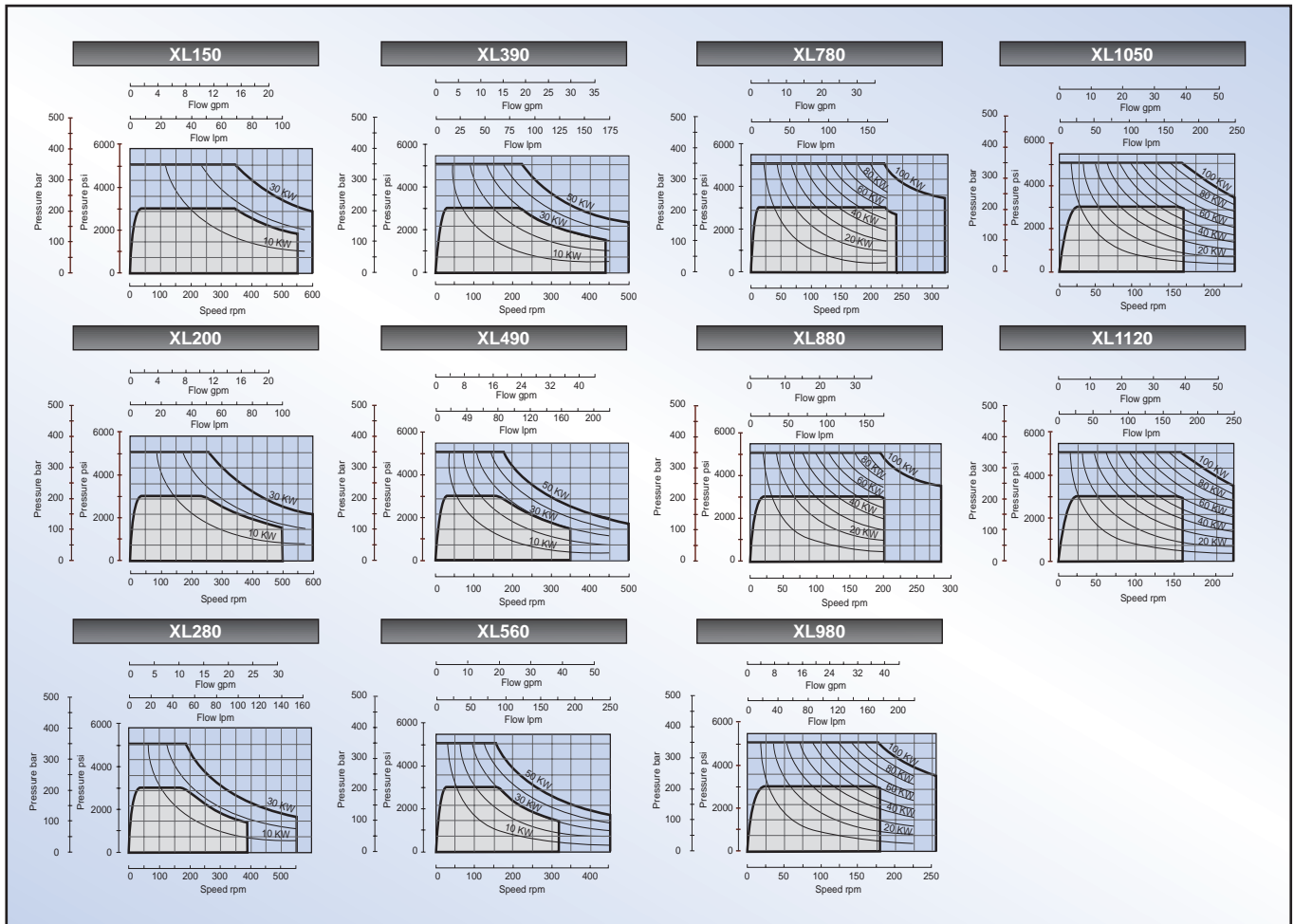


## PERFORMANCE DATA - POWER CHARTS

Power capabilities for XL motors are indicated in the charts shown. These should be read in conjunction with the information given in the technical data chart. For optimum life, continuous periods of operation should be limited to the grey area on the charts. Mobile transmissions and industrial drives may use values up

to maximum stated intermittent speeds pressures and powers shown as part of an anticipated duty cycle. ISO efficiencies shown are intended to assist in designing transmission systems. Allowance should be made for normal reduction in efficiencies as a system ages.



## CALCULATIONS

### DETERMINATION OF MOTOR SIZE

$$\text{Output torque} = \frac{\text{Motor displacement} \times \Delta \text{ pressure} \times \eta_m}{20\pi}$$

Flow required for rotational speed:

$$\text{Flow} = \frac{\text{Motor displacement} \times \text{rotational speed}}{1000 \times \eta_v}$$

$$\text{Output power} = \frac{\text{Motor torque} \times \text{rotational speed}}{9550}$$

### Units

Torque	=	Nm.
Flow	=	L/min.
Power	=	kW.
ΔPressure	=	Bar
Speed	=	Rev/min.
Motor displacement	=	cm <sup>3</sup> per revolution
η <sub>m</sub>	=	Mechanical efficiency.
η <sub>v</sub>	=	Volumetric efficiency.

For approximate estimates of performance η<sub>m</sub> = 0.95; η<sub>v</sub> = 0.95. These can be assumed as typical values for 50% of maximum continuous speed and 275 bar Δpressure.