

DIRECT INJECTION STEAM	ADVANTAGES	LIMITATIONS	ANCILLARY EQUIPMENT
Steam Cup	<ul style="list-style-type: none"> ■ Simple design 	<ul style="list-style-type: none"> ■ Limited performance features ■ Limits in control of steam output ■ Limitations in allowable steam capacity ■ Unrefined sound silencing ■ Can disperse boiler chemicals into air 	<ul style="list-style-type: none"> ■ N/A
Steam Separator	<ul style="list-style-type: none"> ■ Reliable performance ■ Available in a wide range of capacities ■ Adjusts to changes in demand ■ Separates steam from condensate ■ Sound silencing capability ■ Low maintenance requirements ■ Available with high turn-down or valve rangeability ■ Lifts condensate within stream pressure constraints ■ Control valve can be adjusted electrically or pneumatically 	<ul style="list-style-type: none"> ■ Requires availability of a steam boiler ■ Longer nonwetting distance than steam panel-type ■ Can disperse boiler chemicals into air 	<ul style="list-style-type: none"> ■ Steam trap ■ Wye type strainer ■ Temperature switch ■ Controls
Steam Panel	<ul style="list-style-type: none"> ■ Reliable performance ■ Available in a wide range of capacities ■ Adjusts to changes in demand ■ Separates steam from condensate ■ Sound silencing capability ■ Low maintenance requirements ■ Available with high turn-down or valve rangeability ■ Short nonwetting distances ■ Control valve can be adjusted electrically or pneumatically ■ Performs without steam jacket or manifolds ■ Can be insulated for energy savings 	<ul style="list-style-type: none"> ■ Requires availability of a steam boiler ■ Can disperse boiler chemicals into air ■ Difficulty lifting condensate from steam traps unless specified with an integral heat exchanger that vaporizes condensate 	<ul style="list-style-type: none"> ■ Wye type strainer ■ Controls ■ Condensate pump ■ Manufacturer supplied and installed panel insulation