

## 502.11 Pipe and Duct Insulation

For all new buildings, all pipes carrying refrigerant, hot water or chilled water and ducts, including prefabricated ducts, supplying conditioned air must be insulated to minimise heat loss and prevent condensation.

1. Pipes and ducts passing through conditioned spaces must be insulated in accordance with BSI British Standard BS 5422:2009 or other insulation standards approved by Dubai Municipality.
2. Pipes passing through outside or unconditioned spaces must be insulated with the minimum insulation thickness specified in Table 502.11 (1).

Table 502.11 (1) Minimum insulation thickness for pipes passing through unconditioned spaces

Steel pipe nominal pipe size (mm)	Temperature of contents (°C)					
	10° C		5° C		0° C	
	Minimum Insulation thickness (mm)					
	λ = 0.018 W/mK	λ = 0.038 W/mK	λ = 0.018 W/mK	λ = 0.038 W/mK	λ = 0.018 W/mK	λ = 0.038 W/mK
15	50	30	45	30	45	30
20	60	30	55	30	45	30
25	60	40	55	35	55	30
32	65	40	55	35	55	30
40	65	40	60	35	55	30
50	70	45	60	40	60	30
65	70	45	60	40	60	40
80	75	45	65	40	60	40
100	75	45	65	40	70	40
150	90	50	80	45	75	40
200	90	55	80	45	75	45
250	100	55	80	55	75	45
300+	100	80	100	75	80	70

•  $\lambda$  = thermal conductivity of insulating materials at a mean temperature of 10°C.

