VACUUM ASSISTED VENOUS DRAINAGE

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Introduction
Vacuum assisted venous drainage is to be implemented whenever gravity venous drainage is deemed to be insufficient to maintain adequate systemic perfusion, during cardiopulmonary bypass (CPD). This technique may be requested by the surgeon’s consent when inadequate venous drainage is noted by the perfusionist.

The greater vacuum as applied to the housing, greater flow is achieved for each of the cannulae used. There were no difference between the negative pressure applied to the housing and the pressure measured at the inlet to the venous bag. For each, a vacuum of –50 mmHg applied to the housing, resulted in a 40 % increase in flow as compared to venous flow without vacuum.

Conclusion
Augmented venous return allows the perfusionist to use a venous line having a smaller inner diameter thereby reducing prime volume and allows the surgeon to use a smaller venous cannula resulting in easier insertion, better surgical view and a smaller surgical incision.