

Paco Express 6.1.1.25 - Microsoft Internet Explorer

The Engineering Institute of Thailand  
under H.M. the King's Patronage  
วิศวกรรมสถานแห่งประเทศไทย ในพระบรมราชูปถัมภ์

Address: http://pacopumps.selector.intelligence.com/TEC\_HydSel/HydSel\_JSP/intelligence/main.jsp?selectedURL=/conditions/service

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites

Links: Customize Links Free Hotmail Windows Windows Marketplace Windows Media

New Item | Preferences | Help | Return to Products **Paco Express 6.1.1.25**

**PACO EXPRESS**

Selection Criteria: Conditions of Service, Product Lines

Selection Results

Units Next >> Instructions: Define Flow and Head, and click on the Next-> button.

Operating Conditions System Data

Basic Operating Conditions

Flow, rated: [ ] USgpm  
Head, rated: [ ] ft

Frequency: 60 Hz  
Search criteria: Set synchronous speed limits  
Sync. speed limits (min / max): ~1200 rpm / ~3600 rpm

Advanced Operating Conditions  
Selection Constraints

# ปฏิบัติการเลือกเครื่องสูบน้ำ โดย PUMP SELECTION PROGRAM

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Done Internet

start Sahap Engineering ... Paco Express 6.1.1.2... EN 12:20

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เงื่อนไขเพื่อการเลือกเพิ่มเติม

ป้อนข้อมูลอัตราการไหล และเสตที่ต้องการ

ป้อนข้อมูลความดันทางเข้า วิธีกำหนดขนาดมอเตอร์ และข้อมูลของไหลที่จะสูบ

ป้อนข้อมูลระบบไฟฟ้า และรอบการหมุนที่ต้องการ

คลิกเพื่อไปยังหน้าต่อไป

Done Internet

start Sahap Engineering ... Paco Express 6.1.1.2... EN 12:20

คลิกเพื่อไปยังหน้าต่อไป

5

1

2

3

4

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คลิกเพื่อไปยังหน้าต่อไป

คลิกเพื่อไปยังหน้าต่อไป

เลือกประเภทของเครื่องสูบลที่ต้องการ

Select	Product Line	Maximum Flow (USgpm)	Maximum Head (ft)	Max. Suction Pressure (psig)	Temperature Limits (deg F)	Maximum Viscosity (cP)	Max. Solids Diameter (in)
<input type="checkbox"/>	End Suction, Close-coupled, LC	7000	440	150.0	10.00 to 275.0	1996.5	2.01
<input type="checkbox"/>	End Suction, Frame Mounted, LF	7000	440	150.0	10.00 to 275.0	1996.5	2.01
<input type="checkbox"/>	End Suction, Close-coupled Vertical, LCV	7000	440	150.0	10.00 to 275.0	1996.5	2.01
<input type="checkbox"/>	In Line, Close-coupled, VL	4000	440	150.0	10.00 to 275.0	1996.5	1.50
<input type="checkbox"/>	In Line, Split Coupled, VLS				10.00 to 275.0	1996.5	1.50
<input type="checkbox"/>	Vertical Space Miser, Close-coupled VSM				10.00 to 275.0	1995.9	1.50
<input type="checkbox"/>	Vertical Space Miser, Split Coupled, VSMS				10.00 to 275.0	1995.9	1.50
<input type="checkbox"/>	Two-Stage, End Suction Close Coupled				10.00 to 212.0	1996.5	0.25
<input type="checkbox"/>	End Suction, Low NPSH, Close Coupled, LN	110	220	200.0	10.00 to 250.0	1996.5	0.47
<input type="checkbox"/>	End Suction, Low NPSH, Split Coupled, OLN	230	795	150.0	10.00 to 250.0	1996.5	0.50
<input checked="" type="checkbox"/>	Split Case, KD	17300	760	150.0	10.00 to 275.0	1996.5	2.01
<input type="checkbox"/>	Split Case, KPV	13000	760	150.0	10.00 to 275.0	1996.5	2.01
<input type="checkbox"/>	Dry Pit Non-Clog, Vertical Frame, NCF	7300	350	100.0	10.00 to 180.0	1996.5	4.49
<input type="checkbox"/>	Dry Pit Non-Clog, Horizontal Frame, NCH	7300	350	100.0	10.00 to 180.0	1996.5	4.49

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**PACO EXPRESS** Selection Criteria: Conditions of Service, Product Lines, Pump Size List. Selection Results: Search Results.

Result	Pump Size	Display Thumbnails	Stages	Pump speed, rated (rpm)	Pump Efficiency (%)	NPSH (ft)	Max. Power (hp)	% BEP	% Max Diameter or Pitch	Price Index	Near Miss Reason
✓	6012-3M HP	<input type="checkbox"/>	1	1,483	88.79	6.23	30.0	93.07	93.42	RFQ	
✓	6015-1Q HP	<input type="checkbox"/>	1	1,483	86.65	6.31	38.1	92.19	73.33	RFQ	
✓	6012-1Q HP	<input type="checkbox"/>	1	1,483	84.74	13.40	40.4	117.14	99.50	RFQ	
✓	5015-9Q HP	<input type="checkbox"/>	1	1,483	79.86	14.61	42.2	125.39	79.00	RFQ	
✓	6012-5B HP	<input type="checkbox"/>	1	1,483	76.80	6.67	45.2	61.32	90.25	RFQ	
✓	8015-3M HP	<input type="checkbox"/>	1	1,483	73.16	8.22	47.8	84.11	71.07	RFQ	
✓	4015-7Q HP	<input type="checkbox"/>	1	1,483	60.02	22.75	46.0	150.50	87.47	RFQ	
✓	1012-8Q HP	<input type="checkbox"/>	1	1,483	57.29	0.25	57	44.09	87.67	RFQ	

คลิกไปที่รุ่นเครื่องสูบน้ำที่ต้องการเลือก

**PACO EXPRESS** Selection Criteria: Conditions of Service, Product Lines, Pump Size List. Selection Results: Search Results, Performance Curve, Performance Datasheet, Life Cycle Cost.

คลิกเพื่อดูข้อมูลโดยละเอียด

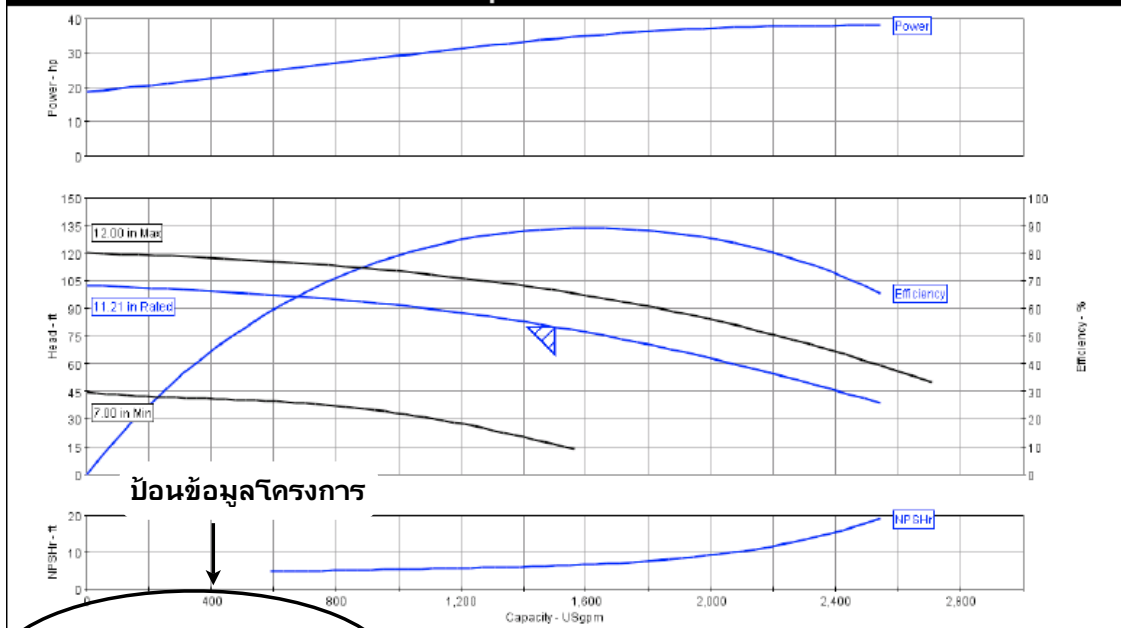
ตั้งค่าการพิมพ์ การเดินคู่ขนานหรืออนุกรม กำหนดเส้นระบบ

ป้อนข้อมูลโครงการ

สั่งพิมพ์เป็น PDF

Performance Curve Graph: Power (hp) vs Capacity (USGpm) and Head (ft) vs Efficiency (%).

**Pump Performance Curve**



Customer	: The Engineering Institute of Thailand	Pump size	: 6012-3/4 KP	Flow, rated	: 1,500 USgpm
Customer reference	: New Building	Stages	: 1	Head, rated	: 80.0 ft
Item number	: CWP 1 - 3	Pump speed, rated	: 1,493 rpm	Fluid density, rated / max	: 0.998 / 0.998 SG
Service	: Condenser Water Pump	Based on curve number	: RC2303-1 Rev 0	Viscosity	: 1.00 cP
Quantity of pumps	: 3	Efficiency	: 88.79 %	Cq/Ch/Ce [ANSI/HI 9.6.7-2004]	: 1.00 / 1.00 / 1.00
Quote number	: SHP/Q/08-1058/KV/KV	Power, rated	: 34.1 hp	-	-
Date last saved	: 01 Sep 2008 7:18 AM	NPSH required	: 6.23 ft	-	-

**CURVE PREFERENCES**

http://pacopumps.selector.intelligulp.com - Item Preferences - Microsoft Internet Explorer

Defaults Reset Cancel **Submit**

**Performance Curve Content**

Properties	Head	Efficiency	NPSHr	Power		MCSF
				Shaft (P2)	Input (P1)	
None	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Rated diameter only	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	-
Rated, min & max dia.	<input checked="" type="radio"/>	-	-	-	-	-
ISO lines	-	-	-	<input type="radio"/>	-	<input checked="" type="radio"/>
Non viscous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	-
Position	Middle	-	Bottom	-	Top	-

**Preferred Operating Region**

Properties	Left of BEP	Right of BEP
Percent of BEP	70.0	120.0
Display?	<input type="checkbox"/>	<input type="checkbox"/>

**Parallel or Series Operation**

Properties	Parallel	Series
Number of pumps	0	0
Display?	<input type="checkbox"/>	<input type="checkbox"/>

**System Curves**

Properties	Curve #1	Curve #2	Curve #3	Curve #4
Static head (ft)	0.0			
Flow (USGpm)	<input type="checkbox"/> set @ 1900			
Head (ft)	<input type="checkbox"/> set @ 80.0			
Label	System Curve #1			
Display?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Pump Performance Curve Presentation**

Curve	Style	Color	Weight
Rated diameter, rated viscosity	Solid	Blue	2
Rated diameter, non viscous	Solid	Blue	1
Min & max diameter, rated viscosity	Solid	Black	2

Done Internet



Pump Performance Datasheet

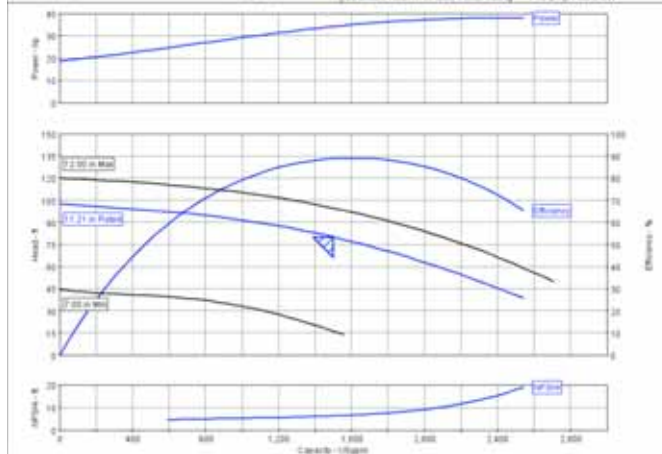
Customer	The Engineering Institute of Thailand	Quote number	SPH006 Y05RKYVW
Customer reference	New Building	Pump size	8012-34 KP
Item number	CMSP 1-3	Stages	1
Service	Conditioner Water Pump	Based on curve number	RC2005-1 Rev 0
Quantity of pumps	3	Date last saved	01 Sep 2008 7:18 AM
Operating Conditions		Liquid	
Flow, rated	1,500 USgpm	Liquid type	Water
Head, rated (requested)	80.0 ft	Additional liquid description	
Head, rated (actual)	79.9 ft	Shut-off diameter, max	0.00 in
Shut-off pressure, rated / max	0.00 / 0.00 psi g	Temperature, max	66.00 deg F
NPSH available, rated	Ample	Fluid density, rated / max	0.000 / 0.000 SG
Frequency	50 Hz	Viscosity, rated	1.00 cP
Performance		Material	
Pump speed, rated	1,400 rpm	Material requested	Auto
Impeller diameter, rated	11.21 in	Material selected	Cast Iron
Impeller diameter, maximum	12.00 in		
Impeller diameter, minimum	7.00 in		
Efficiency	86.79 %	Pressure Data	
NPSH required / margin required	8.20 / 0.00 ft	Maximum working pressure	44.30 psi g
Max. flow (eye flow) / Min. flow (eye flow)	1,422 / 10,000 US Gpm	Maximum allowable working pressure	250.0 psi g
MCSF	504 USgpm	Maximum allowable suction pressure	375.0 psi g
Head, maximum, rated diameter	100 ft	Hydraulic test pressure	
Head rise to shutoff	28.14 %	Driver & Power Data	
Flow, best eff. point (BEP)	1,612 USgpm	Driver sizing specification	Maximum power
Flow ratio (rated / BEP)	83.07 %	Margin over specification	0.00 in
Diameter ratio (rated / max)	83.42 %	Service factor	1.00
Head ratio (rated da / max dia)	80.19 %	Power, hydraulic	30.2 hp
Cap/CvCo (ANSI H 9.6.7-2004)	1.00 / 1.00 / 1.00	Power, rated	34.1 hp
Selection status	Acceptable	Power, maximum, rated diameter	38.0 hp
		Minimum recommended motor rating	40.2 hp / 30.0 kW

DATA SHEET

POWER CURVE

H-Q & EFF. CURVE

NPSHR



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Address: [http://pacopumps.selector.intellicorp.com/TEQ\\_HySel/HySel\\_JSP/intellicorp/main.jsp?selectedURL=performancecurve](http://pacopumps.selector.intellicorp.com/TEQ_HySel/HySel_JSP/intellicorp/main.jsp?selectedURL=performancecurve)

Selection Criteria: Conditions of Service, Product Lines, Pump Size List

Selection Results: Search Results, Performance Curve, Performance Datasheet, Life Cycle Cost

Buttons: Units, Save and return, Curve Preferences, Print

Performance Curve: Multi-Speed Curves

Graphs: Power-hp vs Capacity-USgpm, Head-ft vs Capacity-USgpm, Efficiency-% vs Capacity-USgpm

Annotations: 12.00 in Max, 11.21 in Rated, 7.00 in Min, System Curve #1, Parallel (2)

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คลิกเพื่อสร้างเส้นระบบ (SYSTEM CURVE)  
สร้าง H-Q CURVE เมื่อเครื่องสูบลมเดินคู่ขนาน



คลิกเพื่อสร้าง H-Q CURVE ที่รอบการหมุนต่างๆ

ป้อนข้อมูล รอบการหมุนที่ต้องการ

Curve Data	1	2	3	4	5	6
Flow (USgpm)	1,500					
Head (ft)	80.0					
Pump speed, rated (rpm)	1483					
Head curve	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Efficiency curve	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Power curve	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
NPSH curve	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Line style	Solid	Solid	Solid	Solid	Solid	Solid
Line color	Blue	Blue	Blue	Blue	Blue	Blue
Line weight	2	2	2	2	2	2
Display	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

H-Q CURVE ที่รอบการหมุนต่างๆ

Capacity (USgpm)	740 rpm	890 rpm	1038 rpm	1185 rpm	1335 rpm
0	~5	~10	~15	~20	~25
1,200	~10	~18	~25	~32	~38
1,800	~15	~25	~35	~45	~55
2,400	~20	~32	~45	~58	~70

Capacity (USgpm)	740 rpm	890 rpm	1038 rpm	1185 rpm	1335 rpm
0	~100	~100	~100	~100	~100
1,200	~95	~95	~95	~95	~95
1,800	~90	~90	~90	~90	~90
2,400	~85	~85	~85	~85	~85



**QUESTION  
PLEASE**

