KIMES ENGINEERING
AND MANAGEMENT SERVICES, INC.

COLUMBIA COUNTY BUILDING DEPARTMENT
REVIEWED FOR FIELD COPY CODE COMPLIANCE
PLANS EXAMINER

Client of Kimes Engineering: PARAGON POOLS OF LAKE CITY

Worksheet showing data for compliance with 2010 FBC, ANSI/APSP- 15

Owner: CINDY RENDEL Address: 176 SW ARROW GLEN Lot: 12

ANSI 15 Filtration Flow Area: CANNON CREEK PLACE

Volume of Pool Area 420 x Avg Depth 4.75 = Vol in CF 1995

Vol in CF x 7.48 gal/CF = 14923 GALLONS

Calculate Maximum Filtration Flow Rate: Pool Volume/ 360 = 41 GPM [if <13,000 MAY use 36 gpm]

ANSI 15 Auxiliary Flow *MAY USE LESS THAN THIS MAXIMUM*

Calculate Maximum Auxiliary Load Design Flow Rate: *IF AT LEAST ANSI 5 12 HR TURNOVER*

Number Spa Jets X 7 to 15 GPM = X GPM

Or Water Feature Flow: X GPM X

ANSI 15 Flow ACTUAL TURNOVER AT ANSI 15 FLOW= 6.1 HR IF LESS THAN 12 HR MEETS ANSI 5

ANSI 15 Flow : 41 GPM [greater of ***ANSI 15 Auxiliary Flows*** and ***ANSI 15 Filtration Flow***]

PUMP FROM APSP LISTING

Select a pump with Curve A (pools <17,000 gal) or Curve C (pools >17,000 gal) flow equal to or less than ***ANSI 15 Filtration Flow.*** May select a multi speed pump with flows acceptable for the ***ANSI 15 Auxiliary Flow*** , with acceptable Curve A or C listed flows. Curve A or C flows listed have no relationship or requirement related to ***ANSI 15 Auxiliary Flow.***

Pump Make & Model: PENTAIR INTELLIFLO

Pump Flow Rate(s) from Listing: @ Low/Single speed 11 GPM, & @ High Speed 73 GPM

Pump Control: Filtration Pump has no auxiliary load: X , time clock to be installed.

Filtration Pump with auxiliary load: Control for low speed default w/in 24 hrs: SELF CONTAINED
Make/model

Size filter on *"FILTRATION Flow"*

Filter Rates: Cartridge= 0.375 gpm/sf; Sand= 15 gpm/sf; DE= 2 gpm/sf

Filter size: ***ANSI 15 Flow*** 41 GPM / 0.375 gpm/sf = 110.5 SF Min Filter Size

[see pool plan for filter model or show here: PENTAIR CCRP150, 150SF]

ANSI 7 Flow **see Site Specific Information Sheet**

ANSI 5 Flow: Depending on the pipe, use any of the ANSI 15 Filtration, or ANSI 15 flows or the flow at 60 ft TDH on the selected pump curve for the ***ANSI 5 Flow.***

See flow vs velocity vs pipe size on Standard Engineering.
See summary of pipe sizes on ANSI 7 Site Specific Information Sheet

HEATER MODEL: X

GAS HEATER EFFICIENCY RATING: X with no pilot light [min 78%]

HEAT PUMP EFFICIENCY C.O.P.: X [min 4.0]

JAMES KENT KIMES LICENSE No. 33678 STATE OF FLORIDA PROFESSIONAL ENGINEER

- For Client Use Only -

3990 SR 64 E | Bradenton, Florida 34208 | ph: (941)749-0311
kent@kimesengineering.com | P.E. 33678, C.A. 27189

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AND MANAGEMENT SERVICES, INC.

PARAGON POOLS OF LAKE CITY
Client of Kimes Engineering:

Owner: CINDY RENDEL
Address: 176 SW ARROW GLEN

SITE SPECIFIC INFORMATION FOR COMPLIANCE WITH 2010 FBC ANSI/APSP-7

METHOD OF DETERMINING ANSI 7 PUMP FLOW

Max Flow from Pump Curve		Simplified TDH		Detailed TDH	
Pump Curve Attached		Curve & Calc		Curve & Calc	X

SUCTION OUTLET FOR: **FILTRATION PUMP**

Manufacturer & Model: PENTAIR INTELLIFLO

Pump Flow from Pump Curve with method indicated: 111 GPM

d **Maximum** Pump Flow for sizing Branch Pipe & Suction based on number of Suction Outlets used : GPM

Minimum Branch Pipe Size given flow at **6 FPS:** 3 INCH

LISTED SUCTION OUTLET COVER/GRATE- POOL OUTLET

Number of Suction Outlets: TWO Manufacturer & Model: SDX

APPROVED Maximum Outlet Flow (GPM) **Floor flow:** 200 **Wall flow:** 192

TRUNK/SUCTION PIPE SIZING- ANSI 7 FLOW

Minimum Trunk Pipe Size given flow @ **8 FPS** 2.5 **Inch Pipe**

SUCTION OUTLET FOR: **SPA**

Manufacturer & Model: X

Pump Flow from Pump Curve with method indicated: GPM

d **Maximum** Pump Flow for sizing Branch Pipe & Suction based on number of Suction Outlets used : X GPM

Minimum Branch Pipe Size given flow at **6 FPS:** INCH

LISTED SUCTION OUTLET COVER/GRATE- SPA OUTLETS

Number of Suction Outlets: X Manufacturer & Model: X

APPROVED Maximum Outlet Flow (GPM) **Floor flow:** **Wall flow:** GPM

TRUNK/SUCTION PIPE SIZING- ANSI 7 FLOW

Minimum Trunk Pipe Size given flow @ **8 FPS** **Inch Pipe**

ANSI 15 FLOW= 41 GPM

	OTHER PIPE SIZE SUMMARY	PIPE SIZE - INCH FULL FLOW	PIPE SIZE - INCH SPILL FLOW
	SKIMMER SUCTION- ANSI 15 FLOW @ 6 FPS :	2	
	FILTRATION RETURN SIDE-ANSI 15 FLOW @ 8 FPS:	MIN 1-1/2	
X GPM	AUXILIARY RETURN SIDE- ANSI 5 FLOW @ 10 FPS:	MIN	
X GPM	2ND AUXILIARY RETURN SIDE- ANSI 5 FLOW @ 10 FPS:	MIN	
	OPTIONAL VACUUM OR SWEEP LINE- ANSI 5 FLOW @ 8 FPS:	TYP 1-1/2	

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NOTES:

SUMMARY: USE DUAL SDX DRAINS FOR POOL, WITH 3" BRANCH PIPE
USE 2.5" SUCTION LINES TO PUMP

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PROJECT CLIENT PARAGON POOLS OF LAKE CITY
PROJECT NAME CINDY RENDEL
PROJECT ADDRESS 176 SW ARROW GLEN

Pool ONLY	suction	pressure	equipment
Pipe Size	2.5	2	2
Pipe Length 100% flow	53	36	15
#El fittings	5	4	4
#T Run fittings	0	0	0
#T Branch fittings	1	0	1
Gate Valves	0	0	1
# 3 Way valves	0	0	2

This calculation assumes worst case with 100% suction from drain and none from skimmer.
This calculation is conservative in that it omits the velocity head on the pressure side beyond the first split of return lines.

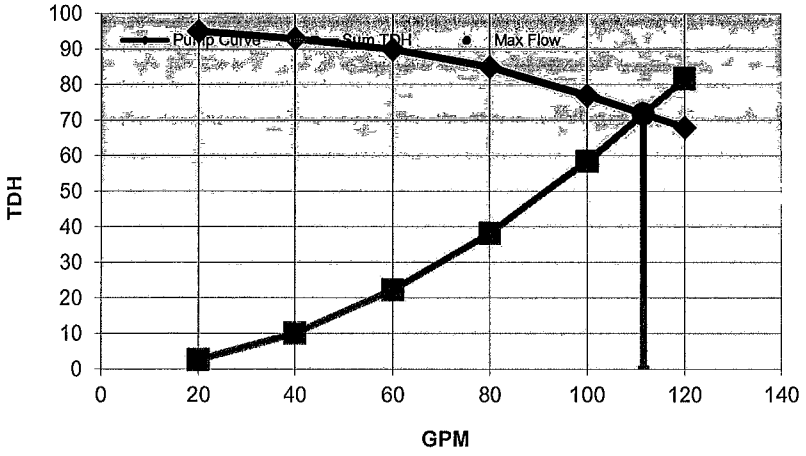
Filter: PENTAIR CCRP150, 150SF
Heater: X
Return Fittings 3

Head loss based on Hazen-Williams equation
Head Loss per 100 ft $=0.2083\,(100/c)^{1.852} * q^{1.852} / d_h^{4.8655}$
Using c= 140

SUM PIPE FRICTION HEAD	1.9	8.2	17.3	29.5	44.5	62.4
FILTER HEAD	0.0	0.4	1.7	3.7	6.5	9.3
RETURN FITTING FLOW	0.8	1.5	3.3	5.0	7.4	10.0
SALT CELL	0.0	0.0	0.0	0.0	0.0	0.0
HEATER	0.0	0.0	0.0	0.0	0.0	0.0
SUM TDH	3	10	22	38	58	82
FLOW	20	40	60	80	100	120

DETAILED TDH POOL MODE

Pump Curve PENTAIR INTELLIFLO VS



USE MINIMUM **2.5" BRANCH SUCTION**

MAXIMUM FLOW **111** GPM
ANSI 7 SUCTION BRANCH: **3** " MIN IF MULTIPLE OUTLETS- OMIT FOR UNBLOCKABLE OUTLETS
ANSI 7 SUCTION TO EQUIP: **2.5** " TRUNK SUCTION TO EQUIPMENT

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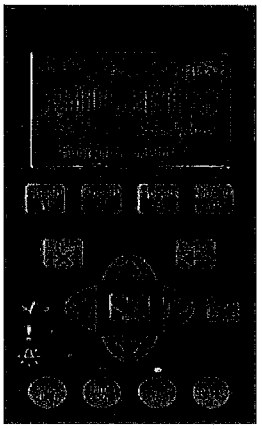
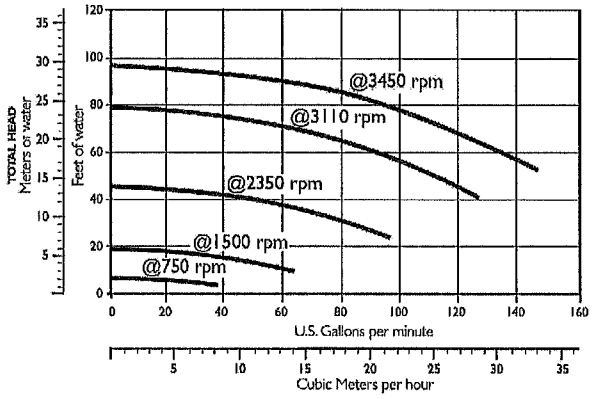
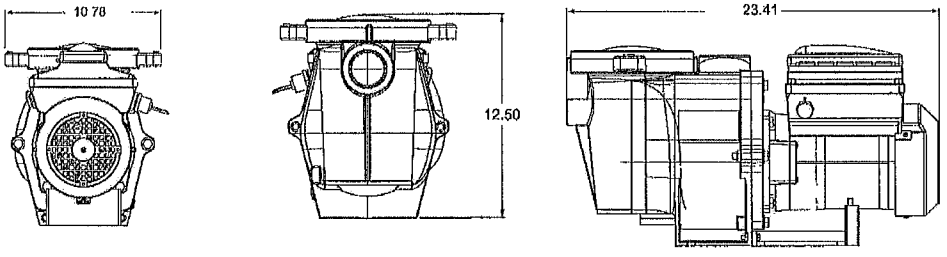
IntelliFlo® Variable Speed High Performance Pump (Cont'd)



Keypad for IntelliFlo Variable Speed

Dimensions and Performance*





Refer to catalog page 35 for a selection of 1-and-2-Pole GFCI breakers which offer 6 milliamp personnel protection while meeting NEC 2008 Standards for Pool Pumps.

* See page 477 for replacement parts

CINDY RENDEL

With a flow rating of 200 gpm on the floor and 192 gpm on the wall SDX is compatible with pumps up to 3 hp In most cases this eliminates the need to calculate the system total dynamic head

DESCRIPTION	MAX FLOW FLOOR	MAX FLOW WALL
One SDX Drain	200 gpm (756 lpm)	192 gpm (726 lpm)
Two SDX Drains	200 gpm (756 lpm)	192 gpm (726 lpm)
Three SDX Drains	300 gpm (1136 lpm)	288 gpm (1090 lpm)
Four SDX Drains	400 gpm (1514 lpm)	384 gpm (1456 lpm)

- Order **SDX** for new pool construction or when installing a new plaster ring (such as when a new interior finish is being applied)
- **SDX** is available for concrete, vinyl and fiberglass pools
- Order **SDX Retro** when replacing an existing suction outlet cover up to 10 in diameter
- **SDX Retro** is available for concrete and vinyl pools
- **SDX Equalizer** for skimmer equalizer lines or suction pipes extending through the wall of concrete pools without sumps Spacer ring provides adequate clearance to eliminate chipping of interior surface to create a sump Includes concrete anchors.

Available in eight colors to complement any interior surface

White 01 | Black 03 | Light Gray 08 | Gray 02 | Beige 07 | Taupe 04 | Light Blue 06 | Blue 05

WARNING: SDX and SDX Retro must be installed in accordance with Paramount's written instruction manual, and in conformity with applicable Federal State Local and Swimming pool industry building and safety codes.

Paramount
Pool Life. Simplified.

World's #1 In-Floor Systems Company

295 East Corporate Place Suite 100
Chandler Arizona 85225
480.893.7607 | 1.800.621 5886 | www 1Paramount.com
Paramount@1Paramount com

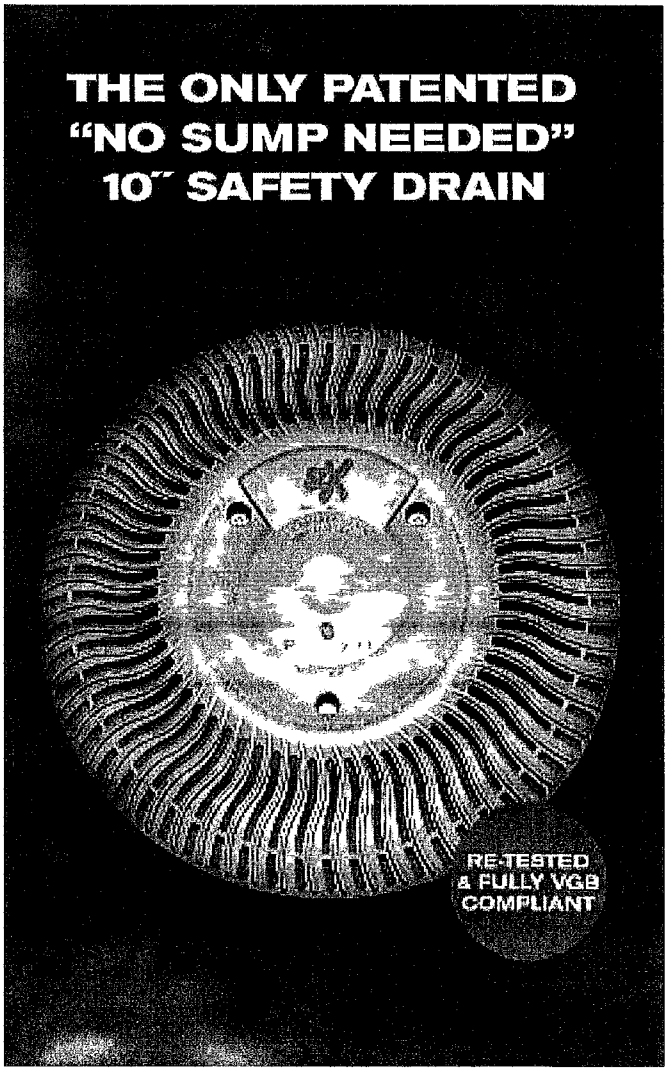
SDX & SDX Retro are Protected by U.S. Patent Numbers 7178,179 D,532,684 D,531,998

SDX0814 004-022-5630-00 REV060711

MADE IN USA

SDX®

VGB HIGH FLOW SAFETY DRAIN



Powered by:
Paramount
Pool Life. Simplified.

176 SW ARROW GLEN

PARAGON POOLS

I, Daniel Wright, give my consent to the installation of an inground swimming pool at:
176 SW Arrow Glen, Lake City, FL 32024
Parcel: 24-4S-16-03114-112

Daniel B. Wright 3/1/2014
Signature / Date

DANIEL B. WRIGHT
Print Name

The foregoing instrument was acknowledged before me, a certified Notary, this 1 day of March, 2014, by:
Daniel Wright who are Personally Known ____ or have Produced Identification ✓ Type Missouri DL

Notary Signature
Notary Stamp or Seal:

GEORGE R MORSE
Notary Public - State of Florida
My Comm Expires Sep 27, 2017
Commission # FF 041705

PARAGON Pools
295 NW Commons Loop
Suite 115-343
Lake City, FL 32055

PHONE (386) 755-7300
CELL (386) 984-0917
E-MAIL brent@ParagonPoolsOnline.com
License CPC 1456799

PARAGON POOLS

I, Matthew Rendel, give my consent to the installation of an inground swimming pool at:
176 SW Arrow Glen, Lake City, FL 32024
Parcel: 24-4S-16-03114-112

M. Rendel 2/28/14
Signature / Date

Matthew Stacey Rendel
Print Name

The foregoing instrument was acknowledged before me, a certified Notary, this 28 day of Feb, 2014, by:
Matthew Rendel who are Personally Known ____ or have Produced Identification ✓ Type FL Driver License

Notary Signature
Notary Stamp or Seal:

MICHAEL J. CARR
Notary Public - State of Florida
My Comm Expires Feb 19, 2018
Commission # FF 090094

PARAGON Pools
295 NW Commons Loop
Suite 115-343
Lake City, FL 32055

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