

Mr Jones who owns a small factory unit has just purchased a new compressor.

(Scott & Sargeant SIP – RS-15 3 phase compressor specification details below).

Determine a suitable CSA for a conductor and confirm the selected CSA is suitable for voltage drop using the information below and BS 7671 (2022) and the On-Site Guide.



TECHNICAL SPECIFICATION

Input Supply: 400v 3-PHASE
 Motor Power: 15kW (20.11hp)
 Power Factor 0.8
 Noise Level: 65dB(A)
 Max. Air Pressure: 145psi (10bar)
 Net Weight: 443.00kg
 Gross Weight: 458.00kg
 Product Dimensions: 1980(H) x 700(W) x 1670mm(D)
 Packaged Dimensions: 2000(H) x 775(W) x 1800mm(D)

Existing Consumer Unit Details.

EATON 8-way TP-N EBM81
 125 A Main Switch incomer

Circuit Installation Details

The circuit is to be installed at a depth of 1.75 metres inside a ducting under the ground.

Circuit length

43 meters

Cable Type

4c multicore armoured 70 °C thermoplastic insulated cables. (COPPER CONDUCTORS)

CPC Selection

Separate single copper cable to be selected 2 CSA sizes smaller than the live conductor CSA.

Highest Ground Temperature

35°C

Supply Characteristics

TN-S
 Ze 0.24 Ω