



engineered systems

PRODUCT PROFILE

QVF STANDARD REACTORS

QVF Standard Glass Reactor Series:

The QVF Standard Reactor Series are available in sizes of 30, 50, and 100-L. The reactor systems are widely used in research and development as well as kilo plant production applications throughout the chemical, biotech, and pharmaceutical industries. One reason for this extensive use is the special properties of

borosilicate glass 3.3, which combines process visibility, purity, corrosion resistance, and long term service.

Complemented by other highly corrosion resistant materials such as PTFE, SiC and De Dietrich Glass Lined Steel, the QVF Glass Reactor Series can handle a variety of functions.

Standard Features:

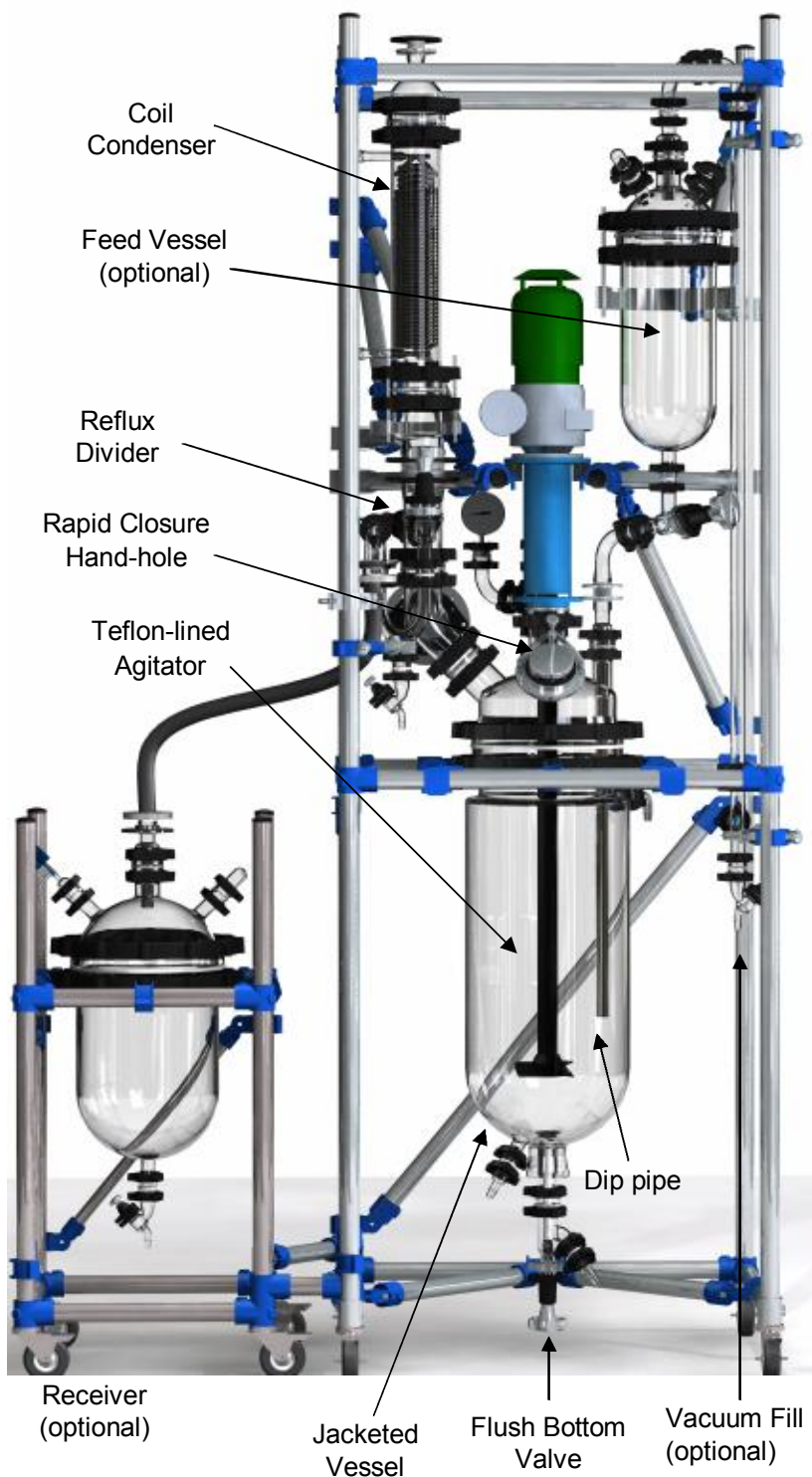
- Single dry mechanical seal
- Bottom outlet valve with zero dead space
- Temperature & pressure gauges
- Graphite rupture disk assembly
- Rapid closure hand hole assembly
- Dip pipe for liquid addition
- Interconnecting piping, valves & fittings
- Galvanized support structure
- Explosion proof motor
- Double bearing for agitator support

Common Options:

- Feed vessel
- Glass lined Steel jacketed reactor bottom
- Receiver vessel
- High temperature double mechanical seal
- Bottom outlet temperature sensor
- Temperature control module
- Vacuum system
- Phase separator
- Horizontal condenser
- Distillation overheads featuring DuraPak®
- Reactor bottom lift device
- Additional instrumentation/transmitters
- Variable frequency drive

Sizes:

- Stock standards: 30, 50 & 100 Liters
- Pre-engineered standards: 5L to 100 Liters
- Temperature rating: -50°C to 120°C (higher temperature available, to 200°C)
- Pressure rating: Full vacuum to 0.6 Bar





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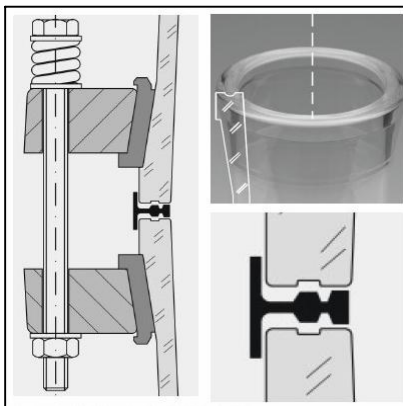
Key Features & Options:

QVF Safety & Quality:

All glass reactor components are fabricated from high quality World Product Range (WPR) borosilicate glass 3.3. Each part meets equipment safety regulations such as the Pressure Equipment Directive (ASME code equivalent) and carries the CE mark. Furthermore, WPR components are traceable for validated processes and ease of replacement.



Bottom outlet valve with zero dead space and optional thermowell



QVF fire polished ends with GMP gaskets for improved cleaning



Optional QVF glass Optimix reactor

Improved Delivery & Service:

- Pre-engineered for fast delivery
- All standard reactor components are in stock
- Quick turn around on replacement parts
- Customer spare inventory reduced



Special QVF reactor engineered to fit in tight height constraints; featuring options such as: lift mechanism, Optimix baffles, and horizontal coil condenser

Standard Sizes

Capacity		30L	50L	100L
Condenser	m ²	0.5	0.5	2.5
Feed Tank	L	5	10	20
Receiver Tank	L	20	20	30
Base Reactor w x d x h	mm	980 x 890 x 2800	980 x 890 x 3130	1130 x 850 x 3235

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De Dietrich



ROSENMUND





reaction technology

Q30

QVF 30L Jacketed Borosilicate Glass Reactor

SPECIFICATIONS

Vessel Design Pressure (barg)	0.6 and F.V.
Jacket Design Pressure (barg)	0.5
Design Temperature (°C)	120
Jacket Heating Area (m²)	0.46

DIMENSIONS

	mm	in
A	2800	110
B	980	39
C	880	35
D	386	15
E	1330	52
F	2220	88
G	1105	50
H	1650	65
I (I.D)	300	12

CAPACITY (L)

Working Volume	31
Total Volume (to hand hole)	47
Jacket Volume	17

REACTOR WEIGHTS (lb)

Reactor (with drive system)	490
Complete (with condenser)	550
Add for Shipping	300

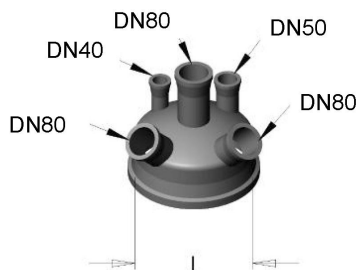
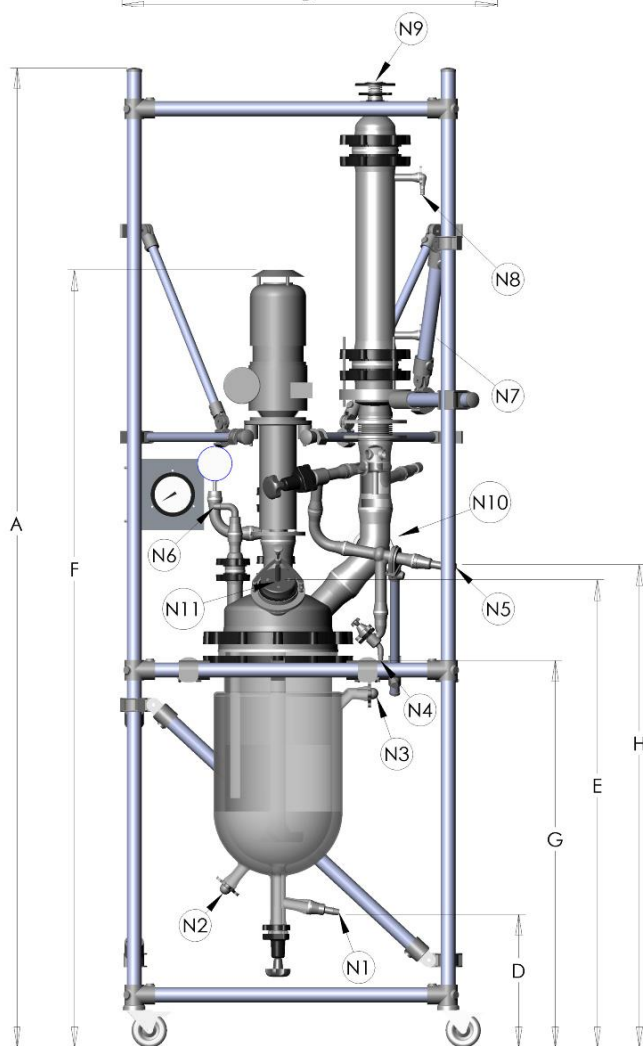
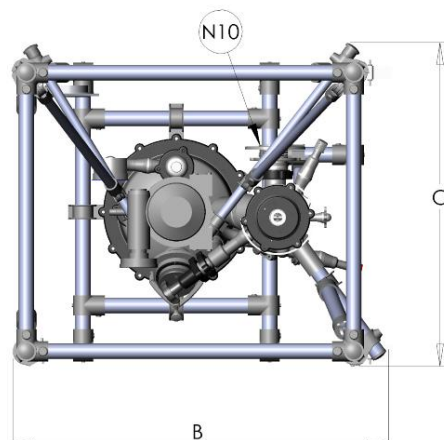
HELICAL GEAR DRIVE

Motor	½ HP
Motor Type	XP

PITCHED BLADE TURBINE AGITATOR

Span (diameter)	145 mm (6")
Speed (range)	125 to 600 RPM
Material of Construction	PTFE / CS

Nozzle Schedule			
Mark	Size	Type	Service
N1	3/4" OD	Hose Barb	Reactor Outlet
N2	3/4" OD	Hose Barb	Jacket Inlet
N3	3/4" OD	Hose Barb	Jacket Outlet
N4	5/8" OD	Hose Barb	Liquid Seal Drain
N5	3/8" ID	Compression	Distillate Outlet
N6	3/4" OD	Hose Barb	Reactor Liquid Feed
N7	1/2" OD	Hose Barb	Coolant Inlet
N8	1/2" OD	Hose Barb	Coolant Outlet
N9	1"	ANSI 150#	Vapor Outlet
N10	2"	ANSI 150#	Relief Outlet
N11	3"	Closure Plug	Hand Hole
N12	3/8" ID	Compression	Thermowell Opening



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reaction technology

Q50

QVF 50L Jacketed Borosilicate Glass Reactor

SPECIFICATIONS

Vessel Design Pressure (barg)	0.6 and F.V.
Jacket Design Pressure (barg)	0.5
Design Temperature (°C)	120
Jacket Heating Area (m²)	0.72

DIMENSIONS

	mm	in
A	3130	123
B	980	39
C	880	35
D	385	15
E	1880	74
F	2490	98
G	1440	57
H	1650	65
I (I.D)	300	12

CAPACITY (L)

Working Volume	51
Maximum Volume	59
Jacket Volume	22

REACTOR WEIGHTS (lb)

Reactor (with drive system)	525
Complete (with condenser)	590
Add for Shipping	300

HELICAL GEAR DRIVE

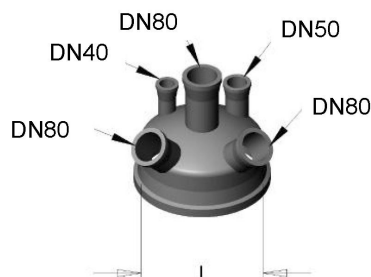
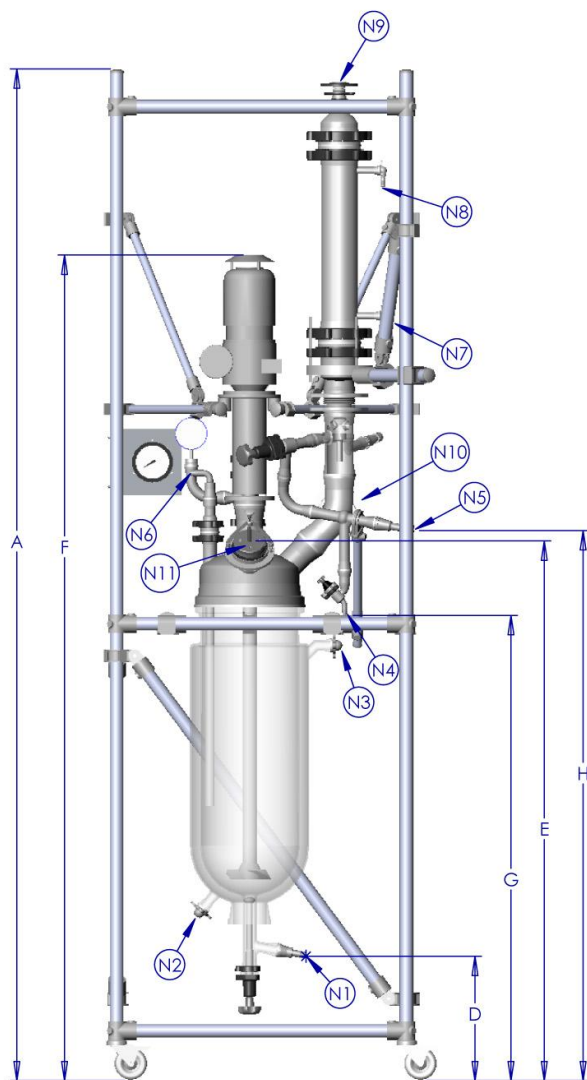
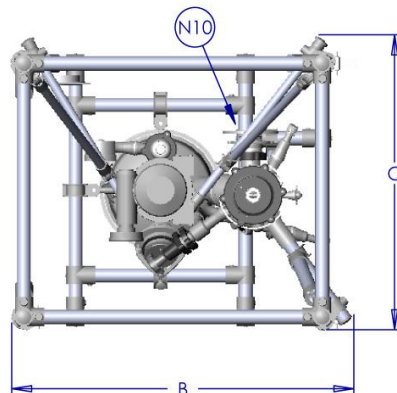
Motor	½ HP
Motor Type	XP

PITCHED BLADE TURBINE AGITATOR

Span (diameter)	145 mm (6")
Speed (range)	125 to 600 RPM
Material of Construction	PTFE / CS

Nozzle Schedule

Mark	Size	Type	Service
N1	3/4" OD	Hose Barb	Reactor Outlet
N2	3/4" OD	Hose Barb	Jacket Inlet
N3	3/4" OD	Hose Barb	Jacket Outlet
N4	5/8" OD	Hose Barb	Liquid Seal Drain
N5	3/8" ID	Compression	Distillate Outlet
N6	3/4" OD	Hose Barb	Reactor Liquid Feed
N7	1/2" OD	Hose Barb	Coolant Inlet
N8	1/2" OD	Hose Barb	Coolant Outlet
N9	1"	ANSI 150#	Vapor Outlet
N10	2"	ANSI 150#	Relief Outlet
N11	3"	Closure Plug	Hand Hole
N12	3/8" ID	Compression	Thermowell Opening



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Q100

QVF 100L Jacketed Borosilicate Glass Reactor

SPECIFICATIONS

Vessel Design Pressure (barg)	0.6 and F.V.
Jacket Design Pressure (barg)	0.5
Design Temperature (°C)	120
Jacket Heating Area (m²)	1.01

DIMENSIONS

	mm	in
A	3235	127
B	1130	44
C	850	33
D	530	21
E	1685	66
F	2900	114
G	1690	67
H	1960	77
I (I.D)	450	18

CAPACITY (L)

Working Volume	104
Maximum Volume	122
Jacket Volume	26

REACTOR WEIGHTS (lb)

Reactor (with drive system)	810
Complete (with condenser)	890
Add for Shipping	300

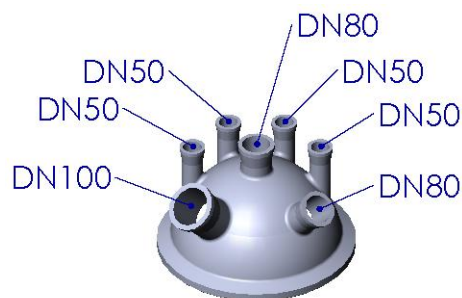
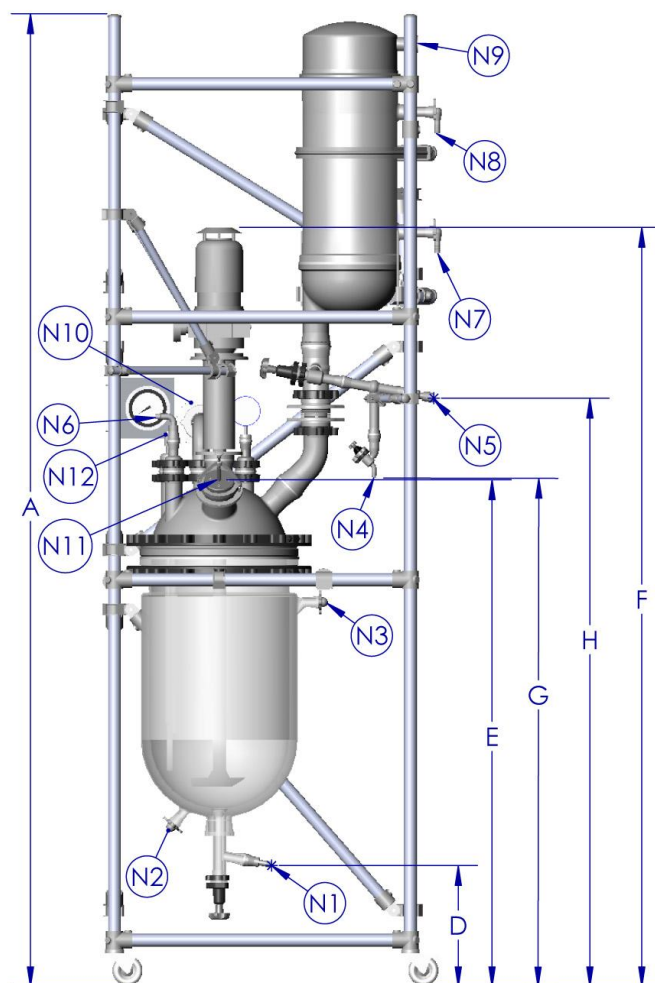
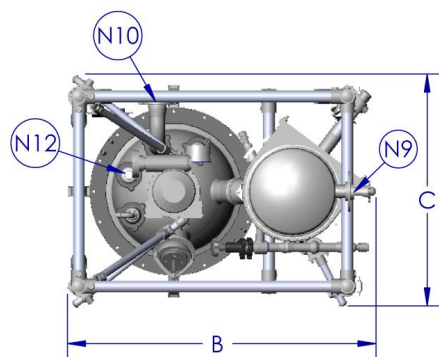
HELICAL GEAR DRIVE

Motor	½ HP
Motor Type	XP

PITCHED BLADE TURBINE AGITATOR

Span (diameter)	190 mm (8")
Speed (range)	125 to 600 RPM
Material of Construction	PTFE / CS

Nozzle Schedule			
Mark	Size	Type	Service
N1	3/4" OD	Hose Barb	Reactor Outlet
N2	3/4" OD	Hose Barb	Jacket Inlet
N3	3/4" OD	Hose Barb	Jacket Outlet
N4	5/8" ID	Hose Barb	Liquid Seal Drain
N5	3/8" ID	Compression	Distillate Outlet
N6	3/4" OD	Hose Barb	Reactor Liquid Feed
N7	1/2" OD	Hose Barb	Coolant Inlet
N8	1/2" OD	Hose Barb	Coolant Outlet
N9	1 1/2"	ANSI 150#	Vapor Outlet
N10	2"	ANSI 150#	Relief Outlet
N11	4"	Closure Plug	Hand Hole
N12	3/8" ID	Compression	Thermowell Opening
N13	2"	Pipe Cover	Spare



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