NigeriaBuildingCost.ng · Free sample takeoff — edit the blue cells, quantities and totals recalculate

Air-Conditioning & Ventilation Takeoff — Shopping Plaza

Split units by shop, refrigerant and drain pipework, supports, isolators and extract fans

Project	2-storey shopping plaza, 12 shops (example)
Location	Wetheral Road, Owerri
Client	Chief Nwosu (example)
Floor area	864 m² (36.0 × 12.0 m × 2 floors)
Prepared by	Example QS (sample)
Rates as at	Oct 2026 · Wetheral Road, Owerri

BASIS OF MEASUREMENT

• 12 shops of 72 m² each over two floors; one ground-floor double shop used as a supermarket.

• Sizing rule of thumb: about 1 HP per 12–15 m² for a shop with a glass front and daytime crowds.

• Unit rates are supply and standard installation (3 m pipe run); longer runs are measured as extra over.

• Prices for split units vary widely by brand (inverter units cost 25–40% more).

SUMMARY BY ELEMENT

#	Element	Amount (₦)	% of total
1	A Split units	₦16,300,000	78.4%
2	B Pipework & drains	₦2,016,800	9.7%
3	C Supports & electrical	₦1,528,000	7.4%
4	D Ventilation	₦461,000	2.2%
5	E Commissioning	₦482,000	2.3%
	Measured work	**₦20,787,800**	

Measured work	₦20,787,800
Preliminaries (%)	5.0%
Preliminaries	₦1,039,390
Contingency (%)	5.0%
Contingency	₦1,091,360
VAT (%)	7.5%
VAT	₦1,718,891
TOTAL	**₦24,637,441**

NigeriaBuildingCost.ng

Rates are Wetheral Road, Owerri market rates from NigeriaBuildingCost.ng (supply and fix unless stated). The project, client and dimensions are an example — replace them with your own drawings.

Free sample takeoff from NigeriaBuildingCost.ng. Rates are indicative (Oct 2026) — check current prices in your location before relying on any figure.
Faster option: use the free Electrical Items Calculator at https://nigeriabuildingcost.ng/electrical-items-calculator

NigeriaBuildingCost.ng

NigeriaBuildingCost.ng · Free sample takeoff — edit the blue cells, quantities and totals recalculate

Air-Conditioning & Ventilation Takeoff — Shopping Plaza

Quantities are pulled from the Dimensions sheet — change a dimension there, or a rate here, and the totals update

A SPLIT UNITS

Ref	Description	Qty	Unit	Rate (₦)	Amount (₦)
A1	1.5 HP wall-mounted split AC, installed (indoor + outdoor unit)	16.00	nr	₦520,000	₦8,320,000
A2	2 HP wall-mounted split AC, installed	6.00	nr	₦680,000	₦4,080,000
A3	5 HP floor-standing split AC, installed	2.00	nr	₦1,950,000	₦3,900,000
				Carried to summary	**₦16,300,000**

B PIPEWORK & DRAINS

Ref	Description	Qty	Unit	Rate (₦)	Amount (₦)
B1	Insulated copper refrigerant pipe pair 1/4" + 1/2", in trunking	116.00	m	₦9,500	₦1,102,000
B2	Insulated copper pipe pair 3/8" + 5/8" for 5 HP units	20.00	m	₦14,500	₦290,000
B3	Extra pipe beyond standard installation length	24.00	m	₦9,500	₦228,000
B4	20 mm PVC condensate drain to nearest gully	96.00	m	₦1,800	₦172,800
B5	PVC trunking 100 × 50 for pipe runs, external	64.00	m	₦3,500	₦224,000
				Carried to summary	**₦2,016,800**

C SUPPORTS & ELECTRICAL

Ref	Description	Qty	Unit	Rate (₦)	Amount (₦)
C1	Galvanised wall brackets for outdoor units with anti-vibration mounts	22.00	nr	₦28,000	₦616,000
C2	Concrete plinth for 5 HP outdoor units	2.00	nr	₦45,000	₦90,000
C3	Weatherproof rotary isolator next to outdoor unit	24.00	nr	₦12,500	₦300,000
C4	AC power point with 4 mm² cable (if not in the electrical package)	22.00	nr	₦16,000	₦352,000
C5	3-phase supply to 5 HP units, 6 mm² 4-core, with isolator	2.00	nr	₦85,000	₦170,000
				Carried to summary	**₦1,528,000**

D VENTILATION

NigeriaBuildingCost.ng

Ref	Description	Qty	Unit	Rate (₦)	Amount (₦)
D1	150 mm wall / ceiling extract fan with backdraught shutter	8.00	nr	₦38,000	₦304,000
D2	150 mm flexible duct to external grille	18.00	m	₦4,500	₦81,000
D3	Weatherproof external louvre grille	8.00	nr	₦9,500	₦76,000
				Carried to summary	**₦461,000**

E COMMISSIONING

Ref	Description	Qty	Unit	Rate (₦)	Amount (₦)
E1	Pressure test, vacuum, refrigerant top-up and commission	24.00	nr	₦18,000	₦432,000
E2	Handover: user instructions and warranty registration	1.00	item	₦50,000	₦50,000
				Carried to summary	**₦482,000**

Free sample takeoff from NigeriaBuildingCost.ng. Rates are indicative (Oct 2026) — check current prices in your location before relying on any figure.
Faster option: use the free Electrical Items Calculator at https://nigeriabuildingcost.ng/electrical-items-calculator

NigeriaBuildingCost.ng

NigeriaBuildingCost.ng · Free sample takeoff — edit the blue cells, quantities and totals recalculate

Dimensions — Air-Conditioning & Ventilation Takeoff — Shopping Plaza

Quantity = timesing × length × width × height/depth (blank = 1). Negative timesing = deduction (openings, voids).

A SPLIT UNITS

Ref	Location / dimension	Times	L (m)	W (m)	H/D (m)	Quantity	Unit
A1 1.5 HP wall-mounted split AC, installed (indoor + outdoor unit) (nr)							
A1	Ground floor shops (6 × 72 m², 2 per shop)	12.000				12.00	nr
A1	First floor offices	4.000				4.00	nr
	Total carried to Priced Takeoff					16.00	nr
A2 2 HP wall-mounted split AC, installed (nr)							
A2	First floor shops	4.000				4.00	nr
A2	Open-plan office	2.000				2.00	nr
	Total carried to Priced Takeoff					6.00	nr
A3 5 HP floor-standing split AC, installed (nr)							
A3	Supermarket shop (double unit)	2.000				2.00	nr
	Total carried to Priced Takeoff					2.00	nr

B PIPEWORK & DRAINS

Ref	Location / dimension	Times	L (m)	W (m)	H/D (m)	Quantity	Unit
B1 Insulated copper refrigerant pipe pair 1/4" + 1/2", in trunking (m)							
B1	1.5 HP units, avg 5 m run	16.000	5.000			80.00	m
B1	2 HP units, avg 6 m	6.000	6.000			36.00	m
	Total carried to Priced Takeoff					116.00	m
B2 Insulated copper pipe pair 3/8" + 5/8" for 5 HP units (m)							
B2	Floor-standing units, avg 10 m	2.000	10.000			20.00	m
	Total carried to Priced Takeoff					20.00	m
B3 Extra pipe beyond standard installation length (m)							
B3	First floor units to roof condensers	6.000	4.000			24.00	m
	Total carried to Priced Takeoff					24.00	m
B4 20 mm PVC condensate drain to nearest gully (m)							
B4	Per unit avg 4 m	24.000	4.000			96.00	m
	Total carried to Priced Takeoff					96.00	m
B5 PVC trunking 100 × 50 for pipe runs, external (m)							
B5	Rear elevation risers	1.000	64.000			64.00	m
	Total carried to Priced Takeoff					64.00	m

C SUPPORTS & ELECTRICAL

Ref	Location / dimension	Times	L (m)	W (m)	H/D (m)	Quantity	Unit
C1 Galvanised wall brackets for outdoor units with anti-vibration mounts (nr)							
C1	1.5 HP and 2 HP	22.000				22.00	nr

NigeriaBuildingCost.ng

	Total carried to Priced Takeoff					22.00	nr
C2 Concrete plinth for 5 HP outdoor units (nr)							
C2	At rear	2.000				2.00	nr
	Total carried to Priced Takeoff					2.00	nr
C3 Weatherproof rotary isolator next to outdoor unit (nr)							
C3	Every unit	24.000				24.00	nr
	Total carried to Priced Takeoff					24.00	nr
C4 AC power point with 4 mm² cable (if not in the electrical package) (nr)							
C4	1.5 / 2 HP units	22.000				22.00	nr
	Total carried to Priced Takeoff					22.00	nr
C5 3-phase supply to 5 HP units, 6 mm² 4-core, with isolator (nr)							
C5	Floor-standing units	2.000				2.00	nr
	Total carried to Priced Takeoff					2.00	nr

D VENTILATION

Ref	Location / dimension	Times	L (m)	W (m)	H/D (m)	Quantity	Unit
D1 150 mm wall / ceiling extract fan with backdraught shutter (nr)							
D1	Toilets	6.000				6.00	nr
D1	Kitchenette	2.000				2.00	nr
	Total carried to Priced Takeoff					8.00	nr
D2 150 mm flexible duct to external grille (m)							
D2	Fans not on an external wall	1.000	18.000			18.00	m
	Total carried to Priced Takeoff					18.00	m
D3 Weatherproof external louvre grille (nr)							
D3	Every fan	8.000				8.00	nr
	Total carried to Priced Takeoff					8.00	nr

E COMMISSIONING

Ref	Location / dimension	Times	L (m)	W (m)	H/D (m)	Quantity	Unit
E1 Pressure test, vacuum, refrigerant top-up and commission (nr)							
E1	Every unit	24.000				24.00	nr
	Total carried to Priced Takeoff					24.00	nr
E2 Handover: user instructions and warranty registration (item)							
E2	Whole installation	1.000				1.00	item
	Total carried to Priced Takeoff					1.00	item

Free sample takeoff from NigeriaBuildingCost.ng. Rates are indicative (Oct 2026) — check current prices in your location before relying on any figure.
Faster option: use the free Electrical Items Calculator at https://nigeriabuildingcost.ng/electrical-items-calculator