



Ref: CH580

Date: 25/04/2025

Project Name: 157 MILTON ROAD, GRAVESEND DA12 2RG

Customer: JAMES ROBERT CONSTRUCTION LTD

FLAT 1: Extract pressure calculations are based on the boost setting.

Extract: Diffuser to Fan	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
Bathroom Extract Diffuser	125mm Ø	1	8.0	6.00
GALV Rigid Duct (1m Length)	125mm Ø	6.5	8.0	0.03
GALV Rigid Duct (1m Length)	125mm Ø	1	21.0	0.20
GALV Rigid Straight Connector	125mm Ø	2	8.0	0.10
GALV Rigid 90° Bend	125mm Ø	2	8.0	1.00
GALV Rigid 90° Bend	125mm Ø	1	21.0	4.00
GALV Rigid Tee (Kitchen)	125mm Ø	1	21.0	7.50
			Sub Total	18.83

Additional Duct Run	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
Kitchen Extract Diffuser	125mm Ø	1	13.0	9.50
GALV Rigid Duct (1m Length)	125mm Ø	0.5	13.0	0.03
GALV Rigid 90° Bend	125mm Ø	1	13.0	1.40
			Sub Total	10.93

Exhaust: Fan to Atmosphere	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
GALV Rigid Duct (1m Length)	150mm Ø	16	21.0	3.84
GALV Rigid Straight Connector	150mm Ø	4	21.0	0.48
GALV Rigid 90° Bend	150mm Ø	6	21.0	12.60
GALV Reducer	125 => 150mm Ø	1	21.0	1.10
External Louvre Grille	150mm Ø	1	21.0	1.50
			Sub Total	19.52
Total Pa @ 21 l/s (75.6 m3/h)				49.3

MVHR Unit Manufacturer & Model	RPM	Power Consumption	Total	Total dB(A) @ 1m
DANTHERM HCV 300	1400	SFP	0.28 W/m³/h	30
		SPI	1000 J/m³	
		SEL	1.0 W/l/s	



Ref: CH580

Date: 25/04/2025

Project Name: 157 MILTON ROAD, GRAVESEND DA12 2RG

Customer: JAMES ROBERT CONSTRUCTION LTD

FLAT 1: Supply pressure calculations are based on the boost setting.

Supply: Fan to Diffuser	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
GALV Rigid Duct (1m Length)	125mm Ø	4	21.0	0.80
GALV Rigid Duct (1m Length)	125mm Ø	4.5	13.2	0.11
GALV Rigid Duct (1m Length)	125mm Ø	2	4.7	0.01
GALV Rigid Straight Connector	125mm Ø	1	21.0	0.45
GALV Rigid Straight Connector	125mm Ø	1	13.2	0.12
GALV Rigid 90° Bend	125mm Ø	2	21.0	8.00
GALV Rigid 45° Bend	125mm Ø	2	13.2	1.00
GALV Rigid 90° Bend	125mm Ø	1	4.7	0.20
GALV Rigid Tee (Living/Dining)	125mm Ø	1	21.0	7.50
GALV Rigid Tee (Bedroom 2)	125mm Ø	1	13.2	3.00
Bedroom 1 Supply Diffuser	125mm Ø	1	4.7	4.00
Sub Total				25.19

Additional Duct Run	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
GALV Rigid Duct (1m Length)	125mm Ø	1	8.5	0.01
GALV Rigid 90° Bend	125mm Ø	1	8.5	0.55
Bedroom 2 Supply Diffuser	125mm Ø	1	8.5	6.50
Sub Total				7.06

Additional Duct Run	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
GALV Rigid Duct (1m Length)	125mm Ø	1	7.8	0.01
GALV Rigid 90° Bend	125mm Ø	1	7.8	0.50
Bedroom Supply Diffuser	125mm Ø	1	7.8	6.00
Sub Total				6.51

Intake: Atmosphere to Fan	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
External Louvre Grille	150mm Ø	1	21.0	1.50
GALV Rigid Duct (1m Length)	150mm Ø	18	21.0	4.32
GALV Rigid Straight Connector	150mm Ø	5	21.0	0.60
GALV Rigid 90° Bend	150mm Ø	5	21.0	10.50
GALV Rigid 45° Bend	150mm Ø	1	21.0	0.70
GALV Reducer	125 => 150mm Ø	1	21.0	1.10
Sub Total				18.72

Total Pa @ 21 l/s (75.6 m3/h) 57.48

MVHR Unit Manufacturer & Model	RPM	Power Consumption	Total	Total dB(A) @ 1m
DANTHERM HCV 300	1400	SFP	0.28 W/m³/h	30
		SPI	1000 J/m³	
		SEL	1.0 W/l/s	



Ref: CH580

Date: 25/04/2025

Project Name: 157 MILTON ROAD, GRAVESEND DA12 2RG

Customer: JAMES ROBERT CONSTRUCTION LTD

FLAT 2: Extract pressure calculations are based on the boost setting.

Extract: Diffuser to Fan	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
Bathroom Extract Diffuser	125mm Ø	1	8.0	6.00
GALV Rigid Duct (1m Length)	125mm Ø	2	8.0	0.01
GALV Rigid Duct (1m Length)	125mm Ø	1	21.0	0.20
GALV Rigid Straight Connector	125mm Ø	1	8.0	0.01
GALV Rigid 90° Bend	125mm Ø	2	8.0	1.00
GALV Rigid 90° Bend	125mm Ø	1	27.0	8.00
GALV Rigid Tee (Kitchen)	125mm Ø	1	21.0	7.50
GALV Rigid Tee (WC)	125mm Ø	1	27.0	14.00
Sub Total				36.72

Additional Duct Run	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
Kitchen Extract Diffuser	125mm Ø	1	13.0	9.50
GALV Rigid Duct (1m Length)	125mm Ø	1	13.0	0.05
GALV Rigid 90° Bend	125mm Ø	2	13.0	2.80
Sub Total				12.35

Additional Duct Run	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
WC Extract Diffuser	125mm Ø	1	6.0	5.00
GALV Rigid Duct (1m Length)	125mm Ø	1.5	6.0	0.01
GALV Rigid 90° Bend	125mm Ø	1	6.0	0.40
Sub Total				5.41

Exhaust: Fan to Atmosphere	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
GALV Rigid Duct (1m Length)	150mm Ø	2	27.0	0.70
GALV Rigid 90° Bend	150mm Ø	3	27.0	1.40
GALV Reducer	125 => 150mm Ø	1	27.0	1.80
External Louvre Grille	150mm Ø	1	27.0	2.80
Sub Total				6.70

Total Pa @ 27 l/s (97.2 m³/h) 61.2

MVHR Unit Manufacturer & Model	RPM	Power Consumption	Total	Total dB(A) @ 1m
DANTHERM HCV 300	1600	SFP	0.28 W/m³/h	34
		SPI	1000 J/m³	
		SEL	1.0 W/l/s	



Ref: CH580

Date: 25/04/2025

Project Name: 157 MILTON ROAD, GRAVESEND DA12 2RG

Customer: JAMES ROBERT CONSTRUCTION LTD

FLAT 2: Supply pressure calculations are based on the boost setting.

Supply: Fan to Diffuser	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
GALV Rigid Duct (1m Length)	125mm Ø	6	27.0	2.40
GALV Rigid Duct (1m Length)	125mm Ø	2	11.8	0.80
GALV Rigid Straight Connector	125mm Ø	2	27.0	1.60
GALV Rigid 90° Bend	125mm Ø	3	27.0	24.00
GALV Rigid 45° Bend	125mm Ø	5	27.0	13.00
GALV Rigid 90° Bend	125mm Ø	1	11.8	1.00
GALV Rigid Tee (Living/Dining)	125mm Ø	1	27.0	14.00
Bedroom Supply Diffuser	125mm Ø	1	11.8	9.00
Sub Total				65.80

Additional Duct Run	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
GALV Rigid Duct (1m Length)	125mm Ø	1	15.2	0.10
GALV Rigid 90° Bend	125mm Ø	1	15.2	2.80
Living/Dining Supply Diffuser	125mm Ø	1	15.2	12.00
Sub Total				14.90

Intake: Atmosphere to Fan	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
External Louvre Grille	150mm Ø	1	27.0	2.80
GALV Rigid Duct (1m Length)	150mm Ø	5	27.0	1.75
GALV Rigid Straight Connector	150mm Ø	1	27.0	0.18
GALV Rigid 90° Bend	150mm Ø	4	27.0	1.80
GALV Rigid 45° Bend	150mm Ø	3	27.0	4.14
GALV Rigid 45° Bend	150mm Ø	3	27.0	4.14
GALV Reducer	125 => 150mm Ø	1	27.0	1.80
Sub Total				16.61

Total Pa @ 27 l/s (97.2 m3/h) 97.31

MVHR Unit Manufacturer & Model	RPM	Power Consumption	Total	Total dB(A) @ 1m
DANTHERM HCV 300	1800	SFP	0.33 W/m³/h	38
		SPI	1200 J/m³	
		SEL	1.2 W/l/s	



Ref: CH580

Date: 25/04/2025

Project Name: 157 MILTON ROAD, GRAVESEND DA12 2RG

Customer: JAMES ROBERT CONSTRUCTION LTD

FLAT 3: Extract pressure calculations are based on the boost setting.

Extract: Diffuser to Fan	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
Bathroom Extract Diffuser	125mm Ø	1	8.8	6.50
GALV Rigid Duct (1m Length)	125mm Ø	6.5	8.8	0.06
GALV Rigid Duct (1m Length)	125mm Ø	0.5	23.1	0.12
GALV Rigid Straight Connector	125mm Ø	2	8.8	0.12
GALV Rigid 90° Bend	125mm Ø	2	8.8	1.10
GALV Rigid 90° Bend	125mm Ø	1	23.1	4.50
GALV Rigid Tee	125mm Ø	1	23.1	7.00
Sub Total				19.40

Additional Duct Run	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
Kitchen Extract Diffuser	125mm Ø	1	14.3	11.00
GALV Rigid Duct (1m Length)	125mm Ø	0.5	14.3	0.01
GALV Rigid 90° Bend	125mm Ø	1	14.3	2.40
Sub Total				13.41

Exhaust: Fan to Atmosphere	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
GALV Rigid Duct (1m Length)	150mm Ø	15	23.1	3.75
GALV Rigid Straight Connector	150mm Ø	5	23.1	2.20
GALV Rigid 90° Bend	150mm Ø	4	23.1	18.00
GALV Rigid 45° Bend	150mm Ø	2	23.1	3.20
GALV Reducer	125 => 150mm Ø	1	23.1	1.40
External Louvre Grille	150mm Ø	1	23.1	1.80
Sub Total				30.35

Total Pa @ 23.1 l/s (83.16 m3/h) 63.16

MVHR Unit Manufacturer & Model	RPM	Power Consumption	Total	Total dB(A) @ 1m
DANTHERM HCV 300	1600	SFP	0.33 W/m³/h	34
		SPI	1200 J/m³	
		SEL	1.2 W/l/s	



Ref: CH580

Date: 25/04/2025

Project Name: 157 MILTON ROAD, GRAVESEND DA12 2RG

Customer: JAMES ROBERT CONSTRUCTION LTD

FLAT 3: Supply pressure calculations are based on the boost setting.

Supply: Fan to Diffuser	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
GALV Rigid Duct (1m Length)	125mm Ø	3.5	23.1	0.44
GALV Rigid Duct (1m Length)	125mm Ø	4	14.4	0.26
GALV Rigid Duct (1m Length)	125mm Ø	2	9.1	0.03
GALV Rigid Straight Connector	125mm Ø	1	14.4	0.20
GALV Rigid 90° Bend	125mm Ø	2	23.1	9.00
GALV Rigid 45° Bend	125mm Ø	2	14.4	4.80
GALV Rigid 90° Bend	125mm Ø	2	9.1	1.40
GALV Rigid Tee (Living/Dining)	125mm Ø	1	23.1	7.00
GALV Rigid Tee (Bedroom 2)	125mm Ø	1	14.4	3.00
Bedroom 1 Supply Diffuser	125mm Ø	1	9.1	7.00
Sub Total				33.13

Additional Duct Run	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
GALV Rigid Duct (1m Length)	125mm Ø	1	8.7	0.01
GALV Rigid 90° Bend	125mm Ø	1	8.7	0.55
Living/Dining Supply Diffuser	125mm Ø	1	8.7	6.50
Sub Total				7.06

Additional Duct Run	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
GALV Rigid Duct (1m Length)	125mm Ø	2	5.3	0.01
GALV Rigid 90° Bend	125mm Ø	1	5.3	0.20
Bedroom 2 Supply Diffuser	125mm Ø	1	5.3	4.50
Sub Total				4.71

Intake: Atmosphere to Fan	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
External Louvre Grille	150mm Ø	1	23.1	1.80
GALV Rigid Duct (1m Length)	150mm Ø	16	23.1	4.00
GALV Rigid Straight Connector	150mm Ø	5	23.1	2.20
GALV Rigid 90° Bend	150mm Ø	7	23.1	31.50
GALV Rigid 45° Bend	150mm Ø	2	23.1	3.20
GALV Reducer	125 => 150mm Ø	1	23.1	1.40
Sub Total				44.10

Total Pa @ 23.1 l/s (83.16 m³/h) 89.00

MVHR Unit Manufacturer & Model	RPM	Power Consumption	Total	Total dB(A) @ 1m
DANTHERM HCV 300	1600	SFP	0.33 W/m³/h	34
		SPI	1200 J/m³	
		SEL	1.2 W/l/s	



Ref: CH580

Date: 25/04/2025

Project Name: 157 MILTON ROAD, GRAVESEND DA12 2RG

Customer: JAMES ROBERT CONSTRUCTION LTD

FLAT 4: Extract pressure calculations are based on the boost setting.

Extract: Diffuser to Fan	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
Bathroom Extract Diffuser	125mm Ø	1	10.1	7.50
GALV Rigid Duct (1m Length)	125mm Ø	3	10.1	0.06
GALV Rigid Duct (1m Length)	125mm Ø	1	26.5	0.35
GALV Rigid 90° Bend	125mm Ø	2	10.1	1.80
GALV Rigid 90° Bend	125mm Ø	1	26.5	6.00
GALV Rigid Tee (Kitchen)	125mm Ø	1	26.5	9.00
			Sub Total	24.71

Additional Duct Run	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
Kitchen Extract Diffuser	125mm Ø	1	16.4	12.00
GALV Rigid Duct (1m Length)	125mm Ø	0.5	16.4	0.08
GALV Rigid 90° Bend	125mm Ø	1	16.4	2.20
			Sub Total	14.28

Exhaust: Fan to Atmosphere	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
GALV Rigid Duct (1m Length)	150mm Ø	4.5	26.5	0.68
GALV Rigid Straight Connector	150mm Ø	1	26.5	0.16
GALV Rigid 90° Bend	150mm Ø	6	26.5	18.00
GALV Reducer	125 => 150mm Ø	1	26.5	1.70
External Louvre Grille	150mm Ø	1	26.5	2.60
			Sub Total	23.14

Total Pa @ 26.5 l/s (95.4 m3/h)	62.13
---------------------------------	-------

MVHR Unit Manufacturer & Model	RPM	Power Consumption	Total	Total dB(A) @ 1m
DANTHERM HCV 300	1600	SFP	0.28 W/m³/h	34
		SPI	1000 J/m³	
		SEL	1.0 W/l/s	



Ref: CH580

Date: 25/04/2025

Project Name: 157 MILTON ROAD, GRAVESEND DA12 2RG

Customer: JAMES ROBERT CONSTRUCTION LTD

FLAT 4: Supply pressure calculations are based on the boost setting.

Supply: Fan to Diffuser	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
GALV Rigid Duct (1m Length)	125mm Ø	4.5	22.8	0.57
GALV Rigid Duct (1m Length)	125mm Ø	7	9.8	0.04
GALV Rigid Straight Connector	125mm Ø	1	22.8	0.60
GALV Rigid Straight Connector	125mm Ø	2	9.8	0.14
GALV Rigid 45° Bend	125mm Ø	2	22.8	3.20
GALV Rigid 90° Bend	125mm Ø	4	9.8	2.80
GALV Rigid Tee (Bedroom 2)	125mm Ø	1	26.5	9.00
GALV Rigid Tee (Living/Dining)	125mm Ø	1	22.8	7.00
Bedroom 1 Supply Diffuser	125mm Ø	1	9.8	7.00
Sub Total				30.35

Additional Duct Run	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
GALV Rigid Duct (1m Length)	125mm Ø	1	13.0	0.05
GALV Rigid 90° Bend	125mm Ø	1	13.0	1.40
GALV Rigid 45° Bend	125mm Ø	1	13.0	0.50
Living/Dining Supply Diffuser	125mm Ø	1	13.0	9.50
Sub Total				11.45

Additional Duct Run	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
GALV Rigid Duct (1m Length)	125mm Ø	3	3.7	0.02
GALV Rigid 90° Bend	125mm Ø	2	3.7	0.30
GALV Rigid 45° Bend	125mm Ø	4	3.7	0.34
Bedroom 2 Supply Diffuser	125mm Ø	1	3.7	4.00
Sub Total				4.66

Intake: Atmosphere to Fan	Duct Size	Qty	Flow Rate (l/s)	Resistance (Pa)
External Louvre Grille	150mm Ø	1	26.5	2.60
GALV Rigid Duct (1m Length)	150mm Ø	5.5	26.5	0.83
GALV Rigid Straight Connector	150mm Ø	2	26.5	0.32
GALV Rigid 90° Bend	150mm Ø	6	26.5	18.00
GALV Rigid 45° Bend	150mm Ø	1	26.5	0.96
GALV Reducer	125 => 150mm Ø	1	26.5	1.70
Sub Total				24.41

Total Pa @ 26.5 l/s (95.4 m3/h) 70.87

MVHR Unit Manufacturer & Model	RPM	Power Consumption	Total	Total dB(A) @ 1m
DANTHERM HCV 300	1600	SFP	0.28 W/m³/h	34
		SPI	1000 J/m³	
		SEL	1.0 W/l/s	