## **Hydraulic Design Booklet**



#### **Project Title:** Integral Spray Paver

				SIZE DING NO.
PUMPS & MOTORS	HYDRAULIC VALVES	FLOW CONTROLS	CYLINDERS	MISCELLANEOUS DEVICES
FIXED CAP. PUMP	BLOCKING/DUMP VALVE		DOUBLE ACTING CYLINDER	BREATHER
	2 POSITION 3 WAY	SHUTTLE VALVE	CUSHION/BLIND END	TANK LEVEL GAUGE
FIXED CAP. PUMP BI-DIRECTIONAL	2 POSITION 4 WAY  3 POSITION	PILOT CLOSED CHECK	CUSHION/ROD END	₹ FLOAT SWITCH
FIXED CAP. MOTOR	4 WAY NORMALLY CLOSED	PILOT OPERATED CHECK	CUSHION/BOTH ENDS	PRESSURE SWITCH
	4 WAY NORMALLY OPEN 3 POSITION	DOUBLE P.O. CHECK		NORMALLY OPEN VALVE  PRESSURE GAUGE
FIXED CAP. MOTOR BI-DIRECTIONAL	THE A POSITION 4 WAY MOTOR SPOOL		DOUBLE ROD CYLINDER	
VAR. CAP. PUMP	3 POSITION 4 WAY TANDEM CENTER	→ FIXED ORIFICE  → ADJUSTABLE ORIFICE	SINGLE ACTING CYLINDER	① THERMOMETER
× ×	METHODS OF OPERATION	RETURN FREE FLOW	DOUBLE ACTING CUSHION & SPRING	ACCUMULATER/GAS
VAR. CAP. PUMP BI-DIRECTIONAL	PRESSURE COMPENSATOR	<del>                                      </del>	TELESCOPIC CYLINDER	ACCUMULATER/SPRING
VAR. CAP. MOTOR	DETENT	HYDRAULIC LINES	DOUBLE ACTING TELESCOPIC CYLINDER	Ŷ
VAR. CAP. MOTOR BI-DIRECTIONAL	MANUAL	→ LINE, CROSSING  — LINE, JOINING	?///// CUSHION	ACCUMULATER/WEIGHT
<b>X</b>	7 -	¥ PLUGGED PORT		ACCUMULATER
HYDROSTATIC DRIVE	PEDAL OR TREADLE	->++>- QUICK DISCONNECT/OPEN		Ψ
	PUSH BUTTON	TANK		
<u></u>	LEVER	LINE ABOVE FLUID LEVEL		
	PILOT PRESSURE	THE BELOW FLOID CEVEL		
	FILOT FRESSORE	PRESSURE CONTROLS		
	SOLENOID	DIRECT OPERATED RELIEF	CROSSOVER RELIEF FILTER/ST	RAINER
	SOLENOID CONTROLLED, PILOT PRESSURE OPERATED	THE NEWTON PROPERTY.	COOLER	
	√ √ ✓ SPRING	VENIED REDGY	HEATER	
	<b>F</b> ∑ <b>►</b> SERVO	REDUCING VALVE		
			HARDE. THE DOCUMENT CONTINUE PROPERTY AND AS SHALL AND BE USED ON BENEFICIAL PRO- SPECIATED IN WINDLE OF IN MINE, WHICH FROM	
			DO NOT SCALE DRAWING  UNLESS OTHERWISE SPECIFED  COMPASSIONS ARE IN INCHES.	TITLE MAERIAL MEDIAN (
			TOLERWICES ON: 2 PL DECOMUS ± .06 3 PL DECOMUS ± .0300 MIGLES ± T	DAME SIZE DING NO.
DESCRIPTION INIT ECO DATE			ANGLES ± 1' FRUCTIONS ± 1/16	SECUED BY SCALE SHEET 1 OF

#### **Description**

The following hydraulic design booklet describes the analysis and design of the project name.

Created By:	Ty Bowen	Date: 8/25/2015
Checked By:		Date:
Approved By:		Date:

Project Title: Integral Spray Paver REV:-A
Prepared By: David Struxness
Client Name: Integral dx
Wednesday Statember 92, 2015

**Date:** Wednesday, September 02, 2015 Page 1 of 48

Specialty Systems Engineering • 121 N. 1st Street • Suite 210 • Montevideo, MN 56265 • (320) 269-3227

# **Hydraulic Design Booklet**



### **OUTLINE**

SYSTEM OVERVIEW & CALCULATIONS	Section 1
HYDRAULIC SCHEMATICS	2
COMPONENT LAYOUT(S)	3
BILL OF MATERIAL LISTING(S)	4
COMPONENT SPECIFICATION & MANUALS	5

**Project Title:** Integral Spray Paver REV:-A

Prepared By: David Struxness
Client Name: Integral dx

**Date:** Wednesday, September 02, 2015 Page 2 of 48

Specialty Systems Engineering • 121 N. 1st Street • Suite 210 • Montevideo, MN 56265 • (320) 269-3227