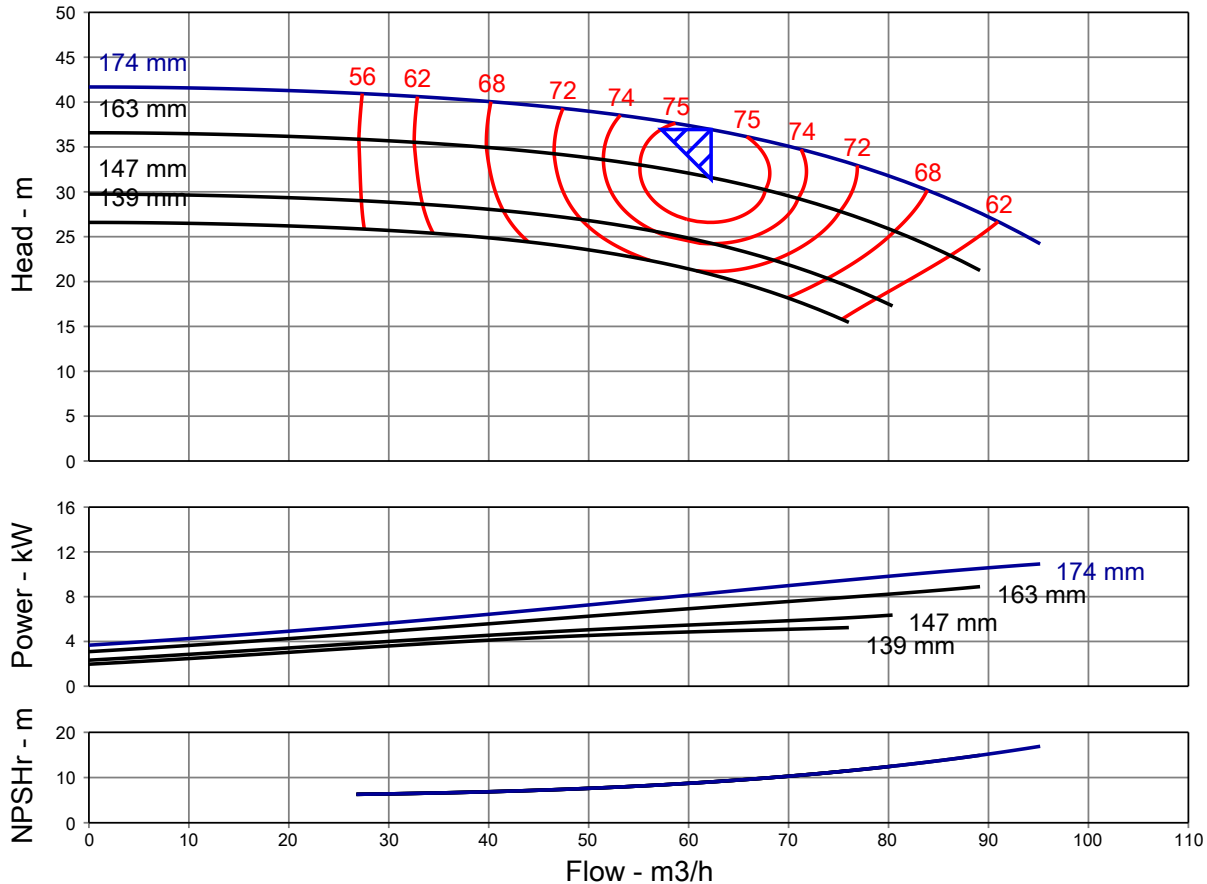


Pump Performance Datasheet

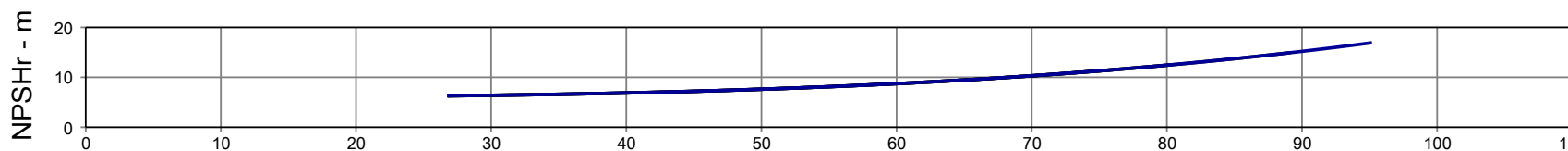
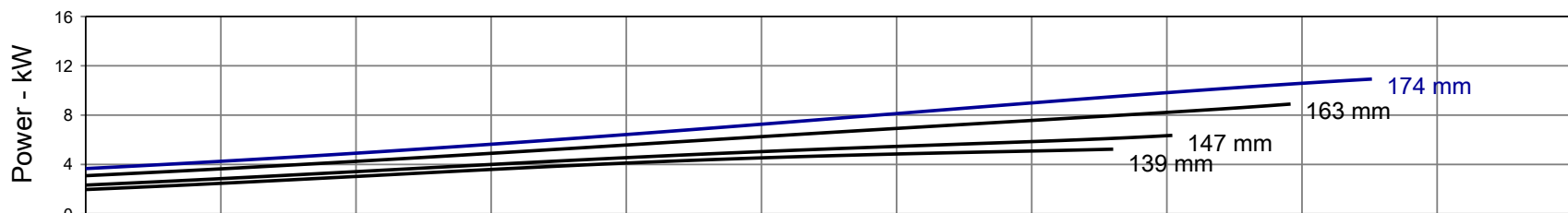
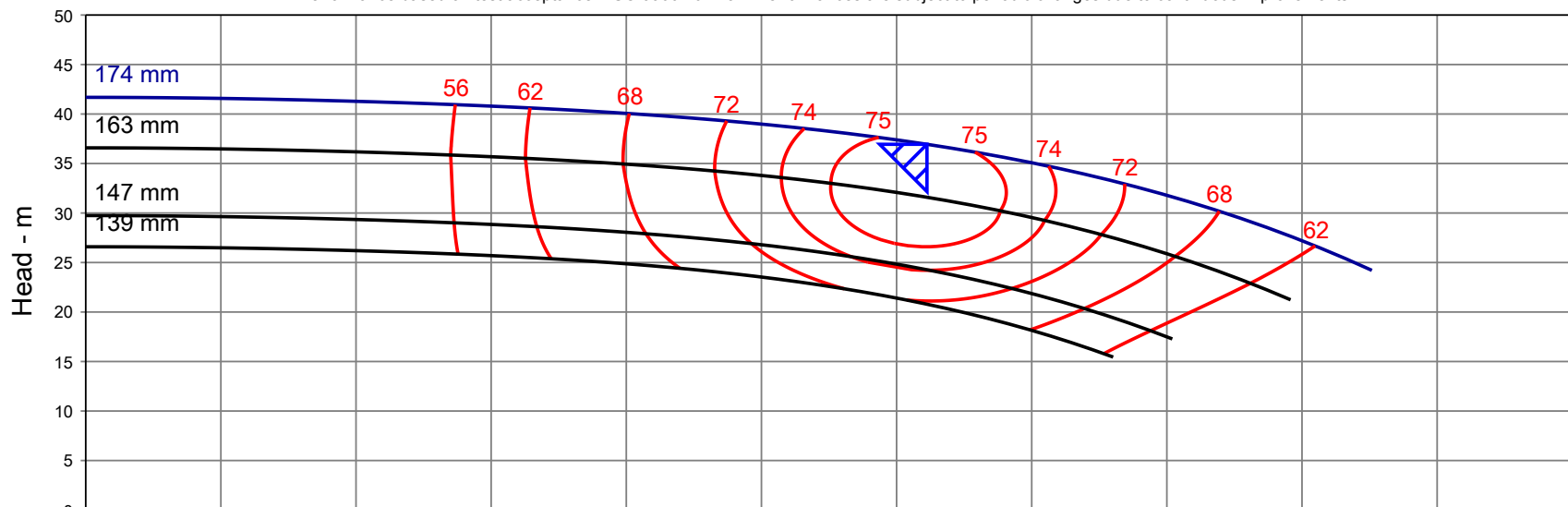
Customer :	Quote number :	Liquid
Customer reference :	Size : LVI 065-160	Liquid type : Water
Item number : Default	Stages : 1	Additional liquid description :
Service :	Based on curve number : LVI 65-65-160-2-60	Solids diameter, max : 0.0 mm
Quantity : 1	Date last saved : 16 Nov 2023 6:22 PM	Solids concentration, by volume : 0.00 %
Operating Conditions		Temperature : 20.00 deg C
Flow, rated : 62.25 m3/h		Fluid density : 0.999 / 0.999 kg/dm3
Head, rated (requested) : 36.94 m		Viscosity : 1.00 cSt
Head, rated (actual) : 36.94 m		Vapor pressure, rated : 0.00 bar.a
Suction pressure, rated / max : 0.00 / 0.00 bar.g		
NPSH available : Ample		
Site Supply Frequency : 50 Hz		
Performance		Material
Speed criteria : Synchronous		Material selected : Standard
Speed : 2875 rpm		
Impeller dia. : 174 mm		Pressure Data
Impeller diameter, maximum : 174 mm		Maximum working pressure : 4.08 bar.g
Impeller diameter, minimum : 139 mm		Maximum allowable working pressure : 16.00 bar.g
Efficiency : 75.18 %		Maximum allowable suction pressure : 2.50 bar.g
NPSH required / margin required : 9.04 / 0.00 m		Hydrostatic test pressure : 24.00 bar.g
nq (imp. eye flow) / S (imp. eye flow) : 25 / 73 Metric units		
MCSF : -		Driver & Power Data (@Max density)
Head max. : 41.69 m		Driver sizing specification : Maximum power
Head rise to shutoff : 12.84 %		Margin over specification : 0.00 %
Flow, best eff. point : 62.25 m3/h		Service factor : 1.00
Flow ratio, rated / BEP : 100.00 %		Power, hydraulic : 6.26 kW
Diameter ratio (rated / max) : 100.00 %		Power, rated : 8.32 kW
Head ratio (rated dia / max dia) : 100.00 %		Power, maximum : 10.92 kW
Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010] : 1.00 / 1.00 / 1.00 / 1.00		Motor rating : 11.19 kW / 15.00 hp
Selection status : Acceptable		

Performance based on test acceptance - ISO 9906:2012 3B. Performances are subject to periodic changes due to continuous improvements.



Pump Performance Curve

Performance based on test acceptance - ISO 9906:2012 3B. Performances are subject to periodic changes due to continuous improvements.

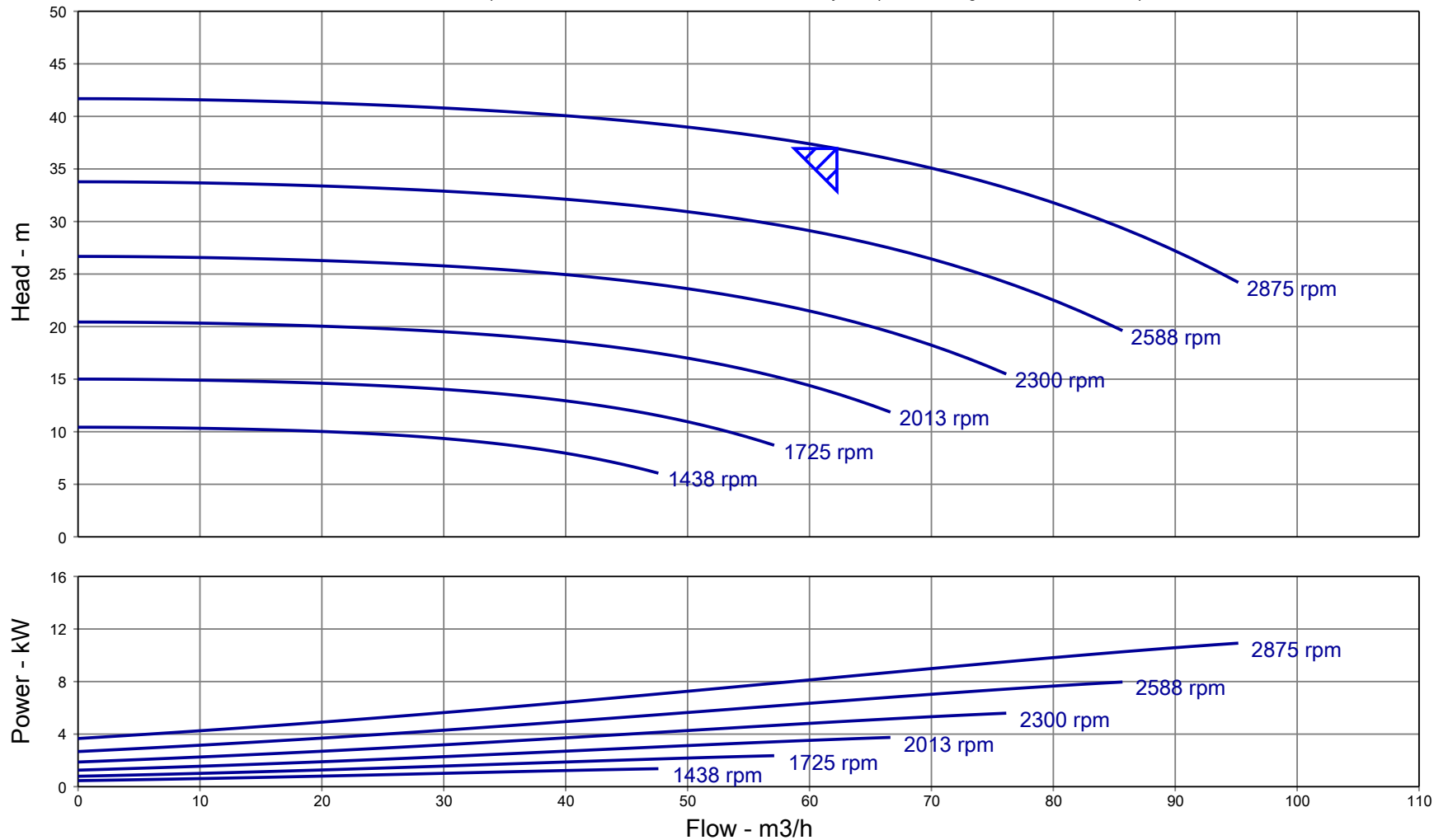


Flow - m3/h

Customer	:	Size	: LVI 065-160	Flow, rated	: 62.25 m3/h
Customer reference	:	Stages	: 1	Head, rated	: 36.94 m
Item number	: Default	Speed	: 2875 rpm	Fluid density	: 0.999 / 0.999 kg/dm3
Service	:	Based on curve number	: LVI 65-65-160-2-60	Viscosity	: 1.00 cSt
Quantity	: 1	Efficiency	: 75.18 %	Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010]	: 1.00 / 1.00 / 1.00 / 1.00
Quote number	:	Power, rated	: 8.32 kW		
Date last saved	: 16 Nov 2023 6:22 PM	NPSH required	: 9.04 m		

Multi-Speed Performance Curve

Performance based on test acceptance - ISO 9906:2012 3B. Performances are subject to periodic changes due to continuous improvements.



Customer :	Stages :	Nominal speed :
Customer reference :	Based on curve number :	Flow, rated :
Item number : Default	Efficiency : 75.18 %	Head, rated :
Service :	Power, rated : 8.32 kW	Speed :
Quantity : 1	NPSH required : 9.04 m	Impeller dia. :
Quote number :	Site Supply Frequency : 50 Hz	Fluid density :
Date last saved : 16 Nov 2023 6:22 PM		Viscosity : 1.00 cSt
Size : LVI 065-160		Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010] : 1.00 / 1.00 / 1.00 / 1.00



Life Cycle Cost Datasheet

Customer :	Quantity : 1	Size : LVI 065-160
Customer reference :	Quote number :	Stages : 1
Item number : Default	Date last saved : 16 Nov 2023 6:22 PM	Speed : 2875
Service :		

Load Profiles and Energy Costs

Expected pump life: 20 years	Load Profile #1	Load Profile #2	Load Profile #3	Load Profile #4	Load Profile #5	Total
Flow: (m3/h)	15.35	-	-	-	-	-
Operation: (hours per year)	8,760	-	-	-	-	8,760
Energy cost, present value (\$ per kWh)	0.1	-	-	-	-	-
Speed (rpm)	2875	-	-	-	-	-
Head (m)	41.44	-	-	-	-	-
Efficiency (%)	37.63	-	-	-	-	-
Power, rated (kW)	4.60	-	-	-	-	-
Motor efficiency (%)	100.00	-	-	-	-	-
Drive/gear efficiency (%)	100.00	-	-	-	-	-
System curve		-	-	-	-	-
Energy, total (kWh)	805,581.6	-	-	-	-	805,581.6
Energy cost, per year	\$ 4,027.91	-	-	-	-	\$ 4,027.91
Energy cost, total present value	\$ 60,412.09	-	-	-	-	\$ 60,412.09

Life Cycle Cost Calculation

Additional Annual Costs		Additional One-time Costs, Year 0		Interest and Inflation Rates	
Routine maintenance cost :	0.00	Initial investment cost :	0.00	Interest rate, % :	6.00
Repair cost :	0.00	Installation and commissioning cost :	0.00	Inflation rate, % :	3.00
Operating cost :	0.00	Other one-time costs, year 0 :	0.00	Total Net Present Value Costs	
Downtime cost :	0.00	Additional One-time Costs, Year 20		Total energy cost :	\$ 60,412.09
Environmental cost :	0.00	Decommissioning cost :	0.00	Total additional annual cost :	\$ 0.00
Other annual costs :	0.00	Other one-time costs, year 20 :	0.00	Total additional one-time cost :	\$ 0.00
Total, present value :	\$ 0.00	Total, present value :	\$ 0.00	Total life cycle cost :	\$ 60,412.09

**Pump Performance - Additional Data**

Customer	:	Quote number	:
Customer reference	:	Size	: LVI 065-160
Item number	: Default	Stages	: 1
Service	:	Speed	: 2875 rpm
Quantity	: 1	Intellicode	:
		Date last saved	: 16 Nov 2023 6:22 PM

Performance Data		Stage, Speed and Solids Limits	
Head, maximum diameter, rated flow	: 36.94 m	Stages, maximum	: 1
Head, minimum diameter, rated flow	: 20.79 m	Stages, minimum	: 1
Head max.	: 41.69 m	Pump speed limit, maximum	: 3600 rpm
Efficiency adjustment factor, total	: 1.00	Pump speed limit, minimum	: 950 rpm
Power adjustment, total	: 0.00 kW	Curve speed limit, maximum	: 3600 rpm
Head adjustment factor, total	: 1.00	Curve speed limit, minimum	: 950 rpm
Flow adjustment factor, total	: 1.00	Variable speed limit, maximum	: -
Flow adjustment factor, efficiency only (shift BEP)	: 1.00	Variable speed limit, minimum	: -
Flow adjustment factor, end-of-curve only, total	: 1.00	Solids size limit	: 0.0 mm
MCSF adjustment factor	: 1.00	Typical Driver Data	
NPSHR adjustment factor, total	: 1.00	Driver speed, full load	: 2875 rpm
NPSHR slope correction factor	: 1.00	Driver speed, rated load	: 2875 rpm
User applied performance adjustment comments :		Driver efficiency, 100% load	: N/A
NPSH margin dictated by pump supplier	: 0.00 m	Driver efficiency, 75% load	: N/A
NPSH margin dictated by user	: 0.00 m	Driver efficiency, 50% load	: N/A
NPSH margin used (added to 'required' values)	: 0.00 m		

Mechanical Limits	
Torque, rated power, rated speed	: 2.89 kW/1000 rpm
Torque, maximum power, rated speed	: 3.80 kW/1000 rpm
Torque, driver power, full load speed	: 3.89 kW/1000 rpm
Torque, driver power, rated speed	: 3.89 kW/1000 rpm
Torque, pump shaft limit	: -
Radial load, worst case	: -
Radial load limit	: -
Impeller peripheral speed, rated	: -
Impeller peripheral speed limit	: -

Various Performance Data	Flow (m3/h)	Head (m)	Efficiency (%)	NPSHr (m)	Power (kW)
Shutoff, rated diameter	0.00	41.69	-	-	3.67
Shutoff, maximum diameter	0.00	41.69	-	-	3.67
MCSF	-	-	-	-	-
Rated flow, minimum diameter	62.25	20.79	71.75	-	4.91
Rated flow, maximum diameter	62.25	36.94	75.18	-	8.32
BEP flow, rated diameter	62.25	36.94	75.18	9.04	8.32
120% rated flow, rated diameter	74.70	33.67	72.90	11.22	9.39
End of curve, rated diameter	95.17	24.21	57.38	16.91	10.92
End of curve, minimum diameter	76.03	15.45	60.99	11.50	5.24
End of curve, maximum diameter	95.17	24.21	57.38	16.91	10.92
Maximum value, rated diameter	-	41.69	75.18	-	10.92
Maximum value, maximum diameter	-	-	75.18	-	10.92

System differential pressure	@ Density, rated		@ Density, max	
Differential pressure, rated flow, rated diameter (bar)	3.62		3.62	
Differential pressure, shutoff, rated diameter (bar)	4.08		4.08	
Differential pressure, shutoff, maximum diameter (bar)	4.08		4.08	

Discharge pressure	@ Suction pressure, rated	@ Suction pressure, max	@ Suction pressure, rated	@ Suction pressure, max
Discharge pressure, rated flow, rated diameter (bar.g)	3.62	3.62	3.62	3.62
Discharge pressure, shutoff, rated diameter (bar.g)	4.08	4.08	4.08	4.08
Discharge pressure, shutoff, maximum diameter (bar.g)	4.08	4.08	4.08	4.08

Ratios	
Maximum flow / rated flow, rated diameter	: 152.89 %
Head rated diameter / head minimum diameter, rated flow	: 177.70 %



Pump Performance - Additional Data

Construction

Vertical In-Line Pump Classifications	: Standard	
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