BSP MPT |
| | RETURN (mm) | 25.4 BSP MPT | 38.1 BSP MPT | 50.8 BSP MPT |
| | DRAIN (mm) | 19.05 NPT MPT | 19.05 NPT MPT | 19.05 NPT MPT |
| NET WEIGHT | KG | 120 | 200 | 230 |
| DIMENSIONS | HEIGHT (mm) | 480 | 1487 | 1541 |
| | WIDTH (mm) | 1600 | 1346 | 1651 |
| | DEPTH (mm) | 680 | 710 | 764 |

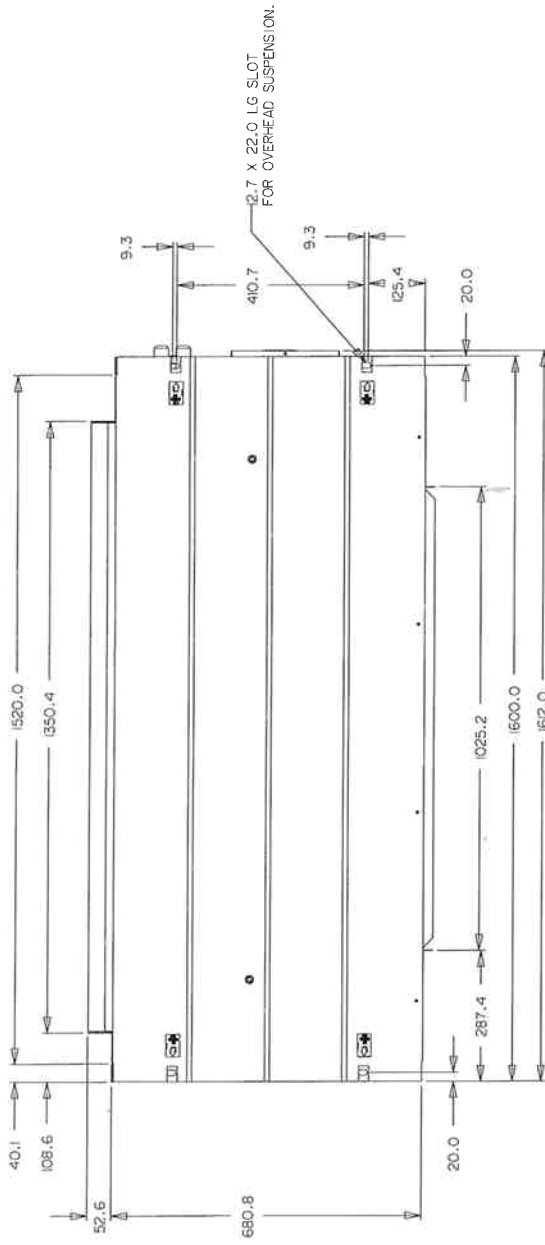
FLA: FULL LOAD AMPS

FPI: FINS PER INCH

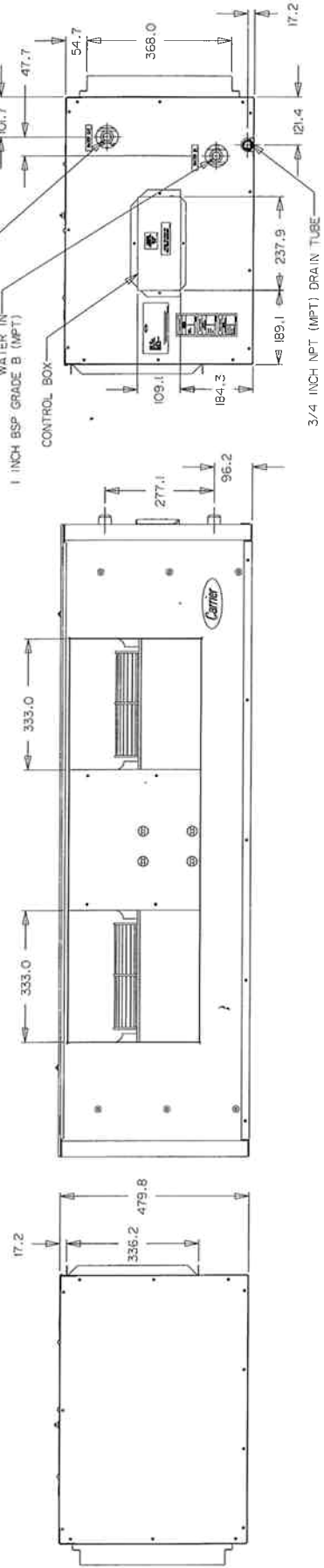
NOTES: STANDARD UNITS ARE SUPPLIED WITHOUT MOTOR, DRIVE PACKAGES AND FILTER MEDIA FOR 40LM150 AND 40LM200

PHYSICAL DIMENSION

40LM120



TOP VIEW



LEFT SIDE VIEW

FRONT VIEW

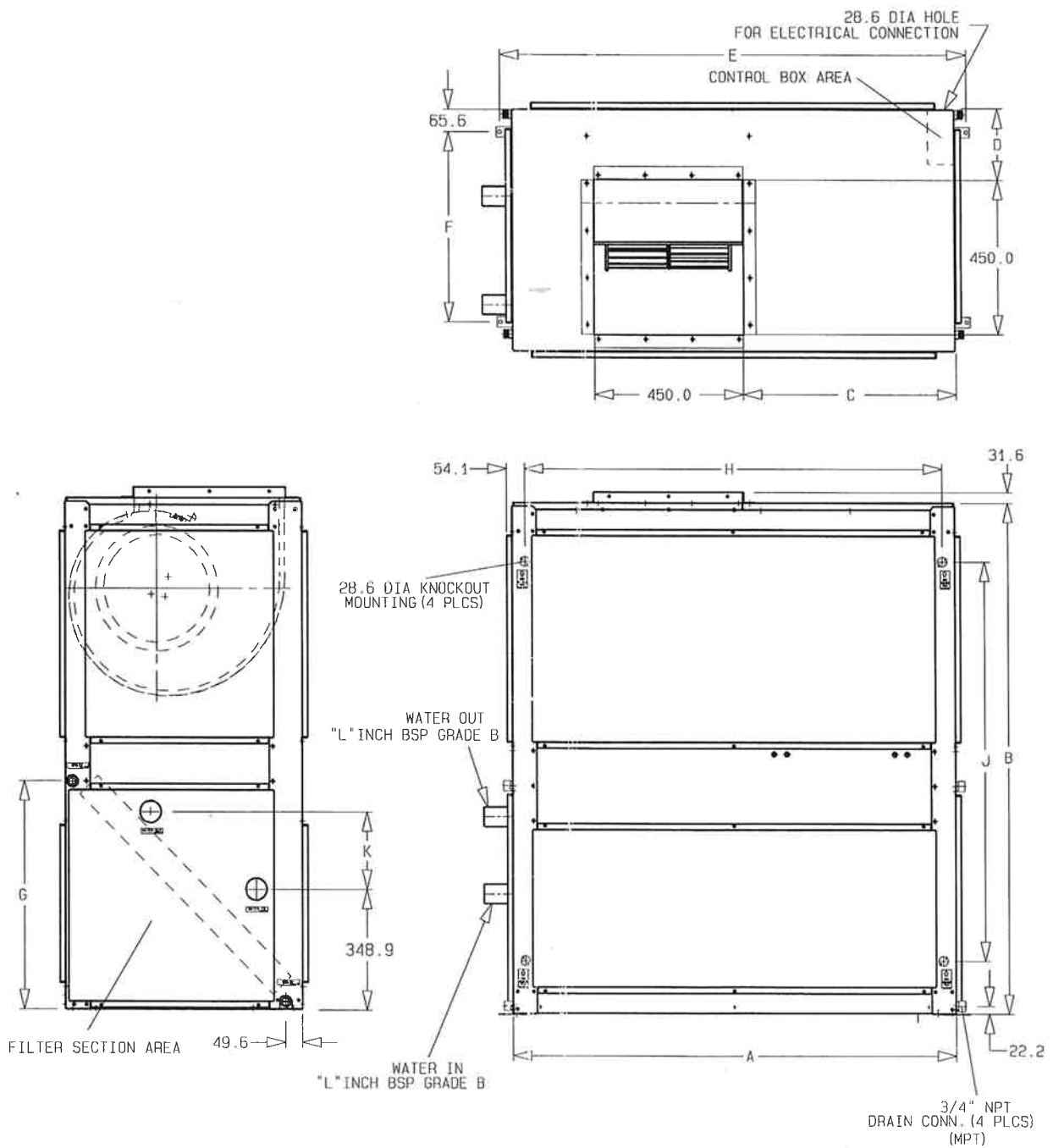
RIGHT SIDE VIEW

ALL DIMENSION IS IN MM

PHYSICAL DIMENSION

40LM150/200

| Model No | A | B | C | D | E | F | G | H | J | K | L |
|----------|------|------|-----|-----|------|-----|-----|------|------|-----|-----|
| 40LM150 | 1346 | 1487 | 644 | 208 | 1413 | 553 | 660 | 1270 | 1161 | 224 | 1.5 |
| 40LM200 | 1651 | 1541 | 698 | 235 | 1713 | 606 | 714 | 1575 | 1215 | 276 | 2.0 |



PERFORMANCE DATA COOLING CAPACITIES

MODEL: 40LM120

| AIR QUANTITY (l/s) | ENT CHILLED WATER TEMP (°C) | CHILLED WATER FLOW (L/MIN) | ENT AIR TEMP DB/WB (°C) | | | | | |
|-----------------------|-----------------------------|----------------------------|-------------------------|------|-----------|------|-----------|------|
| | | | 25.0/17.0 | | 27.0/19.5 | | 29.0/22.0 | |
| | | | TC | SHC | TC | SHC | TC | SHC |
| 849.4 | 5 | 45 | 19.4 | 15.6 | 23.8 | 16.3 | 28.8 | 17 |
| | | 90 | 22.2 | 17.0 | 28.1 | 18.2 | 34.5 | 19.3 |
| | | 135 | 23.5 | 17.6 | 29.7 | 18.9 | 36.5 | 20.2 |
| | 6 | 45 | 18.0 | 15.0 | 22.3 | 15.7 | 27.3 | 16.4 |
| | | 90 | 20.7 | 16.3 | 26.4 | 17.4 | 32.7 | 18.6 |
| | | 135 | 21.7 | 16.8 | 27.9 | 18.1 | 34.7 | 19.4 |
| | 7 | 45 | 16.7 | 14.4 | 20.9 | 15.1 | 25.7 | 15.8 |
| | | 90 | 19.1 | 15.5 | 24.7 | 16.7 | 31.0 | 17.8 |
| | | 135 | 20.0 | 15.9 | 26.1 | 17.3 | 32.9 | 18.6 |
| | 8 | 45 | 15.4 | 13.8 | 19.5 | 14.5 | 24.2 | 15.2 |
| | | 90 | 17.4 | 14.8 | 22.9 | 15.9 | 29.2 | 17.0 |
| | | 135 | 18.3 | 15.2 | 24.3 | 16.5 | 31.0 | 17.9 |
| | 9 | 45 | 14.2 | 13.2 | 18.0 | 13.9 | 22.7 | 14.6 |
| | | 90 | 15.8 | 14.1 | 21.1 | 15.2 | 27.3 | 16.4 |
| | | 135 | 16.5 | 14.4 | 22.4 | 15.7 | 29.1 | 17.0 |
| 1130.2 | 5 | 45 | 22.3 | 19.0 | 27.0 | 19.6 | 32.2 | 20.1 |
| | | 90 | 26.4 | 20.9 | 33.0 | 22.2 | 40.4 | 23.3 |
| | | 135 | 28.2 | 21.8 | 35.6 | 23.3 | 43.7 | 24.7 |
| | 6 | 45 | 20.9 | 18.3 | 25.4 | 18.9 | 30.5 | 19.4 |
| | | 90 | 24.5 | 20.1 | 30.9 | 21.3 | 38.3 | 22.4 |
| | | 135 | 26.1 | 20.9 | 33.4 | 22.3 | 41.5 | 23.8 |
| | 7 | 45 | 19.5 | 17.6 | 23.8 | 18.2 | 28.8 | 18.7 |
| | | 90 | 22.7 | 19.2 | 28.9 | 20.4 | 36.2 | 21.6 |
| | | 135 | 24.1 | 19.9 | 31.2 | 21.4 | 39.2 | 22.8 |
| | 8 | 45 | 18.0 | 16.9 | 22.2 | 17.6 | 27.2 | 18.1 |
| | | 90 | 20.8 | 18.4 | 26.8 | 19.6 | 34.0 | 20.7 |
| | | 135 | 22.1 | 19.0 | 29.0 | 20.4 | 36.9 | 21.9 |
| | 9 | 45 | 16.7 | 16.2 | 20.6 | 16.9 | 25.5 | 17.5 |
| | | 90 | 19.0 | 17.6 | 24.8 | 18.7 | 31.8 | 19.9 |
| | | 135 | 20.0 | 18.1 | 26.7 | 19.5 | 34.6 | 20.9 |
| 1639.9 | 5 | 45 | 26.2 | 23.9 | 30.8 | 24.4 | 36.3 | 24.6 |
| | | 90 | 31.9 | 26.9 | 39.2 | 28.0 | 47.7 | 29.0 |
| | | 135 | 34.68 | 28.3 | 43.3 | 29.8 | 52.9 | 31.2 |
| | 6 | 45 | 24.6 | 23.1 | 29.1 | 23.6 | 34.4 | 23.9 |
| | | 90 | 29.7 | 25.9 | 36.8 | 27.0 | 45.1 | 28.1 |
| | | 135 | 32.2 | 27.1 | 40.6 | 28.6 | 50.2 | 30.0 |
| | 7 | 45 | 23.1 | 22.2 | 27.4 | 22.9 | 32.7 | 23.2 |
| | | 90 | 27.8 | 25.4 | 35.2 | 26.3 | 43.4 | 27.4 |
| | | 135 | 29.7 | 26.0 | 37.9 | 27.5 | 47.4 | 28.9 |
| | 8 | 45 | 21.6 | 21.3 | 25.7 | 22.1 | 30.8 | 22.5 |
| | | 90 | 25.5 | 23.9 | 32.1 | 25.0 | 39.9 | 26.1 |
| | | 135 | 27.4 | 24.9 | 35.1 | 26.4 | 44.5 | 27.8 |
| | 9 | 45 | 20.3 | 20.3 | 24.0 | 21.4 | 28.9 | 21.8 |
| | | 90 | 23.6 | 22.8 | 29.7 | 24.1 | 37.3 | 25.1 |
| | | 135 | 25.0 | 23.7 | 32.5 | 25.2 | 41.6 | 26.7 |

TC : TOTAL HEAT CAPACITY (kW)

SHC : SENSIBLE HEAT COOLING CAPACITY (kW)

PERFORMANCE DATA COOLING CAPACITIES

MODEL: 40LM150

| AIR QUANTITY (l/s) | ENT CHILLED WATER TEMP (°C) | CHILLED WATER FLOW (L/MIN) | ENT AIR TEMP DB/WB (°C) | | | | | |
|-----------------------|-----------------------------|----------------------------|-------------------------|------|-----------|------|-----------|------|
| | | | 25.0/17.0 | | 27.0/19.5 | | 29.0/22.0 | |
| | | | TC | SHC | TC | SHC | TC | SHC |
| 1700 | 5 | 55 | 29.4 | 26.0 | 35.0 | 26.6 | 41.5 | 27.1 |
| | | 110 | 35.8 | 29.2 | 44.4 | 30.6 | 54.2 | 32.0 |
| | | 165 | 38.8 | 30.6 | 48.9 | 32.6 | 59.9 | 34.4 |
| | 6 | 55 | 27.6 | 25.1 | 33.1 | 25.8 | 39.4 | 26.2 |
| | | 110 | 33.3 | 28.1 | 41.6 | 29.5 | 51.3 | 30.9 |
| | | 165 | 36.1 | 29.4 | 45.9 | 31.3 | 56.8 | 33.1 |
| | 7 | 55 | 25.8 | 24.2 | 31.0 | 24.9 | 37.3 | 25.4 |
| | | 110 | 30.8 | 26.9 | 38.9 | 28.4 | 48.5 | 29.7 |
| | | 165 | 33.3 | 28.1 | 42.8 | 29.9 | 53.7 | 31.8 |
| | 8 | 55 | 24.1 | 23.2 | 29.1 | 24.1 | 35.1 | 24.6 |
| | | 110 | 28.6 | 25.9 | 36.2 | 27.2 | 45.5 | 28.6 |
| | | 165 | 30.4 | 26.8 | 39.7 | 28.7 | 50.5 | 30.5 |
| | 9 | 55 | 22.5 | 22.2 | 27.1 | 23.2 | 33.1 | 23.9 |
| | | 110 | 26.1 | 24.6 | 33.5 | 26.1 | 42.5 | 27.4 |
| | | 165 | 27.8 | 25.6 | 36.6 | 27.4 | 47.3 | 29.2 |
| 2100 | 5 | 55 | 32.4 | 29.9 | 37.9 | 30.6 | 44.5 | 30.8 |
| | | 110 | 40.1 | 34.2 | 49.1 | 35.5 | 59.8 | 36.7 |
| | | 165 | 44.1 | 36.1 | 55.0 | 37.9 | 67.2 | 39.7 |
| | 6 | 55 | 30.5 | 28.9 | 35.9 | 29.6 | 42.3 | 29.9 |
| | | 110 | 37.4 | 32.9 | 46.2 | 34.2 | 56.6 | 35.4 |
| | | 165 | 41.0 | 34.6 | 51.6 | 36.5 | 63.7 | 38.2 |
| | 7 | 55 | 28.7 | 27.8 | 33.9 | 28.8 | 39.9 | 29.1 |
| | | 110 | 34.9 | 31.6 | 43.3 | 33.0 | 53.3 | 34.2 |
| | | 165 | 37.8 | 33.2 | 48.1 | 35.0 | 60.2 | 36.8 |
| | 8 | 55 | 26.9 | 26.7 | 31.8 | 27.8 | 37.7 | 28.2 |
| | | 110 | 32.2 | 30.3 | 40.3 | 31.8 | 50.0 | 33.0 |
| | | 165 | 34.9 | 31.7 | 44.7 | 33.6 | 56.6 | 35.4 |
| | 9 | 55 | 25.3 | 25.3 | 29.7 | 26.8 | 35.5 | 27.4 |
| | | 110 | 29.8 | 28.9 | 37.3 | 30.5 | 46.7 | 31.8 |
| | | 165 | 31.9 | 30.3 | 41.3 | 32.2 | 52.9 | 34.0 |
| 2600 | 5 | 55 | 35.0 | 33.3 | 40.4 | 33.9 | 46.8 | 34.1 |
| | | 110 | 43.7 | 38.5 | 53.0 | 39.7 | 63.8 | 40.8 |
| | | 165 | 48.4 | 40.8 | 59.9 | 42.6 | 73.0 | 44.3 |
| | 6 | 55 | 32.9 | 31.9 | 38.2 | 32.9 | 44.4 | 33.2 |
| | | 110 | 40.9 | 37.0 | 49.9 | 38.4 | 60.4 | 39.5 |
| | | 165 | 44.9 | 39.2 | 56.1 | 41.1 | 69.2 | 42.7 |
| | 7 | 55 | 31.0 | 30.8 | 36.0 | 32.0 | 42.1 | 32.3 |
| | | 110 | 38.1 | 35.7 | 46.7 | 37.1 | 56.9 | 38.2 |
| | | 165 | 41.7 | 37.7 | 52.3 | 39.5 | 65.2 | 41.2 |
| | 8 | 55 | 29.3 | 29.3 | 33.9 | 30.9 | 39.8 | 31.4 |
| | | 110 | 35.5 | 34.2 | 43.5 | 35.8 | 53.5 | 36.8 |
| | | 165 | 38.6 | 36.1 | 48.7 | 38.0 | 61.3 | 39.8 |
| | 9 | 55 | 27.6 | 27.6 | 31.9 | 29.8 | 37.6 | 30.4 |
| | | 110 | 32.9 | 32.6 | 40.4 | 34.4 | 50.1 | 35.6 |
| | | 165 | 35.5 | 34.4 | 45.1 | 36.5 | 57.3 | 38.3 |

TC : TOTAL HEAT CAPACITY (kW)

SHC : SENSIBLE HEAT COOLING CAPACITY (kW)

PERFORMANCE DATA COOLING CAPACITIES

MODEL: 40LM200

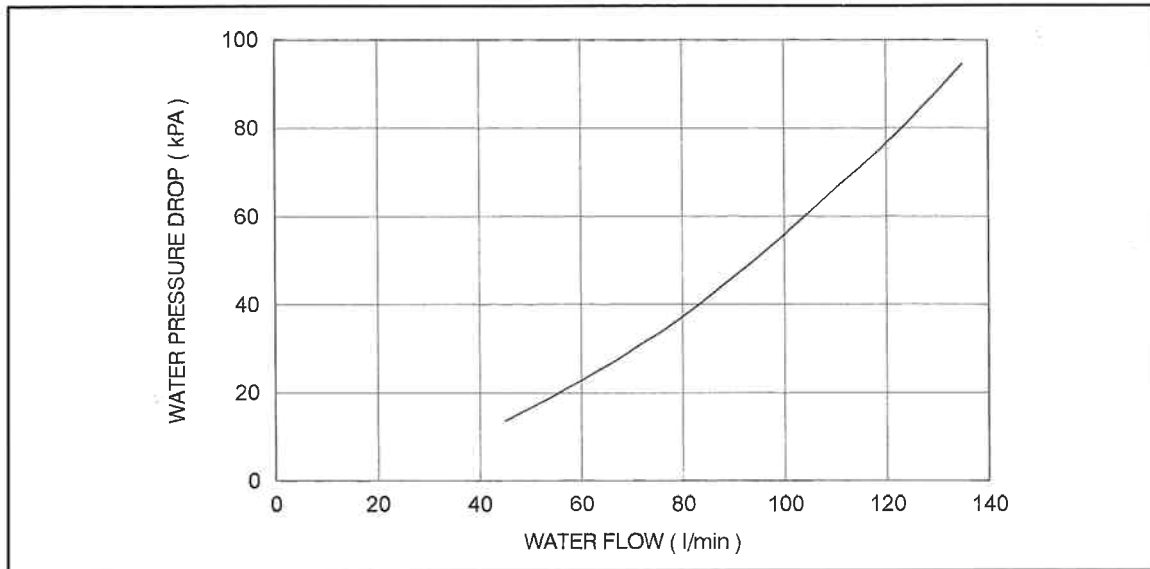
| AIR QUANTITY (l/s) | ENT CHILLED WATER TEMP (°C) | CHILLED WATER FLOW (L/MIN) | ENT AIR TEMP DB/WB (°C) | | | | | |
|-----------------------|-----------------------------|----------------------------|-------------------------|------|-----------|------|-----------|------|
| | | | 25.0/17.0 | | 27.0/19.5 | | 29.0/22.0 | |
| | | | TC | SHC | TC | SHC | TC | SHC |
| 2000 | 5 | 73 | 37.8 | 32.3 | 45.6 | 33.3 | 54.3 | 34.0 |
| | | 145 | 45.2 | 35.9 | 56.5 | 38.0 | 69.1 | 40.0 |
| | | 218 | 48.6 | 37.5 | 61.4 | 40.1 | 75.3 | 42.6 |
| | 6 | 73 | 35.4 | 31.1 | 42.9 | 32.2 | 51.5 | 32.9 |
| | | 145 | 42.1 | 34.5 | 53.1 | 36.5 | 65.5 | 38.5 |
| | | 218 | 45.1 | 35.9 | 57.7 | 38.5 | 71.5 | 40.9 |
| | 7 | 73 | 33.0 | 29.9 | 40.2 | 31.0 | 48.7 | 31.7 |
| | | 145 | 38.9 | 33.0 | 49.5 | 35.0 | 61.9 | 36.9 |
| | | 218 | 41.6 | 34.3 | 53.9 | 36.8 | 67.6 | 39.3 |
| | 8 | 73 | 30.6 | 28.8 | 37.5 | 29.9 | 45.9 | 30.8 |
| | | 145 | 35.7 | 31.6 | 45.9 | 33.5 | 58.2 | 35.5 |
| | | 218 | 38.1 | 32.7 | 50.0 | 35.2 | 63.7 | 37.6 |
| | 9 | 73 | 28.5 | 27.6 | 34.9 | 28.8 | 43.0 | 29.7 |
| | | 145 | 32.7 | 30.1 | 42.5 | 32.1 | 54.4 | 34.0 |
| | | 218 | 34.5 | 31.1 | 46.1 | 33.6 | 59.8 | 36.1 |
| 2800 | 5 | 73 | 44.0 | 40.1 | 51.7 | 40.9 | 60.8 | 41.4 |
| | | 145 | 54.3 | 45.6 | 66.7 | 47.6 | 81.1 | 49.3 |
| | | 218 | 59.4 | 48.2 | 74.3 | 50.8 | 90.8 | 53.2 |
| | 6 | 73 | 41.4 | 38.7 | 48.9 | 39.7 | 57.7 | 40.2 |
| | | 145 | 50.6 | 44.0 | 62.6 | 45.9 | 76.7 | 47.6 |
| | | 218 | 55.2 | 46.2 | 69.7 | 48.8 | 86.1 | 51.3 |
| | 7 | 73 | 38.9 | 37.2 | 46.1 | 38.5 | 54.9 | 39.2 |
| | | 145 | 47.0 | 42.2 | 58.6 | 44.2 | 72.4 | 45.9 |
| | | 218 | 51.0 | 44.2 | 65.0 | 46.9 | 81.2 | 49.3 |
| | 8 | 73 | 36.5 | 35.7 | 43.2 | 37.1 | 51.8 | 37.9 |
| | | 145 | 43.5 | 40.4 | 54.6 | 42.5 | 67.9 | 44.3 |
| | | 218 | 46.8 | 42.3 | 60.3 | 44.9 | 76.4 | 47.4 |
| | 9 | 73 | 34.1 | 34.1 | 40.4 | 35.9 | 48.6 | 36.8 |
| | | 145 | 40.1 | 38.6 | 50.6 | 40.8 | 63.5 | 42.6 |
| | | 218 | 42.9 | 40.4 | 55.6 | 43.0 | 71.4 | 45.5 |
| 3400 | 5 | 73 | 47.3 | 44.5 | 55.0 | 45.4 | 63.9 | 45.7 |
| | | 145 | 59.0 | 51.4 | 71.8 | 53.2 | 86.7 | 54.6 |
| | | 218 | 65.2 | 54.5 | 80.9 | 57.0 | 98.6 | 59.3 |
| | 6 | 73 | 44.7 | 42.8 | 52.4 | 44.2 | 60.7 | 44.5 |
| | | 145 | 55.2 | 49.4 | 67.6 | 51.3 | 82.0 | 52.9 |
| | | 218 | 60.6 | 52.3 | 75.9 | 54.9 | 93.4 | 57.3 |
| | 7 | 73 | 42.1 | 41.2 | 49.1 | 42.7 | 57.4 | 43.3 |
| | | 145 | 51.5 | 47.6 | 63.2 | 49.6 | 77.3 | 51.0 |
| | | 218 | 56.1 | 50.2 | 70.7 | 52.9 | 88.1 | 55.2 |
| | 8 | 73 | 39.5 | 39.4 | 46.1 | 41.4 | 54.2 | 43.0 |
| | | 145 | 47.7 | 45.6 | 58.9 | 47.7 | 72.6 | 49.3 |
| | | 218 | 51.8 | 48.0 | 65.7 | 50.7 | 82.8 | 53.2 |
| | 9 | 73 | 37.2 | 37.2 | 43.2 | 39.9 | 51.2 | 40.7 |
| | | 145 | 44.3 | 43.5 | 54.6 | 45.9 | 67.9 | 47.5 |
| | | 218 | 47.6 | 45.8 | 60.8 | 48.7 | 77.4 | 51.1 |

TC : TOTAL HEAT CAPACITY (kW)

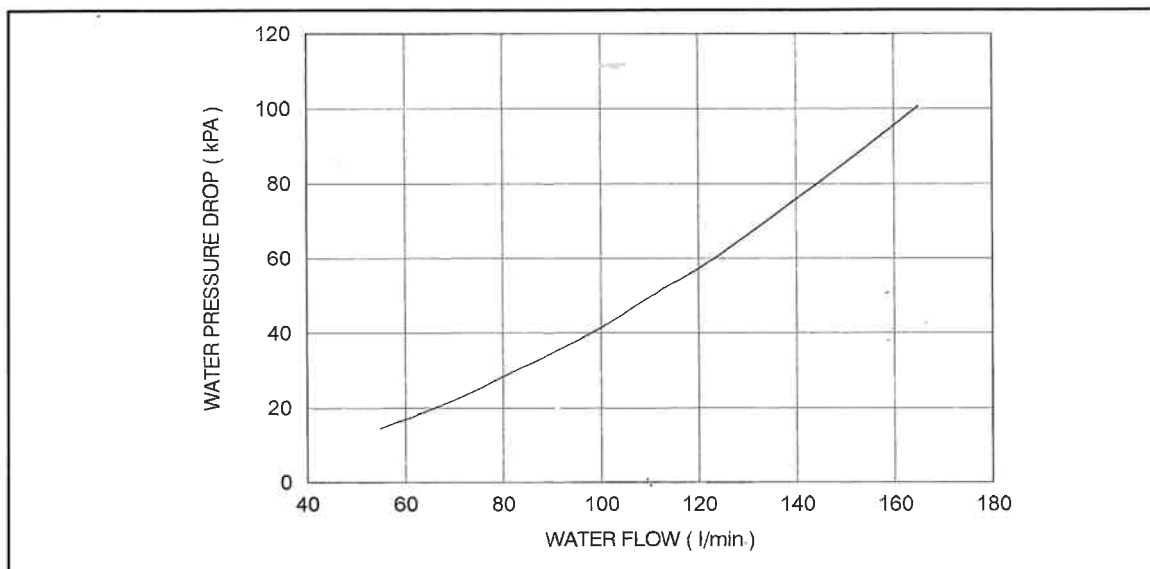
SHC : SENSIBLE HEAT COOLING CAPACITY (kW)

PERFORMANCE DATA COIL PRESSURE DROP

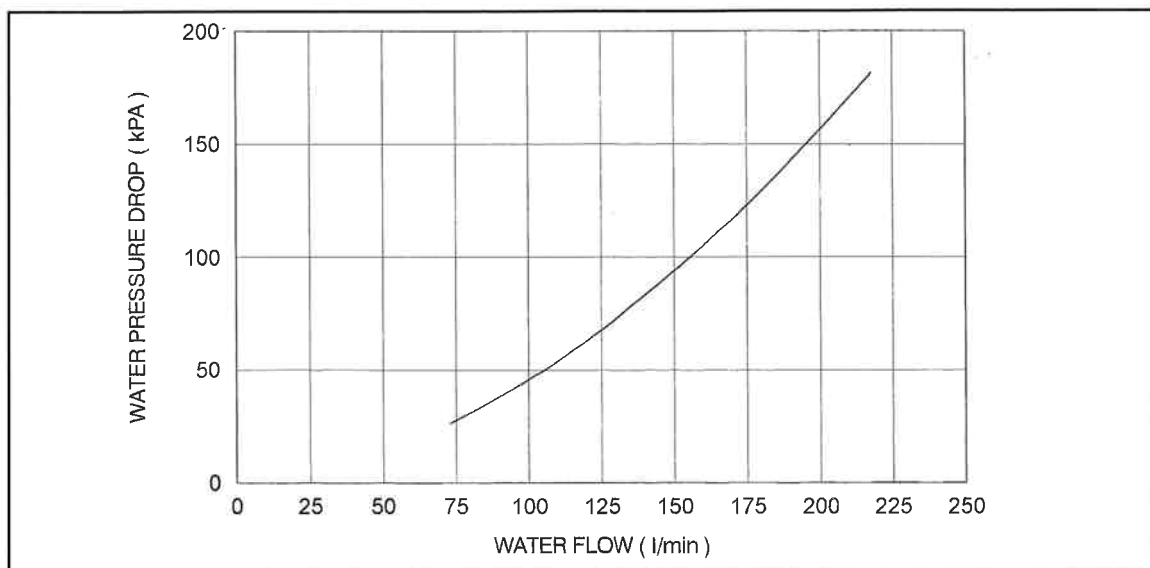
40LM120



40LM150

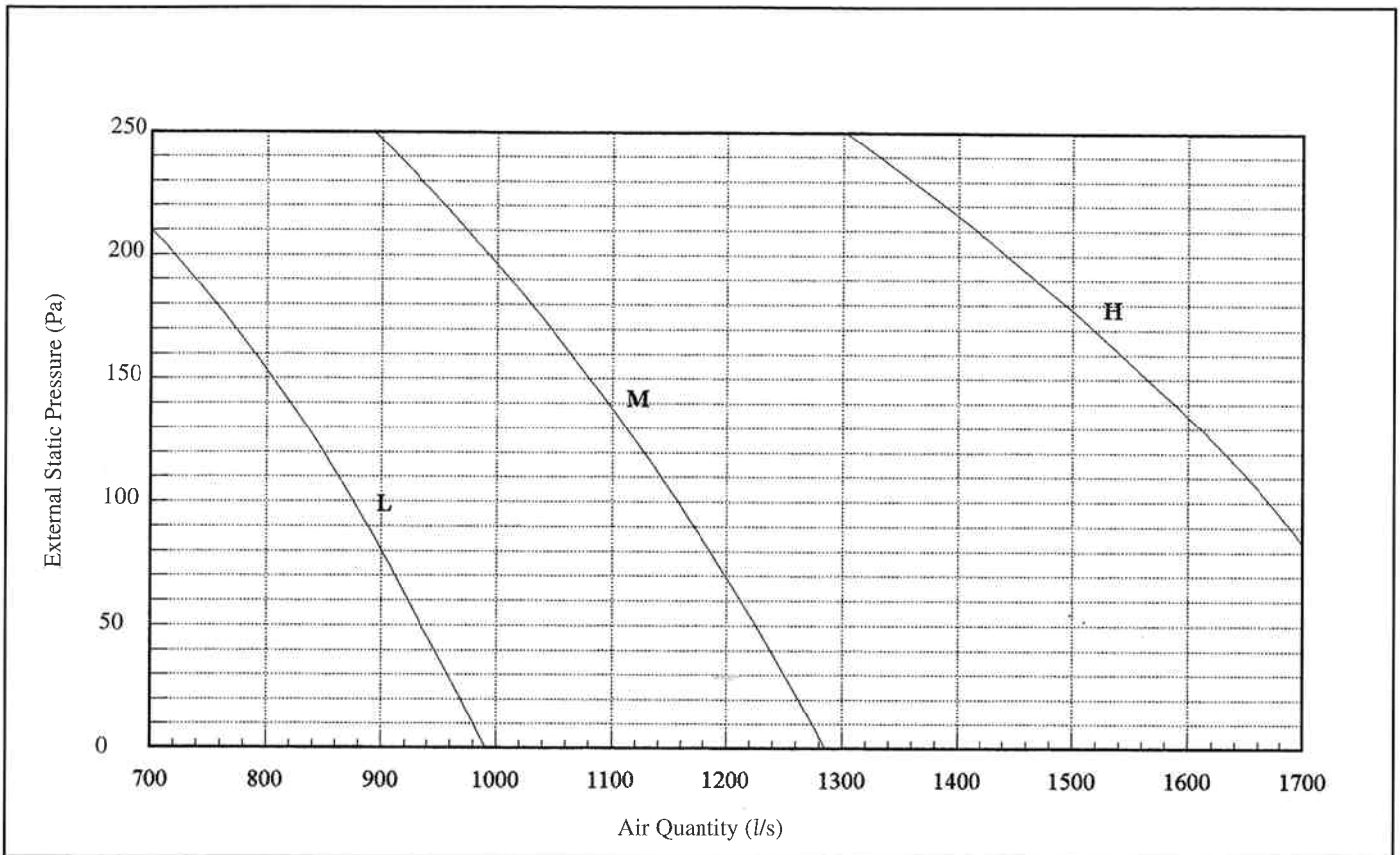


40LM200



FAN PERFORMANCE

40LM120



40LM150

