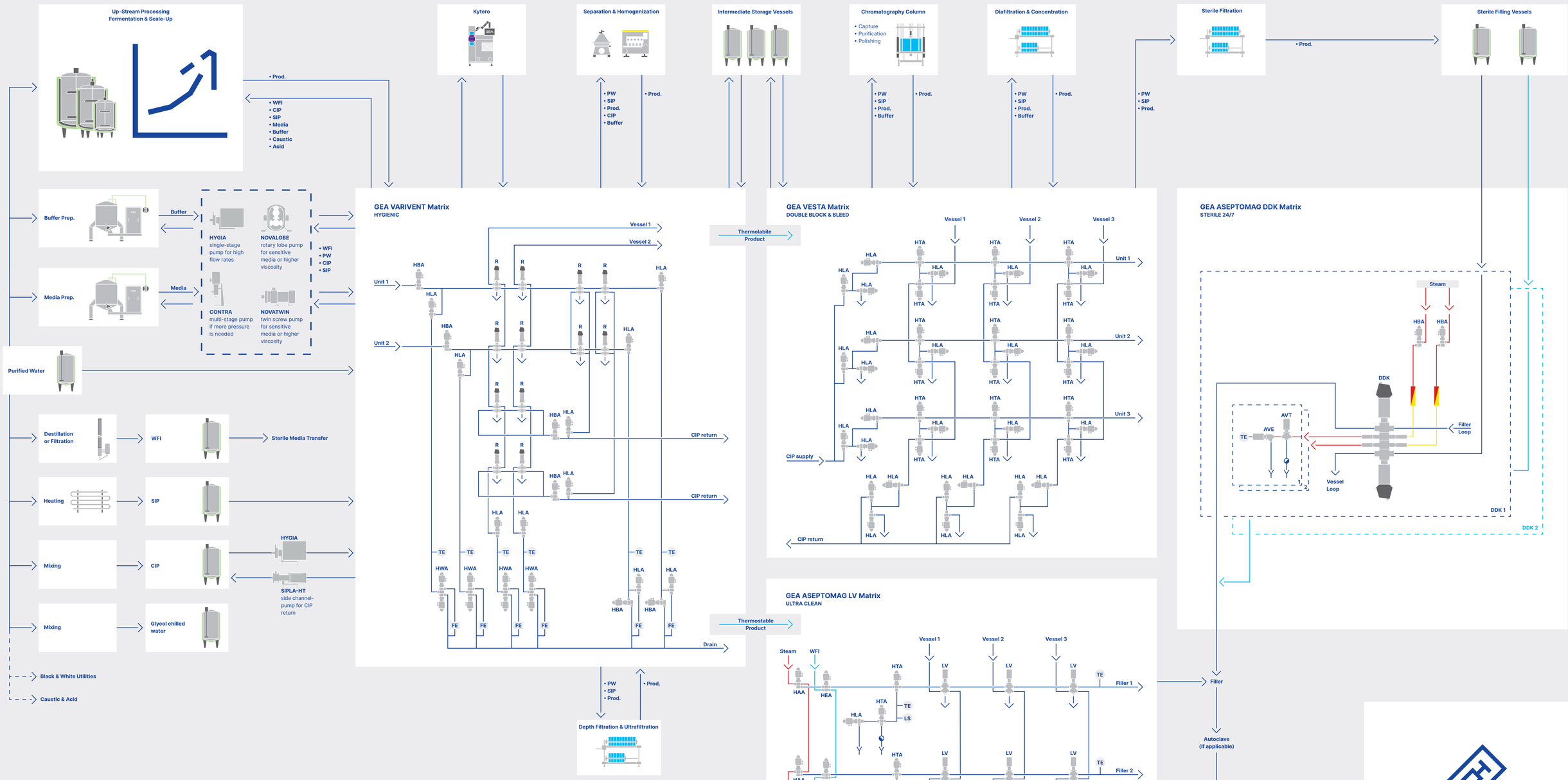
Pharma Process Landscape



Selection scheme for pumps conveying product
HYGIA: single-stage centrifugal pump for large flow rates
CONTRA: multi-stage centrifugal pump if more pressure is needed
NOVALOBE: rotary lobe pump for highly viscous media
NOVATWIN: twin screw pump which enables gentle product handling with almost no pulsation as well as CIP medium with a single pump

		Centrifugal pumps			Positive displacement pumps		
		Single-stage	Multi-stage	Self-priming	Rotary lobe	Twin-screw	
		GEA Hilge HYGIA	**GEA Hilge CONTRA**	**GEA Hilge SIPLA-HT**	**GEA Hilge NOVALOBE**	**GEA Hilge NOVATWIN**	
2-pole 50 Hz	Max. flow rate [m³/h]	180	100	–	up to 2.1 l/rev	up to 310 m³/h	Displacement/ Flow rate
	Max. pump head [m]	77	200	–			
	Motor rating [kW]	up to 45.0	up to 45.0	–	up to 16	up to 25	Max. differential pressure [bar]
4-pole 50 Hz	Max. flow rate [m³/h]	110	–	50			
	Max. pump head [m]	20	–	37	up to 95 140 (SIP)	up to 180 140 (SIP)	Max. liquid temperature [°C]
	Motor rating [kW]	up to 7.5	–	up to 11.0			
2-pole 60 Hz	Max. flow rate [m³/h]	145	100	–	uni-wing, bi-wing, multilobe	4 screw pitches per size	Rotor design
	Max. pump head [m]	110	230	–			
	Motor rating [kW]	up to 45.0	up to 45.0	–	≤ 0.4 / ≤ 0.8	≤ 0.4 / ≤ 0.8	Surface roughness R_a [µm]
4-pole 60 Hz	Max. flow rate [m³/h]	110	–	50			
	Max. pump head [m]	28	–	51	up to 41	up to 74	Max. particle size [mm] (non-abrasive)
	Motor rating [kW]	up to 7.5	–	up to 11.0			
	Surface roughness R_a [µm]	≤ 0.4 / ≤ 0.8 / ≤ 3.2	≤ 0.4 / ≤ 0.8 / ≤ 3.2	≤ 0.4 / ≤ 0.8	1,000,000	1,000,000	Max. viscosity [mPas]
	Surface roughness R_a [µm]	450–500, temporarily 1,000	450–500	800–1,000			
	System pressure [bar]	15 / 25 / 64	25	10	16	30	System pressure [bar]

All pumps available as **ATEX** version for the use in potentially explosive areas due to pressure-resistant encapsulated motors.
All pumps can be equipped with **frequency converters** for a precise and energy-saving adaptation to varying power requirement (e.g. weekend operation) and most gentle product handling (as the higher energy input may have a negative effect on product quality).

Legende: CIP = Cleaning In Place, SIP = Sterilizing In Place, PW = Purified Water, WFI = Water For Injection, LP = Low Point, TE = Temperature Element, FE = Flow Element, EOL = End Of Line Cluster, LS = Level Sensor

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