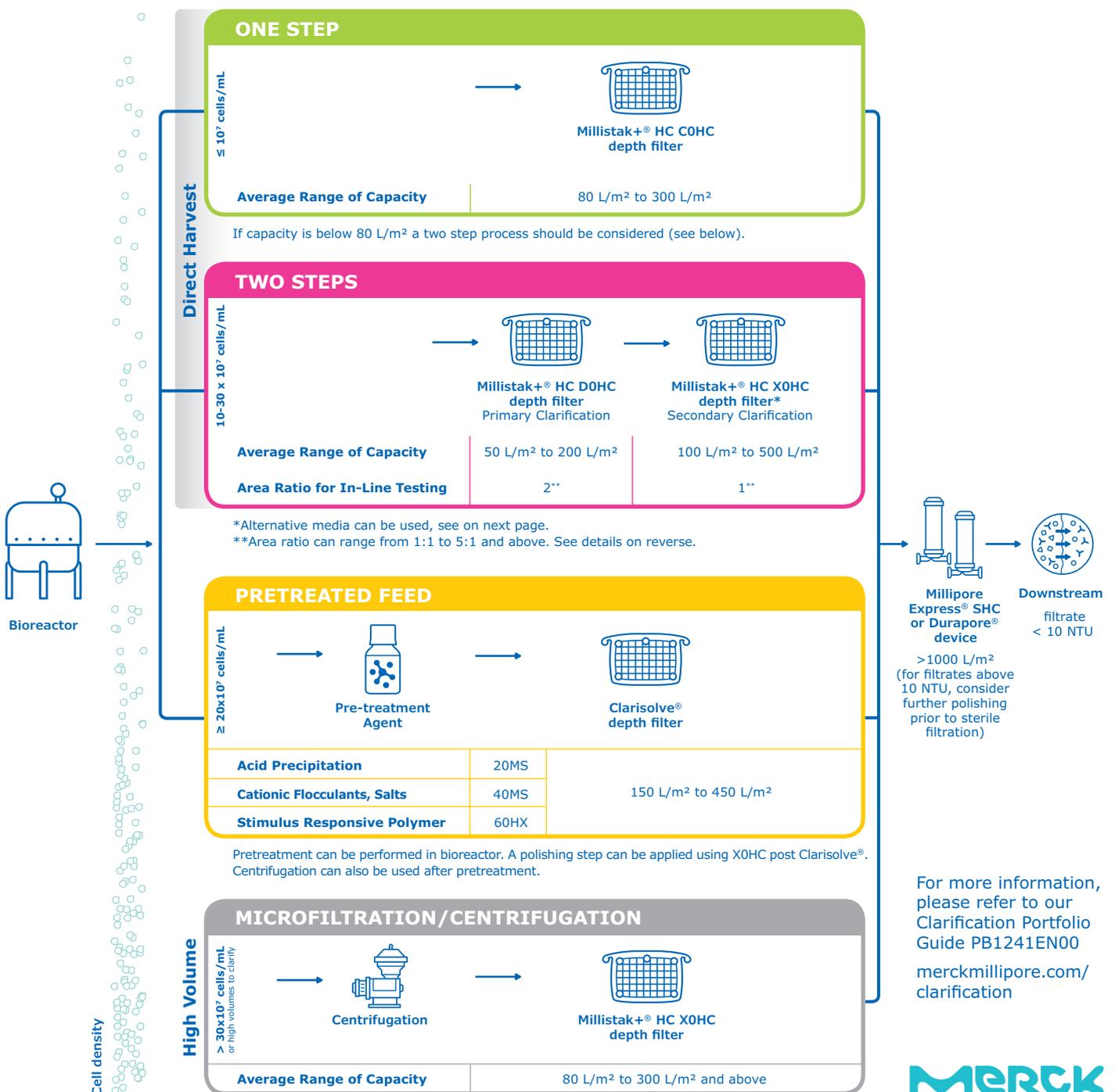
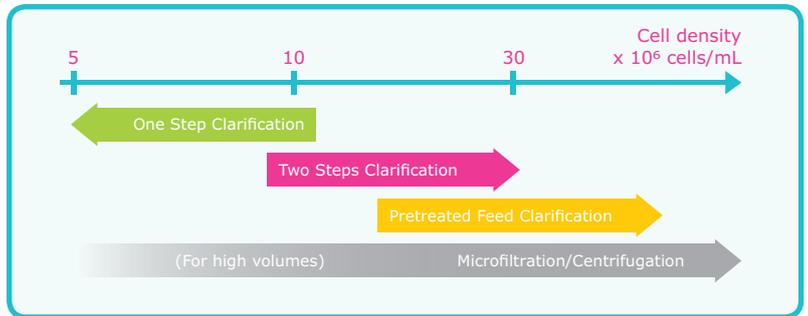
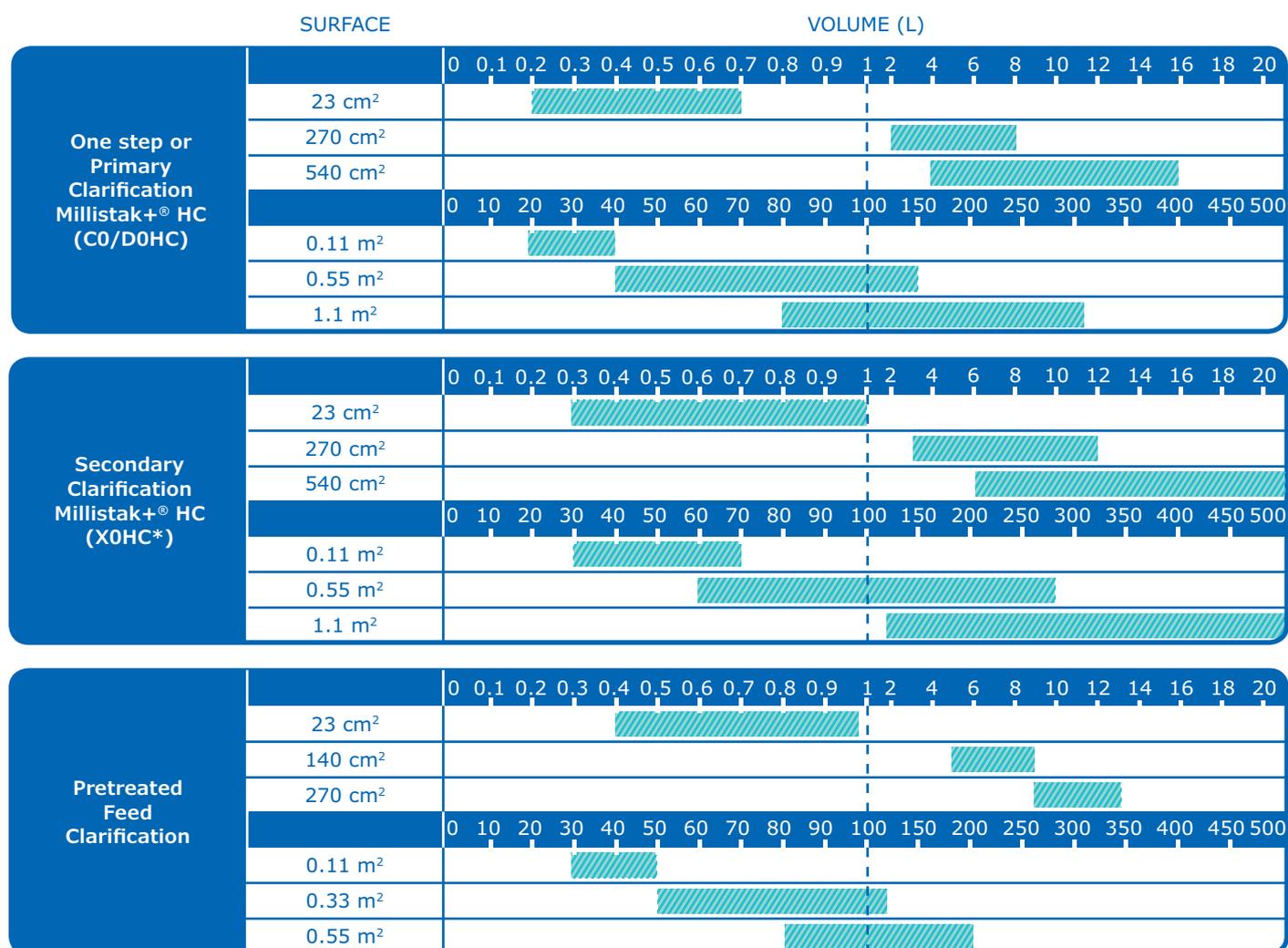


# Clarification of mammalian cell cultures by depth filtration



For more information, please refer to our Clarification Portfolio Guide PB1241EN00 [merckmillipore.com/clarification](http://merckmillipore.com/clarification)

# Volumetric Loading Recommendations for Scale-up



## Recommendations for selection and trials

\* Millistak+® HC F0HC alternative media if capacity is low, Millistak+® HC A1HC or Millistak+® HC B1HC alternative media to test if product yield and purification levels after Millistak+® HC D0HC are low. Other parameters may influence the testing protocol and grades selected (yield, flow, cell culture viability, etc).

\*\* Area ratio of 2:1 is suggested to start with if in-line testing is considered. For determining maximum filter capacities of each filter and an optimum filter area ratio, each filter can be tested separately by a constant flow (Pmax™) assay. Running a trial in-line with the selected filtration train and in process conditions is an important confirmation step. For a video tutorial on how to run a Pmax™ Constant Flow Test, please visit [www.merckmillipore.com/process-development-tools](http://www.merckmillipore.com/process-development-tools). Depending on the feed, any area ratios can be implemented. Please reach out to your local technical contact for more information.

Sterilizing grade filter can be selected from a range of single or multi-layer PES or PVDF membrane (Millipore Express® and Durapore® devices).

## Recommended test conditions

Flow from 100-150 LMH primary clarification (Millistak+® HC C0HC; Millistak+® HC D0HC)

Flow from 100-300 LMH for secondary clarification (Millistak+® HC X0HC; Millistak+® HC F0HC; Millistak+® HC A1HC or Millistak+® HC B1HC)

Maximum end point pressure 1 bar (15 psi) to 1.8 bar (22 psi).

## To place an order or receive technical assistance

### In Europe, please call Customer Service:

France: 0825 045 645  
 Germany: 069 86798021  
 Italy: 848 845 645  
 Spain: 901 516 645 Option 1  
 Switzerland: 0848 645 645  
 United Kingdom: 0870 900 4645

### For other countries across Europe, please call: +44 (0) 115 943 0840

Or visit: [www.merckmillipore.com/offices](http://www.merckmillipore.com/offices)

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