



**NUAIRE THERMAL DUCTING** 

# SAVE TIME AND USE NUAIRE'S DESIGN CENTRE GETTING IT RIGHT FROM THE START

The complete ventilation solution at every stage of your build. At Nuaire we understand the ever increasing challenges that our customers encounter when building new homes. Our complete ventilation solution supports you at every stage of your build.









### NUAIRE'S DESIGN SERVICE GOES BEYOND JUST PRODUCT SELECTION

Nuaire uses the latest Autodesk Revit Software with 3D modelling to guarantee your design replicates system performance. Together with our team of experienced designers, we ensure you have the most efficient system and practical design for your property or development.

#### **DEAL WITH VENTILATION EXPERTS**

Nuaire's technical application team are not only proficient in our 3D Autodesk Revit Software, they are ventilation experts. This expertise together with our Autodesk Revit software and our extensive product range means you get the best ventilation solution for your property or development.

#### **OUR EXPERT SERVICE DOESN'T STOP AT DESIGN STAGE**

Nuaire recognises that when it comes to installation there are always challenges on site to overcome. Our team of experts both at our head office in South Wales and out on the road nationally are always on hand to offer further advice and if needed a re-design that will still meet building regulations, ensure effective system performance and work within the challenges of your build.

Nuaire uses the latest 3D AutoCAD Revit Software, which enables them to provide a design that not only conforms to building regulations but is guaranteed to replicate installed system performance.

When information is provided, the 3D software used by Nuaire will detect clashes with other systems early on and therefore provides a design that works within your build requirements and can help to avoid costly on site remedies.

When a product manufacturer such as Nuaire selects a MVHR product and designs the ducted system that must go with it, all of the above would have been taken into careful consideration.

Nuaire's design will be fully compliant with building regulations and it's important to ensure that it's installed as designed. Most importantly, if issues are encountered on site requiring the design to be changed, you must make sure you go back to your manufacturer and re-work the design so that it still conforms to building regulations.

- Advice on compliance with the very latest building regulations
- A drawing service using the latest 3D AutoCAD Revit Software
- Drawings showing appropriate duct runs for each floor
- A full listing of all the necessary ancillaries needed



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## SAVE TIME & MONEY WITH THERMAL DUCTING

Nuaire's range of thermal ducting has been specifically designed to meet the building regulations for thermal insulated duct. Nuaire's unique quick fix clip system will significantly reduce the amount of time that is required to install a compliant insulated ductwork system as it can cut the insulation time by over 50% saving time and money. Unlike other compliant systems Nuaire's Thermal Ducting does not require to be wrapped around the ductwork, Nuaire's components form the ductwork system saving time and money.



#### THE ONLY COMPLETE SOLUTION ON THE MARKET

- Fully compliant with Building Regulations
- Improved thermal efficiency
- Unique clamping mechanism no requirement for sealant & tape
- Lightweight material one person install
- Simple quick fit components
- Significantly reduces time on site
- Environmentally friendly through eco-efficiency
- Cost effective solution
- Independently tested for thermal conductivity by BASF Germany
- LABC Pending
- Patent Pending





# YOU NEED TO COMPLY WITH BUILDING REGULATIONS



### THERMAL DUCTING WHAT BUILDING REGULATIONS SAY

Ductmaster's new range of thermal duct is specifically designed to comply with 2010 Building Regulations to significantly improve thermal conductivity and thermal resistance of ventilation ducting used in domestic properties.



### THE REQUIREMENT

Ducting should be insulated where it passes through unheated areas and voids (e.g. loft spaces) with equivalent of at least 25mm of a material having a thermal conductivity of ≤0.04W/(m.K) to reduce the possibility of condensation forming. Where a duct extends above roof level the section above the roof should be insulated or a condensate trap should be fitted just below roof level.

### **THE REASON**

Ducting in MVHR systems carry warm air through them, when these ducts pass through unheated spaces such as loft spaces if the ductwork does not have sufficient thermal insulation condensation can form on the ductwork and cause water damage to your property.



### HOW NUAIRE THERMAL COMPLIES THE SIMPLE SOLUTION TO MEET JILDING REGULATIONS

The most common method of insulation duct used through un-heated spaces is bubble wrapped ductwork (figure 1) which has limited resistance. Single wrap using this method does not comply with building regulations. An alternative method which is currently used is to wrap the ductwork in 25mm of rockwool (figure 2) which can be very labour intensive and can be prone to human error, often leaving areas of the ductwork uncovered. Nuaire's thermal insulation (figure 3) significantly improves thermal efficiency and is the simplest cost effective solution to meet current building regulations.







Figure 2: Rockwool.

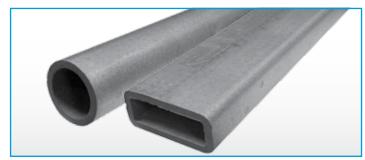
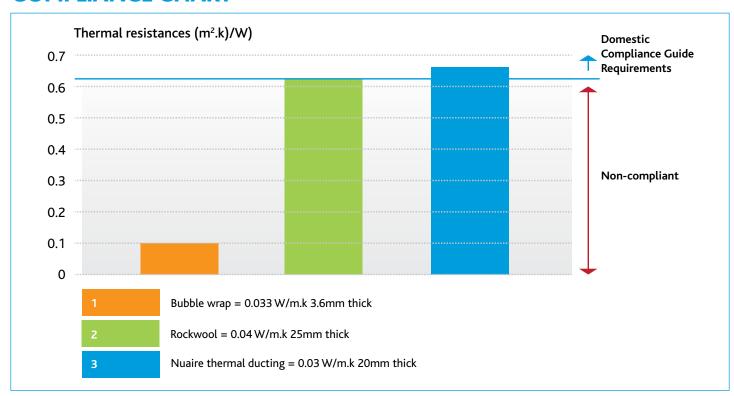


Figure 3: Nuaire thermal ducting.

### **COMPLIANCE CHART**

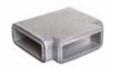


### **NUAIRE THERMAL EXCEEDS BUILDING REGULATION REQUIREMENTS**



### DUCTING AND ANCILLARIES INSULATED 204 X 60MM RECTANGULAR DUCTING ANCILLARIES

INSULATED T PIECE									
			Вох	Resistance in PA					
	Part Number	Duct Size	Description	Quantity	@8l/s	@13l/s	@21l/s	@29l/s	@37l/s
	NTD-204-TP	204mm x 60mm	Insulated T Piece	6	0.9	2.3	5.9	11.2	18.3



INSULATED 90° HORIZONTAL BEND									
Part Number	Duct Size	Description	Box Quantity	Resistano @8l/s		@21l/s	@29l/s	@37l/s	
NTD-204-90H	204mm x 60mm	Insulated 90° Horizontal Bend	6	0.6	1.6	4.1	7.9	12.8	



INSULATED 45° HORIZONTAL BEND								
		Box Resistance in PA						
Part Number	Duct Size	Description	Quantity	@8l/s	@13l/s	@21l/s	@29l/s	@37l/s
NTD-204-45H	204mm x 60mm	Insulated 45° Horizontal Bend	6	0	0.3	1.2	2.6	4.5



INSULATED 90° VERTICAL BEND								
			Box	Resistance in PA				
Part Number	Duct Size	Description	Quantity	@8l/s	@13l/s	@21l/s	@29l/s	@37l/s
NTD-204-90V	204mm X 60mm	Insulated 90° Vertical Bend	6	0.7	1.9	5.2	10.1	16.6



INSULATED PLENUM								
Part Number	Duct Size	Description	Box Quantity	Resistan @8l/s	ce in PA @13l/s	@21l/s	@29l/s	@37l/s
NTD-204-PL	204mm x 60mm	Insulated Plenum	6	0.5	1.3	3.4	6.4	10.4



INSULATED DUCT 1M LENGTH									
			Box	Resistanc	e in PA				
Part Number	Duct Size	Description	Quantity	@8l/s	@13l/s	@21l/s	@29l/s	@37l/s	
NTD-204-1M	204mm x 60mm	Insulated Duct 1m length	6	0.2	0.4	0.8	1.4	2.2	



INSULATED RECTANGULAR DUCT CLAMP WITH FIXING LUGS										
Part Number	Duct Size	Description	Box Quantity	Resistance @8l/s	e in PA @13l/s	@21l/s	@29l/s	@37l/s		
NTD-204-CONL	204mm x 60mm	Insulated Duct Clamps with Fixing Lugs	6	-	-	-	-	-		



INSULATED RECTANGULAR DUCT CLAMP									
Part Number	Duct Size	Description	Box Quantity	Resistance @8l/s	ce in PA @13l/s	@21l/s	@29l/s	@37l/s	
NTD-204-CON	204mm x 60mm	Insulated Duct Clamps without Fixing Lugs	6	-	-	-	-	-	







### DUCTING AND ANCILLARIES INSULATED 125MM DIAMETER CIRCULAR DUCTING ANCILLARIES

INSULATED T PIECE									
		Box Resistance in PA							
Part Number	Duct Size	Description	Quantity	@8l/s	@13l/s	@21l/s	@29l/s	@37l/s	
NTD-125-TP	125mm Dia.	Insulated T Piece	6	0.5	1	2.2	3.9	6.1	



INSULATED 90° BEND								
Part Number	Duct Size	Description	Box Quantity	Resistance in PA tity @8l/s @13l/s @21l/s @29l/s				@37l/s
NTD-125-90H	125mm Dia.	Insulated 90° Bend	6	0.5	1.4	4	7.9	13



INSULATED 45° BEND								
Part Number	Duct Size	Description	Box Resistance in PA Quantity @8l/s @13l,			@21l/s	@29l/s	@37l/s
rait i vallibei	Duct 3ize	Description	Quantity	@Oi/3	@ 131/3	@L II/3	@ <i>LJ</i> (/3	@J/1/3
NTD-125-45H	125mm Dia.	Insulated 45° Bend	6	0.2	0.5	1.4	2.7	4.5



INSULATED DUCT 1M LENGTH									
	Part Number	Duct Size	Description	Box Quantity	Resistano @8l/s	ce in PA @13l/s	@21l/s	@29l/s	@37l/s
	NTD-125-1M	125mm Dia.	Insulated Duct 1M length	6	0.1	0.2	0.4	0.65	0.9



INSULATED ROUND DUCT CLAMP WITH FIXING LUGS								
			Box	Resistan	ce in PA			
Part Number	<b>Duct Size</b>	Description	Quantity	@8l/s	@13l/s	@21l/s	@29l/s	@37l/s
NTD-125-CONL	125mm Dia.	Insulated Duct Clamps	6	-	-	-	-	-
		with Fixing Lugs						



INSULATED ROUND DUCT CLAMPS								
			Box	Resistan	ce in PA			
Part Number	<b>Duct Size</b>	Description	Quantity	@8l/s	@13l/s	@21l/s	@29l/s	@37l/s
NTD-125-CON	125mm Dia.	Insulated Duct Clamps without Fixing Lugs	6	-	-	-	-	-

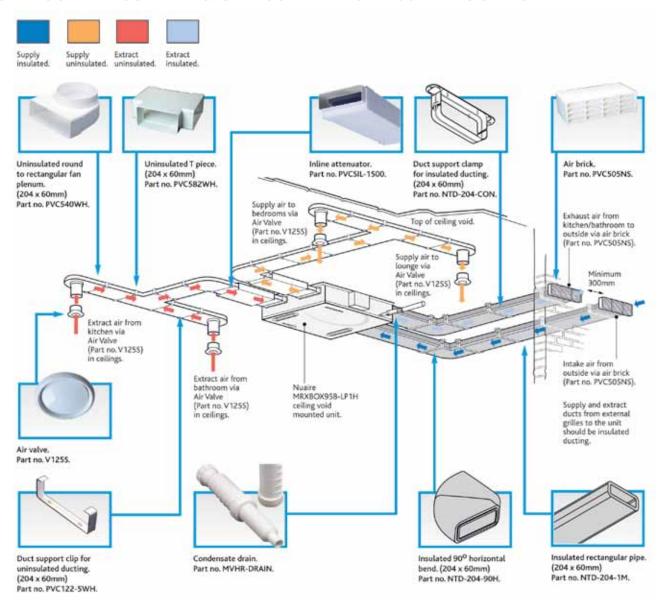


### **NUAIRE'S TOP TIPS**

- Use rigid duct for the majority of your installation
- Avoid using flexible ducting, if you must, remember the regulations, pull taut to 90% of its length, support the install and don't install where it can be crushed
- Minimise bends and ensure your duct routes take the path of least resistance
- Use a non-hardening acrylic sealant and aluminium duct tape to connect your ductwork and use ducting with guide veins to avoid gaps and air leakage
- Use insulated ducting for unheated spaces or heated spaces that are carrying cold air
- Install Nuaire's CONTRAP and install the ductwork correctly to prevent backflow of moisture going to the fan unit
- Follow the design provided by Nuaire

### TYPICAL MVHR DUCTED ARRANGEMENT FOR A CEILING VOID MOUNTED UNIT

### **RECTANGULAR INSULATED & UNINSULATED 204 X 60MM DUCTING**

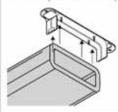


#### USING DUCT CLAMP NTD-204-CON WITH RECTANGULAR INSULATED DUCT PIPE

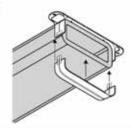
Remove the bottom part of the duct damp from the top half of the clamp and using two screws attach the top half of the clamp to the installation position.

Offer the rectangular duct pipe up

Offer the rectangular duct pipe up to the installed portion of duct clamp and press the duct pipe onto the vertical spikes inside the clamp.



With the duct length in position, offer the lower part of the duct clamp up to the top half of the clamp.



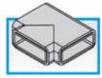
Locate the fixing tabs on each side of the lower part of the duct clamp into the clamp fasteners each side of the top half of the clamp. Each duct joint should be supported by a clamp centrally positioned over each joint.



#### OTHER INSULATED DUCTING ANCILLARIES



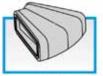
Insulated fan plenum. (204 x 60mm) Part no. NTD-204-PL



Insulated T piece. (204 x 60mm) Part no. NTD-204-TP.



Insulated 90<sup>0</sup> vertical bend. (204 x 60mm) Part no. NTD-204-90V.

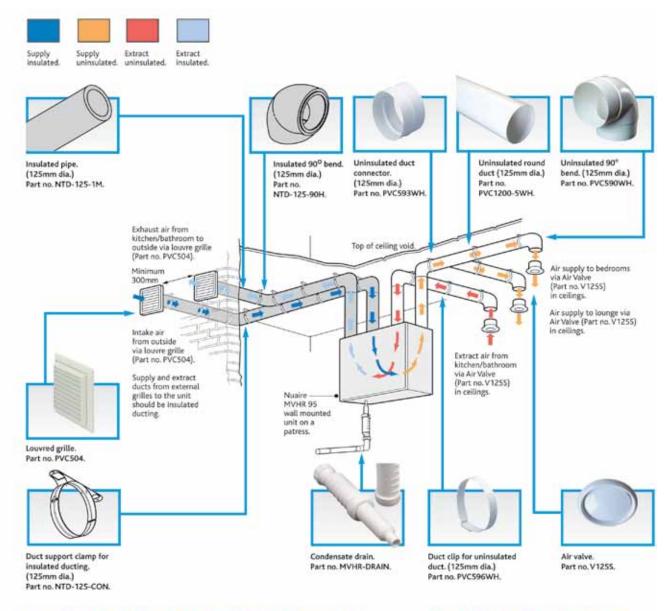


Insulated 45<sup>o</sup> horizontal bend. (204 x 60mm) Part no. NTD-204-45H.



### TYPICAL MVHR DUCTED ARRANGEMENT FOR A WALL MOUNTED UNIT

### **CIRCULAR INSULATED & UNINSULATED 125MM DIAMETER DUCTING**



#### USING DUCT CLAMP NTD-125-CON WITH ROUND INSULATED DUCT PIPE

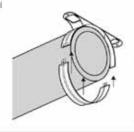
Remove the bottom part of the duct clamp from the top half of the clamp and using two screws attach the top half of the clamp to the installation position.

Offer the round duct pipe up to the

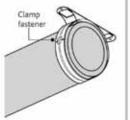
Offer the round duct pipe up to the installed portion of duct clamp and press the duct pipe onto the vertical spikes inside the clamp.



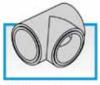
With the duct length in position, offer the lower part of the duct clamp up to the top half of the clamp.



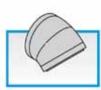
Locate the fixing tabs on each side off the lower part of the duct clamp into the clamp fasteners each side of the top half of the damp. Each duct joint should be supported by a clamp centrally positioned over each joint.



### OTHER INSULATED DUCTING ANCILLARIES



Insulated T piece. (125mm dia.) Part no. NTD-125-TP.



Insulated 45° bend. (125mm dia.) Part no. NTD-125-45H.



### **PRODUCT SPECIFICATION**

MANUFACTURER	Nuaire Ltd.			
PRODUCT BRAND NAME	Ductmaster			
INSULATION PROPERTIES	Thermal Conductivity: 0.03 W/(m.K) Thermal Resistance: 0.67(m².K)/W U value: 1.49 W(m².K)			
MATERIAL	Injection moulded 20mm in thickness; carbon impregnated Expanded Polystyrene (EPS) Density: 25 Kg/m <sup>3</sup> Colour: Silver/Grey			
THERMAL CONDUCTIVITY	Thermal conductivity tested to BASF EN13163			
FIRE RESISTANCE	Flame retardant to Class EN1350 <sup>1-1</sup>			
ENVIROMENTAL	Environmentally friendly through high eco-efficiency			
PRODUCTS	Nuaire Ductmaster thermal insulated duct shall be available in two different sizes, based on the internal dimension: 125mm Diameter or 204 x 60mm rectangular. Unlike other thermal ducting systems Nuaire's unique ducting design negates the need for solid plastic inner ducting to achieve the required thermal properties and leakage rates stipulated by building regulations.			
COMPONENT DESCRIPTIONS	NTD-125-TP: 125mm DIAMETER T PIECE NTD-125-90H: 125mm DIAMETER 90 DEG BEND NTD-125-45H: 125mm DIAMETER 45 DEG BEND NTD-125-1M: 125mm DIAMETER 1M DUCT NTD-204-TP: 204X60mm T PIECE NTD-204-90H: 204X60mm 90 DEG HORIZONTAL BEND NTD-204-45H: 204X60mm 45 DEG HORIZONTAL BEND NTD-204-90V: 204X60mm 90 DEG VERTICAL BEND NTD-204-PL: 204X60mm PLENUM NTD-204-1M: 204X60mm 1M DUCT			
CLAMPING MECHANISM SPECIFICATION	Material: Acrylonitrile Butadiene Styrene (ABS) Colour: Blue - RAL 5015			
COMPONENT DESCRIPTIONS	Nuaire's fast clamp system shall achieve a level of leakage substantially lower than the maximum allowed for a class A duct as defined in DW/143 (Ductwork leakage testing).  Fast clamps also negate the need to use any sealants or tapes to join the duct pieces resulting in a cleaner, faster and easier installation on site.  NTD-125-CONL: 125mm DIAMETER CLAMP WITH FIXING LUGS NTD-125-CON: 125mm DIAMETER CLAMP WITH OUT FIXING LUGS NTD-204-CONL: 204X60 CLAMP WITH FIXING LUGS NTD-204-CON: 204X60 CLAMP WITH OUT FIXING LUGS			



NUAIRE THERMAL DUCTING
THE RIGHT STOCK AT THE RIGHT PRICE,
RIGHT HERE IN THE UK

### **NEED A COMPONENT FAST? TRUST NUAIRE TO DELIVER!**

Next day delivery available on ductmaster range of thermal ducting. With a dedicated Nuaire Xpress team and over 50 sales staff throughout the UK we can ensure you can get what you need, fast! Our excellent service is one of the many reasons thousands of customers keep coming back to us.





### **Nuaire Limited**

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As part of our policy of continuous product development Nuaire reserves the right to alter specifications without prior notice. Telephone calls may be recorded for quality and training purposes.