

CONSTRUCTION

DURADUCT LT® consists of a galvanised steel inner duct over boarded with 6.0mm DURASTEEL® and finishing trim angles.

The system is installed using a proprietary flange. The total thickness of standard DURADUCT LT® is nominally 7.5mm.

TRIED AND TESTED SYSTEMS FOR LIFE SAFETY

DURADUCT LT® is a fast track and economical DURASTEEL® based fire resisting ductwork solution which combines the airflow and wipe down characteristics of standard galvanised steel ductwork with the armour plated comfort of 'FIT and FORGET' DURASTEEL®.

The DURADUCT LT® system is manufactured by approved ductwork contractors and can be delivered to site with minimal site handling.

DURADUCT LT® is TRIED and TESTED in ductwork solutions for natural ventilation ducting, mechanical ventilation ducting, natural smoke vents, mechanical smoke vents, fire rated pressurisation ductwork and kitchen extract ducting.

PERFORMANCE

Up to 240 minutes fire resistance in accordance with the integrity and insulation criteria of BS 476: Part 24: 1987.

TRIED AND TESTED SYSTEMS FOR LIFE SAFETY

DURADUCT SMT® and LT® ductwork systems are made from DURASTEEL® sheet; a non-combustible composite of fibre cement, reinforced by mechanically bonded galvanised steel sheeting.

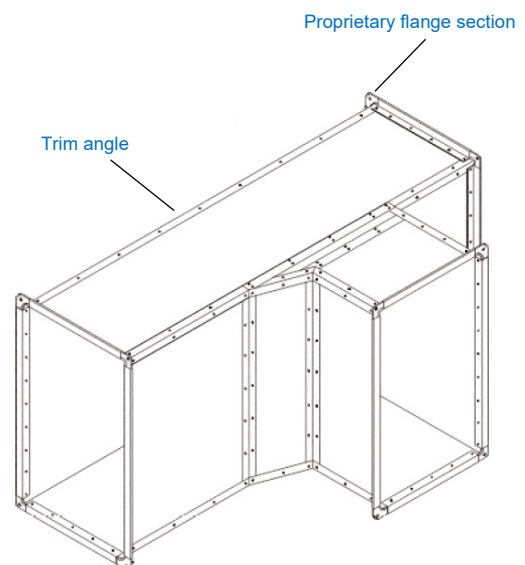
DURASTEEL® is highly resistant to moisture and retains its mechanical integrity even when saturated. It will not absorb combustible fluids such as cooking oil in kitchen extract ducts and has exceptional fire resistant qualities. Systems are available which will provide up to four hours protection to suit the demands of modern developments.

DURASTEEL® withstands hose stream action and, because of its very low moisture absorption, it can be used externally. It is not susceptible to the damage often caused by moisture or sprinkler activation during the early stages of delivery and installation of a fire-rated ductwork system.

DURASTEEL® has a tremendous resistance to impact and has high flexural strength, giving added protection in the early stages of construction and throughout the life of the building.

SYSTEM FEATURES

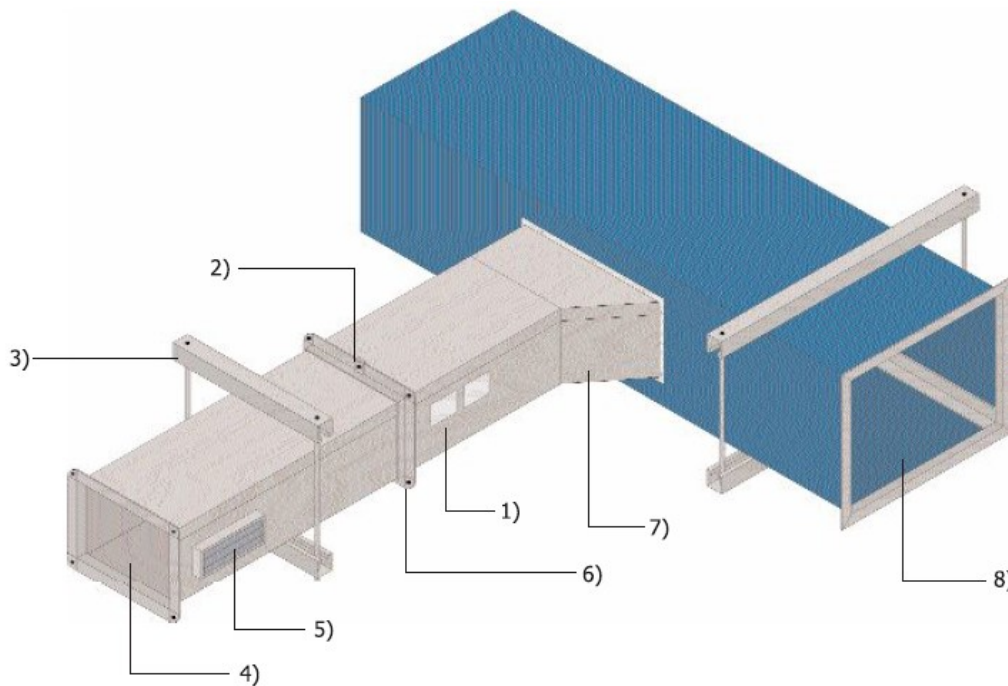
- Fire resistance from either side
- Impact resistance
- Moisture resistance
- Space-saving
- Excellent strength and integrity
- Suitable for internal and external applications
- 'Fit and forget' (maintenance free)



DD/ DR 60-120 DURADUCT STEEL RUN-OUT DUCTING

A steel duct system tested to BS 476:Part 24, built to enhanced DW144 standards, it provides 60 or 120 minutes stability/integrity. This ducting is for use together with the DD/SMT and DD/LT ranges for connection largely between the main smoke extract system and grilles where fire Insulation performance is not required.

Additionally, the system may be used for smaller cross-section extract ducts that are located within protected shafts. These shafts provide the required fire compartmentation and the aesthetic finishes, such as those often used for toilet extract ducting.



DURADUCT® SR steel run-out ducting (connected to a DURASTEEL® smoke extract duct system)

COMPONENTS

- Identification labels (1)
- Clamp (2)
- Duct support system (3)
- DURADUCT® steel run-out duct system DD/SR (4)
- Grille (5)
- 'Knock on flanges' (6)
- Shoe connection (7)
- Durasteel DD/SMT or DD/LT (8)

PERFORMANCE

The DD/SR Range has been tested to:

- BS 476: Part 24: 1987 and meets the fire stability and integrity requirements for up to 120 mins.
- It maintains 75% cross-section and is suitable for smoke extract ducting.
- Air Leakage A -C (DW144)

Please note: The cross section of the DD/SR duct system is limited to 0.2m² with no side greater than 0.75 metres wide. Ducts outside this range are manufactured from DURASTEEL®.

DUCTWORK INSULATION MATRIX LT®

Applications	Powered Ventilation / Natural ventilation / Smoke extraction / Kitchen Extract
Notes	All ductwork is tested / assessed to BS476:Part 24 (ISO 6944 - 1985) Type A duct - Out to In fire condition Type B duct - In to Out fire condition

Additional insulation protection may be required where the duct passes adjacent to combustible materials or hazardous areas. LT standard ductwork is often acceptable in risers and passing through non-combustible areas.

NATURAL VENTILATION

Minutes	Stability	Integrity	Insulation			
			Type A or B duct - 300°C	To BS 7346 pt 2 1990 (to 650°C)	Type A duct - 1000°C+	Type B duct - 1000°C+
30	Yes	Yes	LT	LT	LT	LT
60	Yes	Yes	LT	LT	LT	LT+ 50mm of 60kg/m ³
120	Yes	Yes	LT	LT	LT+ 50mm of 60kg/m ³	LT+ 80mm of 140kg/m ³
180	Yes	Yes	LT	LT	LT+ 50mm of 140kg/m ³	LT+ 100mm of 140kg/m ³
240	Yes	Yes	LT	LT Insulation fails at 220 mins	LT+ 90mm of 165kg/m ³	LT+ 120mm of 140kg/m ³

POWERED VENTILATION/ SMOKE EXTRACT

Minutes	Stability	Integrity	Insulation			
			Type A or B duct - 300°C	To BS 7346 pt 2 1990 (to 650°C)	Type A duct - 1000°C+	Type B duct - 1000°C+
30	Yes	Yes	LT	LT	LT	LT
60	Yes	Yes	LT	LT	LT+ 30mm of 60kg/m ³	LT+ 50mm of 60kg/m ³
120	Yes	Yes	LT	LT	LT+ 50mm of 60kg/m ³	LT+ 80mm of 140kg/m ³
180	Yes	Yes	LT	LT	LT+ 50mm of 140kg/m ³	LT+ 100mm of 140kg/m ³
240	Yes	Yes	LT	LT Insulation fails at 220 mins	LT+ 90mm of 165kg/m ³	LT+ 120mm of 140kg/m ³

KITCHEN EXTRACT

Where main fire risk is from in to out - Type B duct, use the above table for powered ventilation / smoke extract
 Where main fire risk is from out to in - Type A duct at 1000°C+. Use the table below.

Minutes	Stability	Integrity	Type A duct - 1000°C
60	Yes	Yes	LT+ 50mm of 165kg/m ³
120	Yes	Yes	LT+ 90mm of 165kg/m ³

* All data taken from Promat 'Ductwork Solutions' July 2003 Datasheet

PROPERTIES AND PERFORMANCE

Description A composite panel of fibre cement mechanically bonded to punch steel sheets on both surfaces

Size 2500 x 1200mm

		6mm thick	9.5mm thick
Nominal Weight (kg/m²)		16.8	21.0
Strength	Flexural strength (MPa) (average)	109	84
	Flexural modulus (GPa) (average)	55	40
	Impact strength (J) (4.5kg from 1m)	-	44.15
	Impact resistance (J)	-	2793
Moisture	Ambient moisture content (%)	6	6
	Movement ambient to saturated (%)	≤0.15	≤0.15
Thermal	Thermal conductance (W/m ² K)		60
	Coefficient of thermal expansion (x10 ⁻⁶ K ⁻¹)	15	15
Acoustic	Sound reduction index (dB)	28.0	29.7
Fire	Non-combustibility to BS 476:Part 4 Building Regulations classification Maximum tested fire resistance (minutes)	Non-combustible Class 0 -	Non-combustible Class 0 360
Finishes	Sheet:	Galvanised mild steel Stainless steel	
ADDITIONAL TEST EVIDENCE AVAILABLE UPON REQUEST: CONTACT PROMAT UK LIMITED TECHNICAL SERVICES DEPARTMENT			

Note: All physical property values are averages based on standard production. The figures can change dependent on the test methods used. If a particular value is of prime importance for a specification, please contact Promat Technical Services Department.

** All data taken from Promat 'Ductwork Solutions' July 2003 Datasheet*