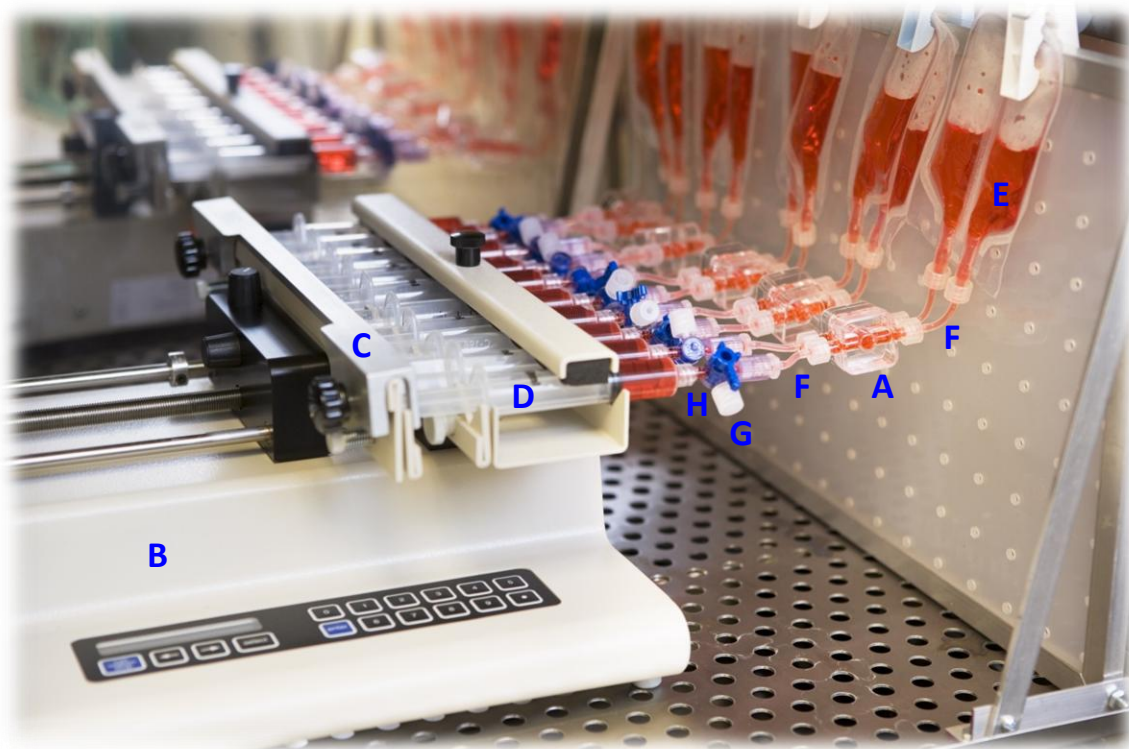


3DKUBE™ 3D Cell Culture Plasticware Syringe Pump Configuration - Suggested Parts and Assembly

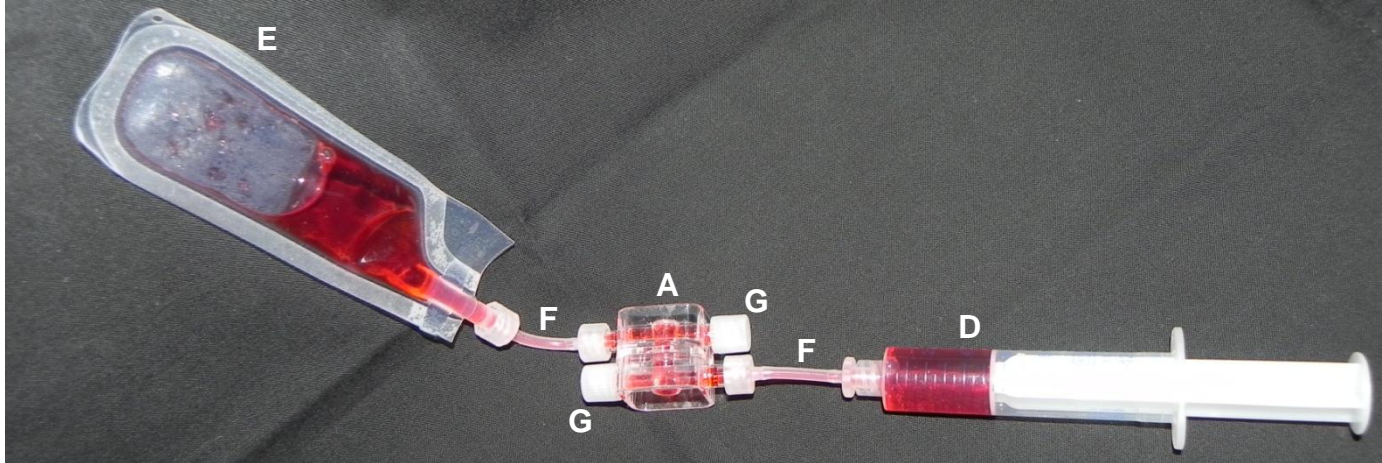
Reference	Description	Vendor and Part Number
A	3DKUBE™ 3D Cell Culture Plasticware	KIYATEC: 3D010, 3D020
B	FC230 Multi-syringe Pump	KIYATEC: FC230
C	Pump Clamp, 10-syringe	KIYATEC: AC050
D	Norm-Ject® Luer Lock Syringe (10 mL, Sterile)	KIYATEC: FC060
E	Gas Exchange Media Reservoir (20 mL) <i>coming soon</i>	KIYATEC: FC040
F	Syringe Pump Connector Kit	KIYATEC: FC030
G	Male luer plug	KIYATEC: FC010
H	3-way Stopcock Valve	KIYATEC: FC050

NOTE:

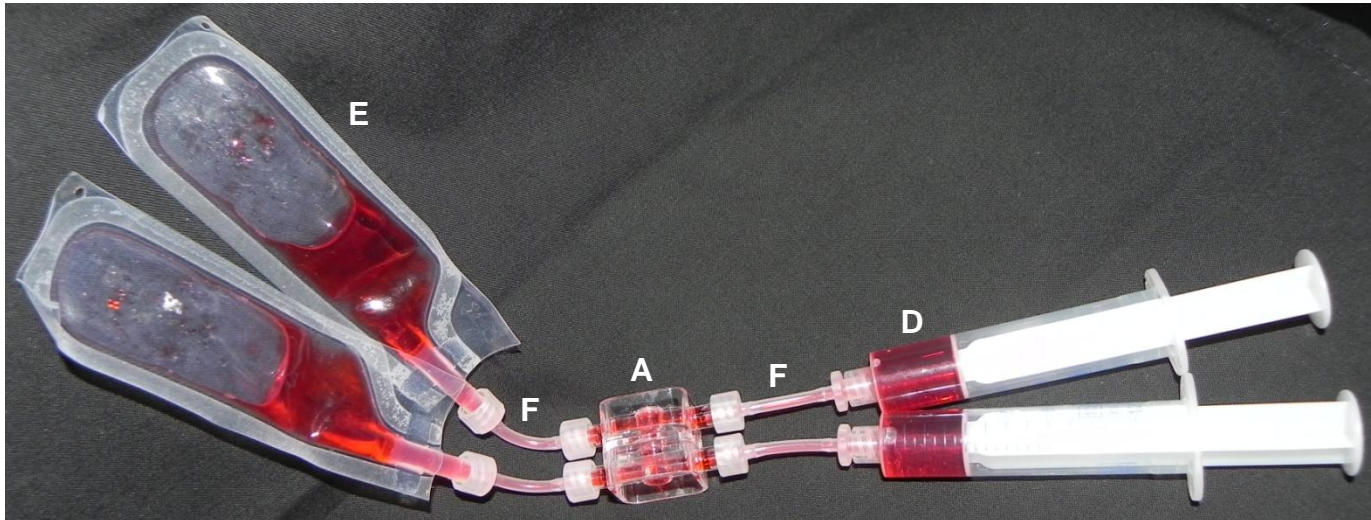
- Polypropylene mesh liner (Cole-Parmer 06630-50) can be used to line the circumference of the culture chamber when using a hydrogel or discrete scaffold material under 500 µm in size.
- 3-way stopcock valve can be used to take medium aliquots and for perfusion seeding of the scaffold material.



Segregated Co-culture Configuration - “Z-flow” Flow Circuit Assembly



Independent Chambers Configuration - “Parallel” Flow Circuit Assembly



Helpful Hints:

- Assemble the 3DKUBE first prior to connecting male luer plugs and connector kit tubing assemblies.
- The gas exchange media reservoir needs to be elevated or hung to allow appropriate media flow without introducing bubbles into the culture chambers.
- Segregated Co-culture configuration should be setup with a “Z-flow” pattern as shown in the picture above to facilitate flow across the 0.45 μm porous membrane to allow soluble factor transfer between cell populations in the opposing 3D culture chambers.