



# TAS Engineering Software Design

## Graftec Online – Standard Curves

1 FILTER 2 SETUP 3 HYDRAULIC DATA 4 DESIGN 5 GRAPHS 6 APPROVALS

MISO 100-200 Status: WIP

Hydraulic design data | BEP | Selection limits

Pump test speed rpm 2950  
Impeller diameter (variable speed pumps) mm 201.00

Impeller diameter 201.00 rpm Curve 1 of 1

Flow rate	m <sup>3</sup> /hr	0.00	50.00	100.00	150.00	200.00	250.00	318.75
Head	m	54.00	53.50	52.00	49.00	45.00	40.00	30.00
Efficiency	%	0.00	33.10	56.63	72.77	81.68	85.08	77.71
Power	kW	19.50	22.00	25.00	27.50	30.00	32.00	33.50
NPSHr	m	4.50	4.50	4.50	4.80			

New impeller diameter | Delete impeller diameter

Or Go back to Setup

Produce your own pump catalogues in-house at a fraction of the cost of traditional methods. GRAFTEC produces high quality pump curves from inputted performance data or test data.

1 GRAPH AND UNITS 2 GRAPH FORMAT 3 CURVE AND AXES 4 TECHNICAL DEFAULT

SELECT GRAPHS AND UNITS

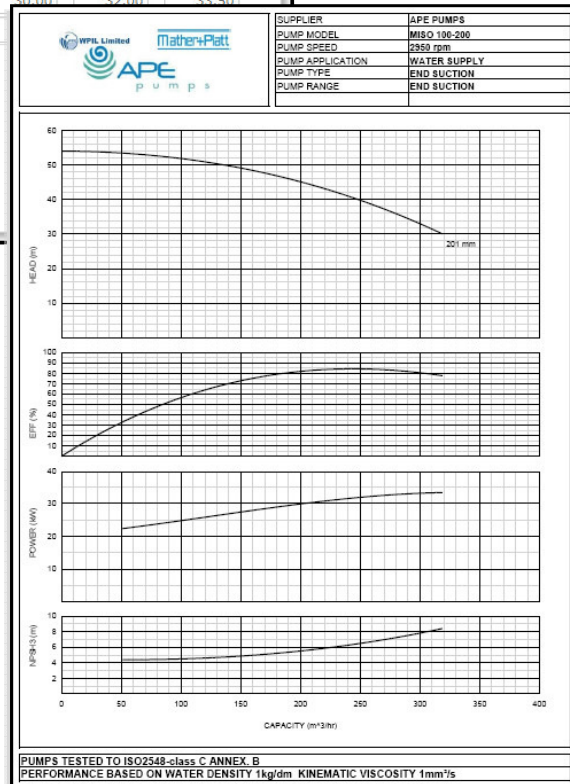
Graph Template GraftecCurveAOL

Graph Format Units

Flow Standard m<sup>3</sup>/hr  
Head Standard m  
Efficiency Iso lines %  
Power Standard kW  
NPSH Standard m  
Generate curves None

View

BEP   
Min flow - stable   
Data Points   
Use model name as label



Output is in any units, language format, with automatic plotting of Iso-efficiency and Iso-power lines.



+27 11 325 0681  
+27 11 325 0488  
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[www.aquateconline.com](http://www.aquateconline.com)  
aquatec@tasonline.co.za



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## Impeller Trims

**Graftec curve options**

	Head	Efficiency	Power	NPSH
145.00 mm	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
132.00 mm	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
120.00 mm	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
106.00 mm	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
View Graph		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**Head and Flow**  
 BEP  
 Min flow - stable  
 Data points (PDF only)

**Efficiency**  
 Isoline (HQ graph)  
 Standard (Efficiency Graph template)  
 Isoline (HQ graph) Graph template  
 DutyCurve\_sh

Curve Number: A040025145AA250 | Revn: 3 | Issue date: May-2019

Generate impeller trim Pump curves from a single set of data. Output curves to a range of electronic formats.

Hydraulic design data | BEP | Selection limits

Pump test speed: rpm 1470  
 Impeller diameter (variable speed pumps): mm 0.00

Impeller diameter: 483.00 mm | Curve 2 of 2

Flow rate	m <sup>3</sup> /hr	0.00	250.00	500.00	850.00	1150.00	1350.00	1500.00
Head	m	82.28	82.00	82.00	78.00	74.00	67.50	55.00
Efficiency	%	0.00	36.00	60.00	80.00	85.00	82.00	74.50
Power	kW	0.00	155.03	186.04	225.63	272.58	302.55	301.49
NPSHr	m	4.90	4.90	4.90	4.90	6.80	9.00	10.20

Impeller diameter: 419.00 mm | Curve 1 of 2

Flow rate	m <sup>3</sup> /hr	0.00	250.00	500.00	800.00	1050.00	1300.00	1470.00
Head	m	61.50	61.10	60.50	51.50	53.00	43.50	30.00
Efficiency	%	0.00	42.00	67.00	81.50	87.00	81.50	65.00
Power	kW	0.00	99.02	122.92	137.63	174.15	188.91	184.71
NPSHr	m	4.90	4.90	4.90	4.90	5.90	8.20	10.20

tel: +44 (0) 1394 462 120  
 fax: +44 (0) 1394 462 130  
 www.amarinth.com  
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+27 11 325 0681  
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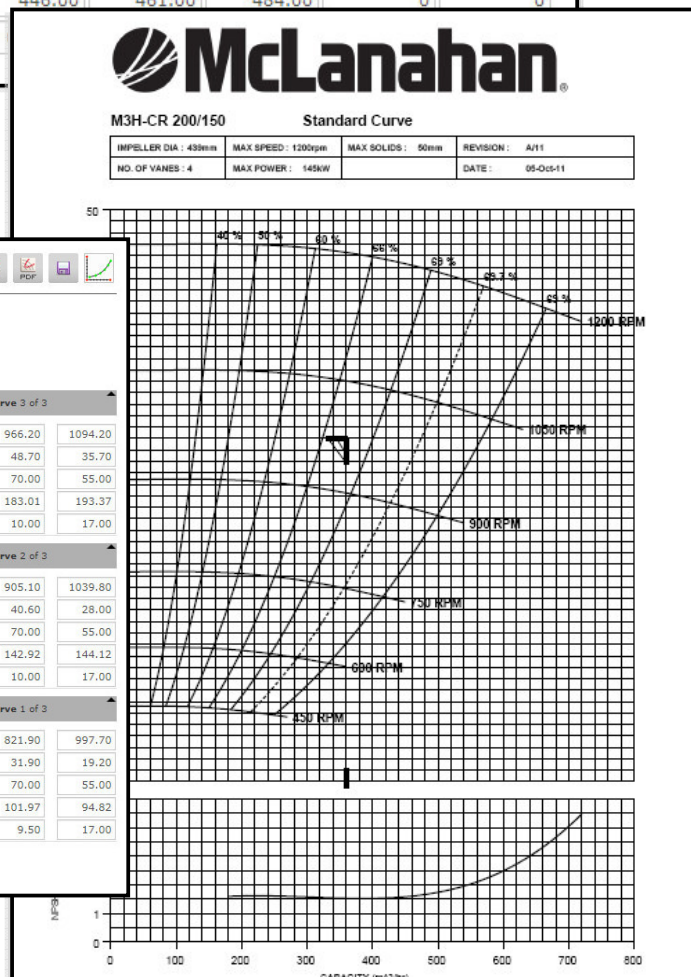
## Variable Speed

Generate variable speed pump curves from a single set of data. Output curves to a range of electronic formats.

Graph Settings | Isolines | **Generate Curves**

**Generate Curves**

Speed	1150	1250	1350	1450	1550	1650	1800	0
Imp. Diam.	401.00	416.00	431.00	446.00	461.00	484.00	0	0
Multistage	0	0	0	0	0	0	0	0



Hydraulic design data | BEP | Selection limits

Pump test speed rpm 1460  
Impeller diameter (variable speed pumps) mm 0.00

Impeller diameter: 484.00 mm **Curve 3 of 3**

Flow rate	m³/hr	0.00	176.00	423.40	717.30	824.30	966.20	1094.20
Head	m	79.90	81.50	80.00	69.20	61.10	48.70	35.70
Efficiency	%	0.00	50.00	75.00	83.00	80.00	70.00	55.00
Power	kW	0.00	78.10	122.96	162.82	171.40	183.01	193.37
NPSHr	m	5.50	5.50	5.50	5.50	7.00	10.00	17.00

Impeller diameter: 446.00 mm **Curve 2 of 3**

Flow rate	m³/hr	0.00	173.40	385.20	649.00	769.60	905.10	1039.80
Head	m	68.70	70.00	68.80	59.40	51.10	40.60	28.00
Efficiency	%	0.00	50.00	75.00	83.00	80.00	70.00	55.00
Power	kW	0.00	66.09	96.20	126.45	133.84	142.92	144.12
NPSHr	m	5.50	5.50	5.50	6.00	7.00	10.00	17.00

Impeller diameter: 401.00 mm **Curve 1 of 3**

Flow rate	m³/hr	0.00	198.10	370.10	572.80	689.00	821.90	997.70
Head	m	52.40	53.90	52.60	47.00	41.10	31.90	19.20
Efficiency	%	0.00	50.00	75.00	83.00	80.00	70.00	55.00
Power	kW	0.00	58.14	70.67	88.31	96.37	101.97	94.82
NPSHr	m	5.50	5.50	5.50	5.50	7.00	9.50	17.00

[New impeller diameter](#) [Delete impeller diameter](#)



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## Multistage

Generate multistage pump curves from a single set of data. Output curves to a range of electronic formats.

Hydraulic design data    BEP    Selection limits

Pump test speed                          rpm    1485  
 Impeller diameter (variable speed pumps)    mm    0.00

Impeller diameter    282.00 in                          Curve 1 of 1

Flow rate	US gpm	0.00	61.50	118.10	160.70	217.30	256.90	304.60
Head	m	129.70	130.30	127.90	125.30	118.00	110.70	97.50
Efficiency	%	0.00	38.50	55.00	62.00	68.00	69.00	67.00
Power	hp	0.00	12.88	16.99	20.09	23.33	25.50	27.42
NPSHr	ft	0.00	0.00	0.00	0.00	0.00	0.00	0.00

→ New impeller diameter    → Delete impeller diameter

SELECT GRAPHS AND UNITS

Graph Template    DutyCurve\_sh

Graph Format

Flow                          Standard

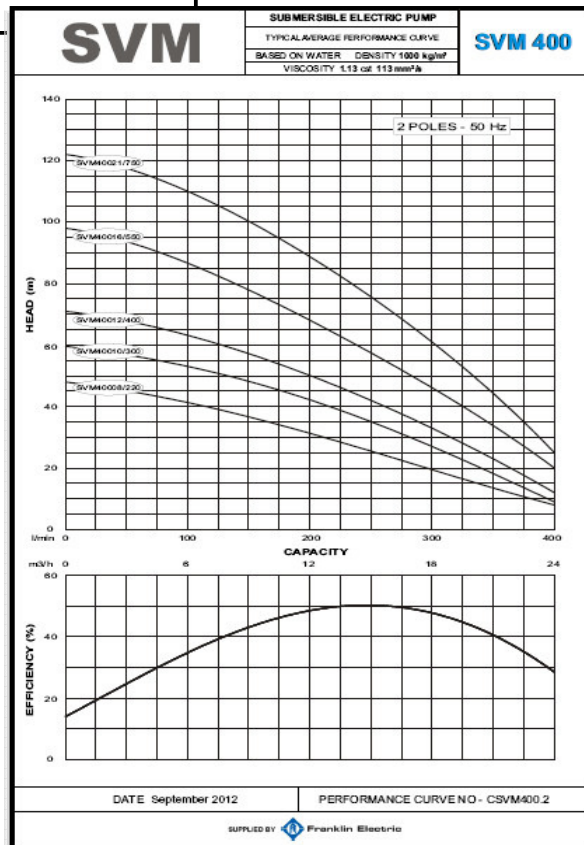
Head                          Standard

Efficiency                          Standard

Power                          Hide

NPSH                          Hide

Generate curves    **Multistage**



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