Appendix 9: Typical Pump Specifications and Performance Curves

Appendix 9 contains the provides the Technical Specifications and Performance Curves for a Flygt Model PL 7065 stormwater duty pump and representative of the “standardized” pumping units proposed in this report.

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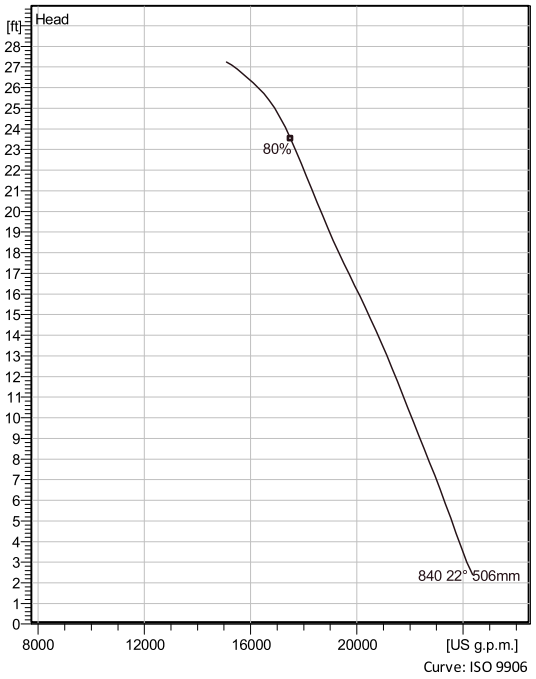
Axial flow propeller pumps with fixed or adjustable pitch blades for high capacity low head pumping of clean or slightly contaminated liquids. Cast iron design optimized for high-flow efficiency.

Technical specification

Curves according to: Water, pure Water, pure [100%],39.2 °F,62.42 lb/ft³,1.6891E-5 ft²/s



Curve: ISO 9906

Nominal (mean) data shown. Under- and over-performance from this data should be expected due to standard manufacturing tolerances.
Please consult your local Flygt representative for performance guarantees.

Configuration

Motor number
P0705.000 43-30-8AA-W 135hp

Impeller diameter
506 mm

Installation type
L - Column pipe Semi permanent, Wet

Discharge diameter
32 inch

Pump information

Impeller diameter
506 mm

Discharge diameter
32 inch

Inlet diameter

Maximum operating speed
880 rpm

Number of blades
4

Max. fluid temperature
40 °C

Configuration

Material

Impeller
Stainless steel

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Technical specification

Motor - General

Motor number	Phases	Rated speed	Rated power
P0705.000 43-30-8AA-W 135hp	3~	880 rpm	135 hp
ATEX approved	**Number of poles**	**Rated current**	**Stator variant**
No	8	179 A	1
Frequency	**Rated voltage**	**Insulation class**	**Type of Duty**
60 Hz	440 V	H	S1
Version code			
000			

Motor - Technical

Power factor - 1/1 Load	Motor efficiency - 1/1 Load	Total moment of inertia	Starts per hour max.
0.82	90.0 %	62.4 lb ft²	15
Power factor - 3/4 Load	**Motor efficiency - 3/4 Load**	**Starting current, direct starting**	
0.80	91.0 %	750 A	
Power factor - 1/2 Load	**Motor efficiency - 1/2 Load**	**Starting current, star-delta**	
0.74	90.5 %	250 A	

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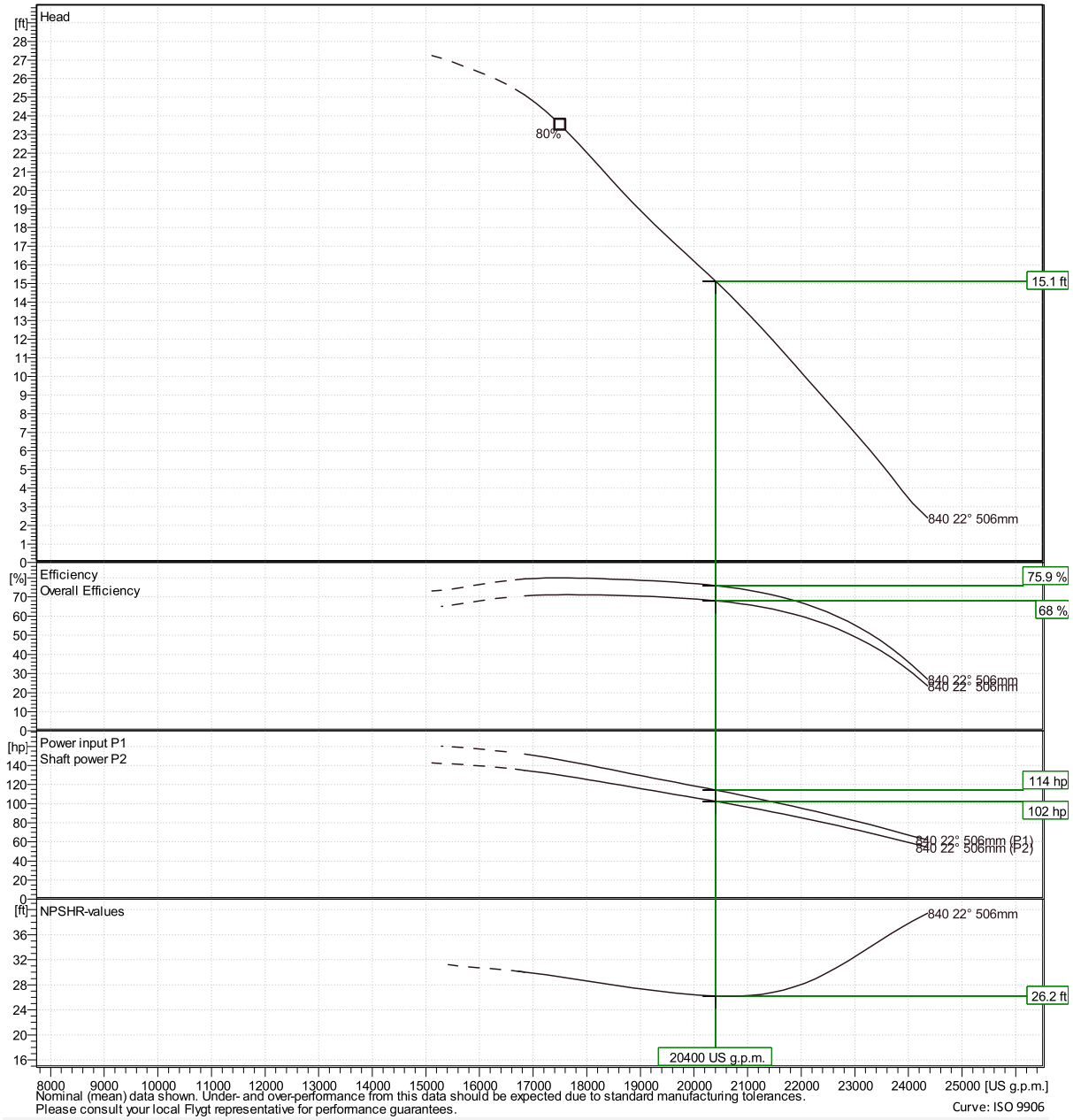
Performance curve

Duty point

Flow	Head
20400 US g.p.m.	15.1 ft

Curves according to: Water, pure Water, pure [100%],39.2 °F,62.42 lb/ft³,1.6891E-5 ft²/s



Nominal (mean) data shown. Under- and over-performance from this data should be expected due to standard manufacturing tolerances.
Please consult your local Flygt representative for performance guarantees.

Curve: ISO 9906

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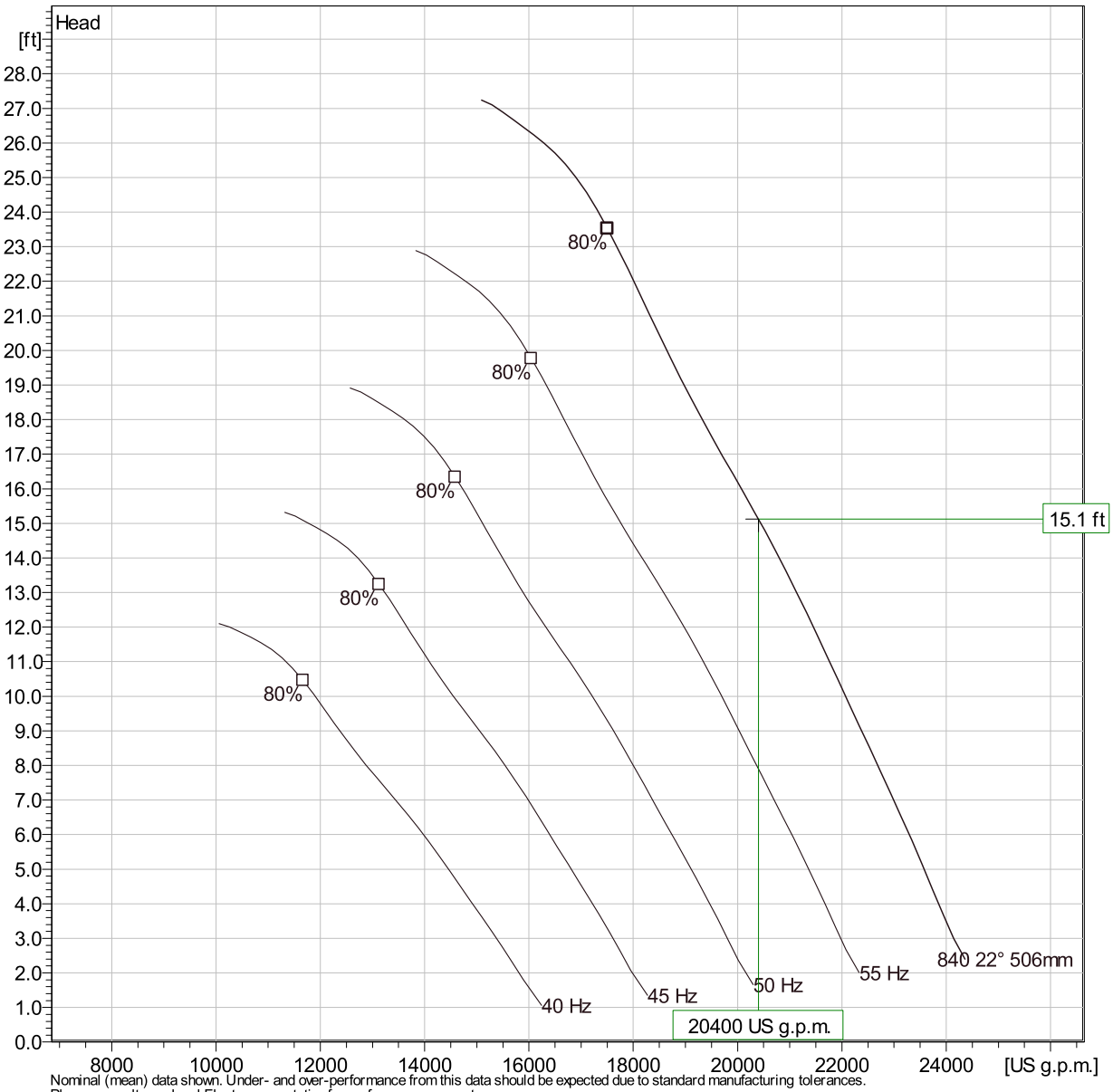
Duty Analysis

Curves according to: Water, pure [100%] ; 39.2°F; 62.42lb/ft³; 1.6891E-5ft²/s



Nominal (mean) data shown. Under- and over-performance from this data should be expected due to standard manufacturing tolerances.
Please consult your local Flygt representative for performance guarantees.

Operating characteristics

Pumps / Systems	Flow	Head	Shaft power	Flow	Head	Shaft power	Hydr.eff.	Spec. Energy	NPSHre
	US g.p.m.	ft	hp	US g.p.m.	ft	hp		kWh/US MG	ft
1	20400	15.1	102	20400	15.1	102	75.9 %	69.7	26.2

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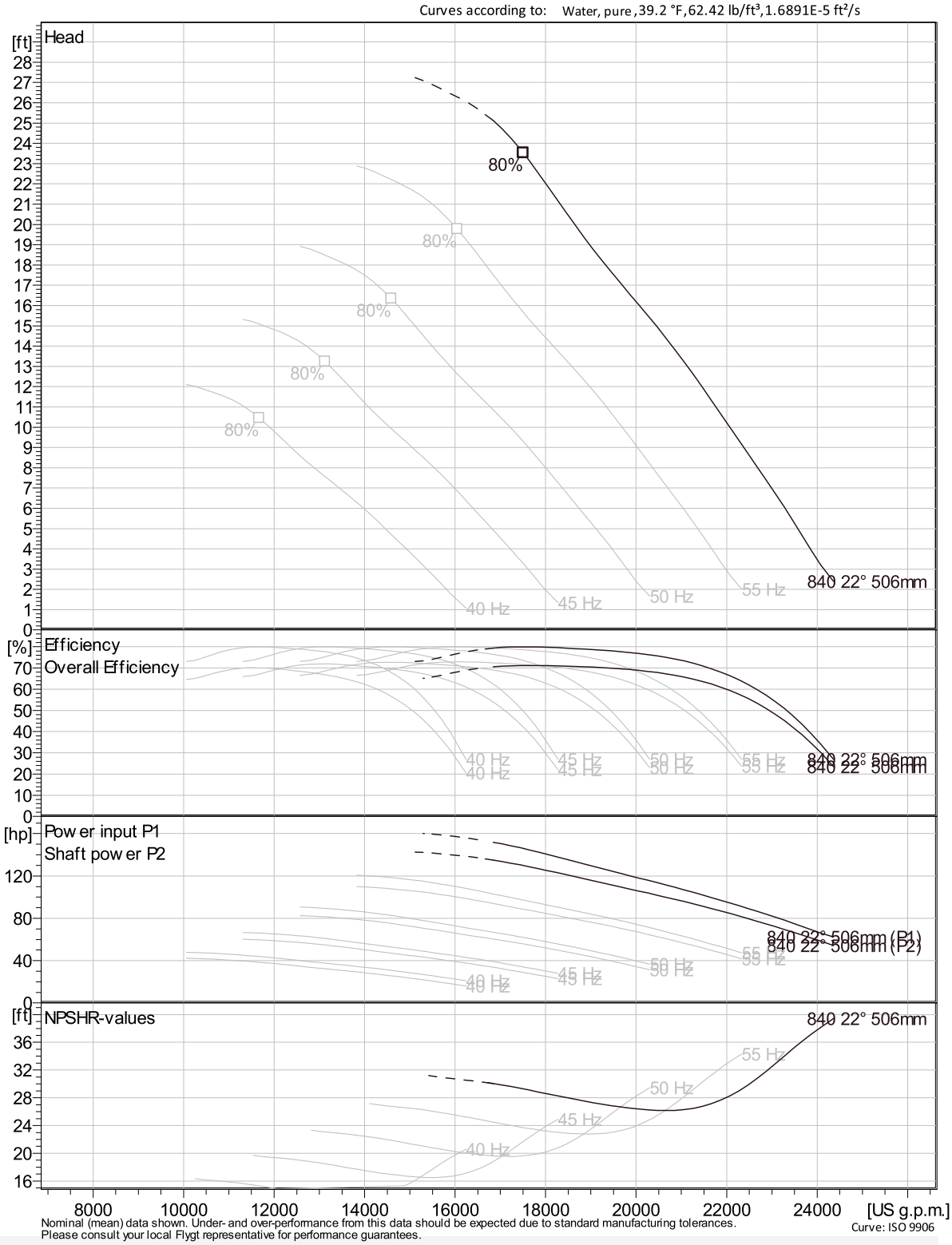
VFD Curve

Curves according to: Water, pure ,39.2 °F,62.42 lb/ft³,1.6891E-5 ft²/s



Nominal (mean) data shown. Under- and over-performance from this data should be expected due to standard manufacturing tolerances.
Please consult your local Flygt representative for performance guarantees.

Curve: ISO 9906

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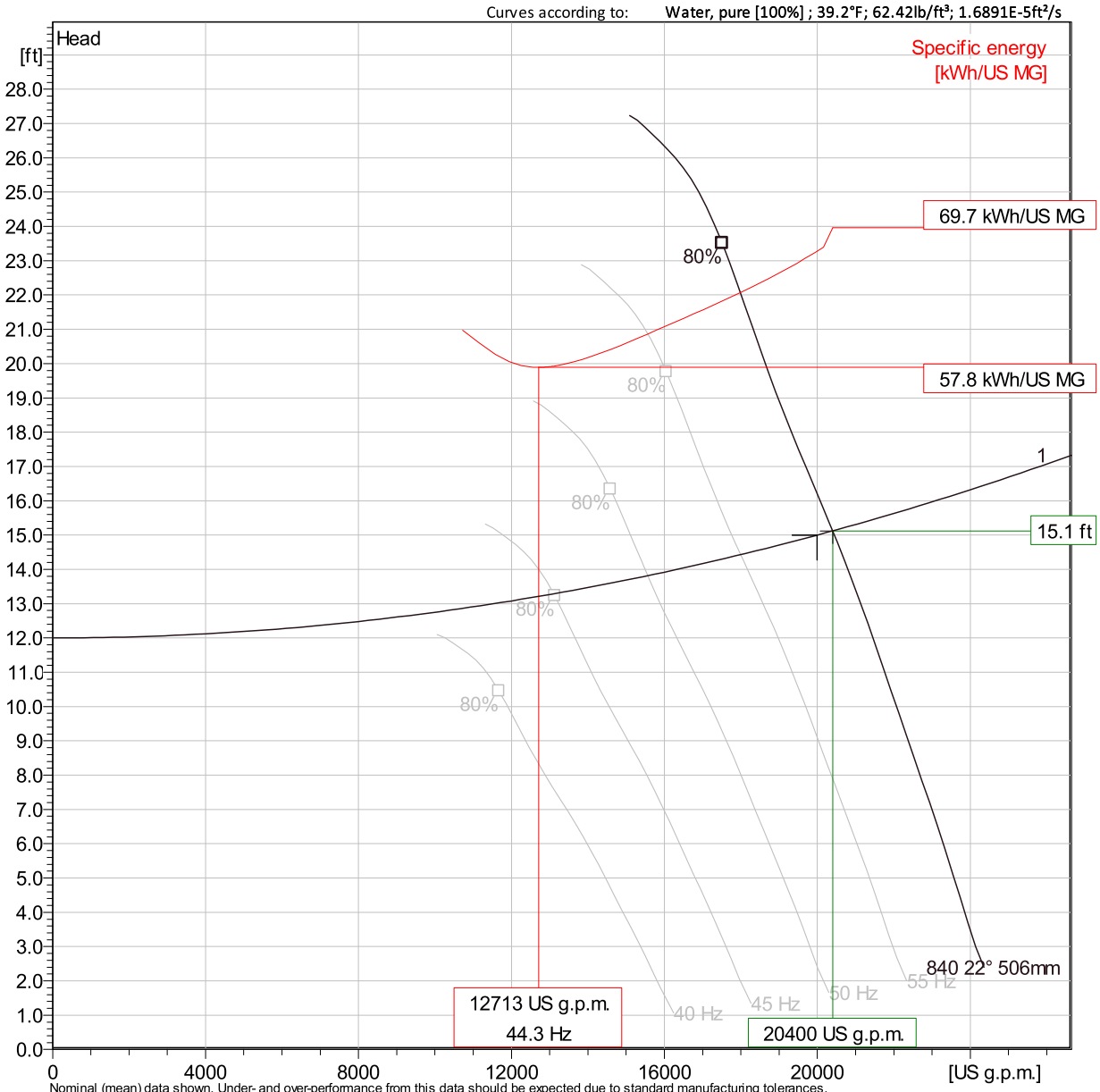
VFD Analysis



Nominal (mean) data shown. Under- and over-performance from this data should be expected due to standard manufacturing tolerances.
Please consult your local Flygt representative for performance guarantees.

Operating Characteristics

Pumps / Systems	Frequency	Flow	Head	Shaft power	Flow	Head	Shaft power	Hydr.eff.	Specific energy	NPSHre
		US g.p.m.	ft	hp	US g.p.m.	ft	hp		kWh/US MG	ft
1	60 Hz	20400	15.1	102	20400	15.1	102	75.9 %	69.7	26.2
1	55 Hz	18000	14.4	84.7	18000	14.4	84.7	77.7 %	64.2	23.2
1	50 Hz	15600	13.8	68.9	15600	13.8	68.9	79.1 %	60.7	20.7
1	45 Hz	13100	13.3	54.9	13100	13.3	54.9	80 %	57.9	18.5

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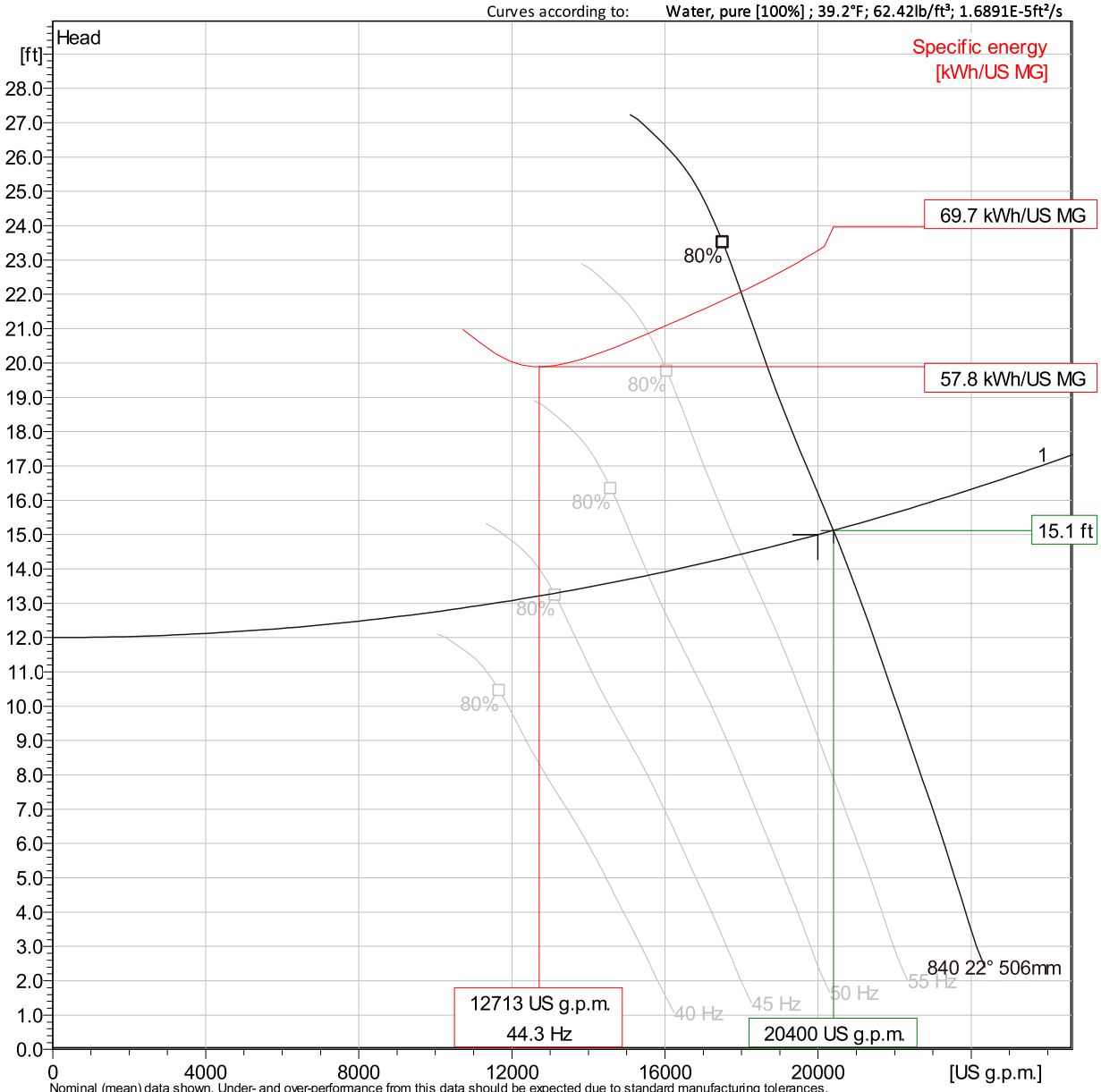
VFD Analysis

Curves according to: Water, pure [100%] ; 39.2°F; 62.42lb/ft³; 1.6891E-5ft²/s



Nominal (mean) data shown. Under- and over-performance from this data should be expected due to standard manufacturing tolerances.
Please consult your local Flygt representative for performance guarantees.

Operating Characteristics

Pumps / Systems	Frequency	Flow	Head	Shaft power	Flow	Head	Shaft power	Hydr.eff.	Specific energy	NPSHre
		US g.p.m.	ft	hp	US g.p.m.	ft	hp		kWh/US MG	ft
1	40 Hz									

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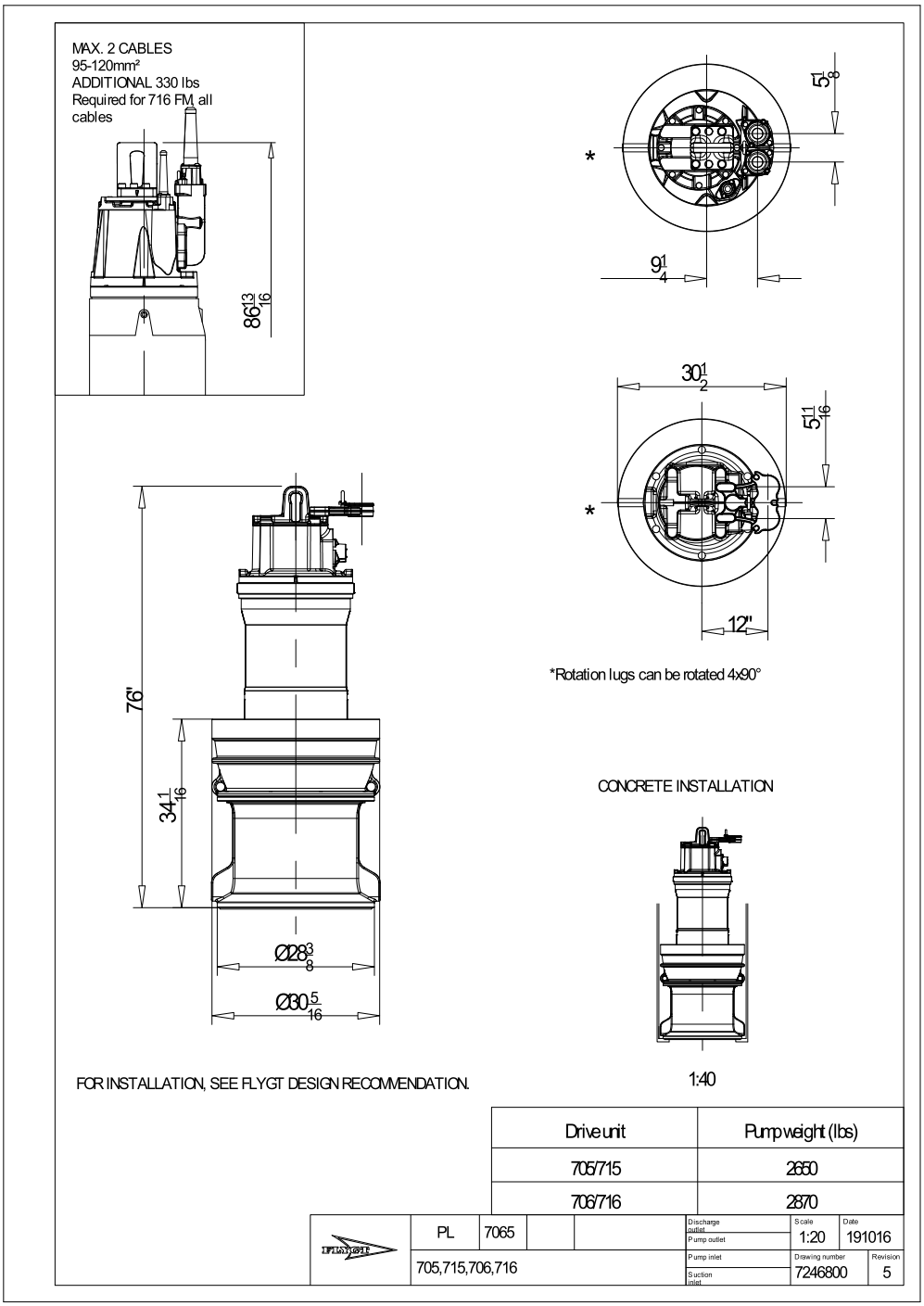
Dimensional drawing



Drive unit	Pump weight (lbs)
705/715	2650
706/716	2870

FLYGT	PL	7065			Discharge outlet / Pump outlet	Scale 1:20	Date 191016
	705,715,706,716				Pump inlet / Suction inlet	Drawing number 7246800	Revision 5

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