PETROBRAS		Nº: I-FD-3549.01-1400-831-CZW-101	
	CLIENT:	UN - RIO / CIMDAP	SHEET: 1 of 7
	JOB:	PDET	
	AREA:	PRA-1	
ENGENHARIA / IEEPT / IEPRA	TITLE:	VALVE DATA SHEETS- TRUNNION MOUNTED BALL VALVES	

CONTRACT No.:	834.2.004.04-0
TECHNICAL RESP. - CREA No.:	STAN ALLEN- P.E.
ADOBE ACROBAT 6.0	

INDEX OF REVISIONS

REV.	DESCRIPTION AND/OR REVISED SHEETS
0	INITIAL ISSUE FOR APPROVAL

	REV. 0	REV. A	REV. B	REV. C	REV. D	REV. E	REV. F	REV. G	REV. H
DATE	19 Oct 05								
DESIGN	CCV								
EXECUTION	WP								
CHECK	WP								
APPROVAL	KB								

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THIS FORM IS PART OF STANDARD PETROBRÁS N-381 REV. F ENGLISH ANNEX A - SHEET 01/08.

VALVE DATA SHEET

SALES ORDER NO. 449787

I-FD-3549.01-1400-831-CZW-101

CUSTOMER: CONSORCIO / PETROBRAS
PROJECT : PRA-1

REVISIONS

REV.	BY	DATE	DESCRIPTION
-	WP	30SEPT05	INITIAL RELEASE

GENERAL	1.	Tag Number	SEE NOTE# 1			
	2.	Qty	2			
	3.	Service	N/A			
		Fluid	N/A			
	4.	Line Size	12”			
	5.	Manufacture	ORBIT			
	6.	Figure Number	1623H8L RTJ			
	7.	Temperature Rating	-20/+800F			
BODY	8.	Body Type	FULL PORT			
	9.	Body Size / Port Size	12” / 12”			
	10.	End Connection and Size	12” ANSI 1500CL			
	11.	Body Material	ASTM A216 WCC			
	12.	Packing Material	GRAPHITE			
	13.	Bonnet Type	OS&Y			
	14.	Trim Material - Core	17-4 SS			
		- Stem	420 SS			
		- Seat	17-4 SS			
	15	- Seat Insert	316 SS			
	16	Seat Tightness	API 598			
ACTUATOR	17.	Manufacture	BETTIS			
	18.	Model	2612 x 11 GVO-HP-SR			
	19.	Action	SPRING CLOSE			
	20.	Fail Positionl	CLOSED			
	21.	Hydraulic Supply Pressure (max)	1500 psi			
	22.	Hydraulic Supply Pressure (min)	1400 psi			
	23.	Manual Operator	NO			
	24.					
	25.	Max. Diff. Press. PPE	3600 psi			
	26.	Max. Diff. Press. SE	300 psi			
SWITCHES	27.	Manufacture	Topworx			
	28.	Model No.	DXP-L21GSEB			
	29.					
	30.					
	31.					
	32.					
ACCESSORIES	33.	Air Set / Set Pressure	N/A			
	34.	Solenoid Valve Manufacture	N/A			
	35.	Solenoid Valve Model No.	N/A			
	36.	Pilot Valve	N/A			
	37.	Adjustable Bleed Controls	N/A			
	38.	Quick Exhaust Valve	N/A			
TEST DATA	39.	Shell Pressure (Psig)	5625			
	40.	Seat Pressure PPE (Psig)	4125			
	41.	Test Fluid	WATER			
	42.	Min. Operating Times (sec)	45-60			
	43.					
	44.					
	45.					
NOTES	1	TAG#'S: SDV-1223113, SDV-1223137				
	2	VALVES PAINTED PER ORBIT SPECIFICATION NO. SP-03-00183 ACTUATORS PAINTED PER BETTIS SPECIFICATION 077877 619 REV.C				

VALVE DATA SHEET

SALES ORDER NO. 449787

I-FD-3549.01-1400-831-CZW-101

CUSTOMER: CONSORCIO / PETROBRAS
PROJECT : PRA-1

REVISIONS

REV.	BY	DATE	DESCRIPTION
-	WP	30SEPT05	INITIAL RELEASE

GENERAL	1.	Tag Number	SEE NOTE# 1			
	2.	Qty	4			
	3.	Service	N/A			
		Fluid	N/A			
	4.	Line Size	8”			
	5.	Manufacture	ORBIT			
	6.	Figure Number	1623H8L RTJ			
	7.	Temperature Rating	-20/+800F			
BODY	8.	Body Type	FULL PORT			
	9.	Body Size / Port Size	8” / 8”			
	10.	End Connection and Size	8” ANSI 1500CL			
	11.	Body Material	ASTM A216 WCC			
	12.	Packing Material	GRAPHITE			
	13.	Bonnet Type	OS&Y			
	14.	Trim Material - Core	17-4 SS			
		- Stem	9310 AS			
		- Seat	17-4 SS			
	15	- Seat Insert	316 SS			
	16	Seat Tightness	API 598			
ACTUATOR	17.	Manufacture	BETTIS			
	18.	Model	7 X 8 GVO-HP-DA			
	19.	Action	DOUBLE ACTING			
	20.	Fail Position	LAST			
	21.	Hydraulic Supply Pressure (max)	1500 psi			
	22.	Hydraulic Supply Pressure (min)	1250 psi			
	23.	Manual Operator	YES			
	24.					
	25.	Max. Diff. Press. PPE	3580 psi			
	26.	Max. Diff. Press. SE	2600 psi			
SWITCHES	27.	Manufacture	Topworx			
	28.	Model No.	DXP-L21GSEB			
	29.					
	30.					
	31.					
	32.					
ACCESSORIES	33.	Air Set / Set Pressure	N/A			
	34.	Solenoid Valve Manufacture	N/A			
	35.	Solenoid Valve Model No.	N/A			
	36.	Pilot Valve	N/A			
	37.	Adjustable Bleed Controls	N/A			
	38.	Quick Exhaust Valve	N/A			
TEST DATA	39.	Shell Pressure (Psig)	5625			
	40.	Seat Pressure PPE (Psig)	3950			
	41.	Test Fluid	WATER			
	42.	Min. Operating Times (sec)	45-60			
	43.					
	44.					
	45.					
NOTES	1	TAG#'S: XV-1223016, XV-1223021, XV-1223135, XV-1223136				
	2	VALVES PAINTED PER ORBIT SPECIFICATION NO. SP-03-00183 ACTUATORS PAINTED PER BETTIS SPECIFICATION 077877 619 REV.C				

VALVE DATA SHEET

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CUSTOMER: CONSORCIO / PETROBRAS
PROJECT : PRA-1

REVISIONS

REV.	BY	DATE	DESCRIPTION
-	WP	30SEPT05	INITIAL RELEASE

GENERAL	1.	Tag Number	SEE NOTE# 1			
	2.	Qty	8			
	3.	Service	N/A			
		Fluid	N/A			
	4.	Line Size	12”			
	5.	Manufacture	ORBIT			
	6.	Figure Number	1523H8L RTJ			
	7.	Temperature Rating	-20/+800F			
BODY	8.	Body Type	FULL PORT			
	9.	Body Size / Port Size	12” / 12”			
	10.	End Connection and Size	12” ANSI 900CL			
	11.	Body Material	ASTM A216 WCC			
	12.	Packing Material	GRAPHITE			
	13.	Bonnet Type	OS&Y			
	14.	Trim Material - Core	17-4 SS			
		- Stem	9310 AS			
		- Seat	17-4 SS			
	15	- Seat Insert	316 SS			
	16	Seat Tightness	API 598			
ACTUATOR	17.	Manufacture	BETTIS			
	18.	Model	9 X 6 GVO-HP-DA			
	19.	Action	DOUBLE ACTING			
	20.	Fail Positionl	LAST			
	21.	Hydraulic Supply Pressure (max)	1500 psi			
	22.	Hydraulic Supply Pressure (min)	1250 psi			
	23.	Manual Operator	YES			
	24.					
	25.	Max. Diff. Press. PPE	2250 psi			
	26.	Max. Diff. Press. SE	1680 psi			
SWITCHES	27.	Manufacture	Topworx			
	28.	Model No.	DXP-L21GSEB			
	29.					
	30.					
	31.					
	32.					
ACCESSORIES	33.	Air Set / Set Pressure	N/A			
	34.	Solenoid Valve Manufacture	N/A			
	35.	Solenoid Valve Model No.	N/A			
	36.	Pilot Valve	N/A			
	37.	Adjustable Bleed Controls	N/A			
	38.	Quick Exhaust Valve	N/A			
TEST DATA	39.	Shell Pressure (Psig)	3375			
	40.	Seat Pressure PPE (Psig)	2475			
	41.	Test Fluid	WATER			
	42.	Min. Operating Times (sec)	45-60			
	43.					
	44.					
	45.					
NOTES	1	TAG#'S: XV-1223018, XV-1223023, XV-1223056, XV-1223057, XV-1223058, XV-1223059, XV-1223142, XV-1223143				
	2	VALVES PAINTED PER ORBIT SPECIFICATION NO. SP-03-00183 ACTUATORS PAINTED PER BETTIS SPECIFICATION 077877 619 REV.C				

VALVE DATA SHEET

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CUSTOMER: CONSORCIO / PETROBRAS
PROJECT : PRA-1

REVISIONS

REV.	BY	DATE	DESCRIPTION
-	WP	30SEPT05	INITIAL RELEASE

GENERAL	1.	Tag Number	SEE NOTE# 1			
	2.	Qty	6			
	3.	Service	N/A			
		Fluid	N/A			
	4.	Line Size	12”			
	5.	Manufacture	ORBIT			
	6.	Figure Number	1623H8L RTJ			
	7.	Temperature Rating	-20/+800F			
BODY	8.	Body Type	FULL PORT			
	9.	Body Size / Port Size	12” / 12”			
	10.	End Connection and Size	12” ANSI 1500CL			
	11.	Body Material	ASTM A216 WCC			
	12.	Packing Material	GRAPHITE			
	13.	Bonnet Type	OS&Y			
	14.	Trim Material - Core	17-4 SS			
		- Stem	9310 AS			
		- Seat	17-4 SS			
	15	- Seat Insert	316 SS			
	16	Seat Tightness	API 598			
ACTUATOR	17.	Manufacture	BETTIS			
	18.	Model	10 X 11 GVO-HP-DA			
	19.	Action	DOUBLE ACTING			
	20.	Fail Positionl	LAST			
	21.	Hydraulic Supply Pressure (max)	1500 psi			
	22.	Hydraulic Supply Pressure (min)	1250 psi			
	23.	Manual Operator	YES			
	24.					
	25.	Max. Diff. Press. PPE	3600 psi			
	26.	Max. Diff. Press. SE	2800 psi			
SWITCHES	27.	Manufacture	Topworx			
	28.	Model No.	DXP-L21GSEB			
	29.					
	30.					
	31.					
	32.					
ACCESSORIES	33.	Air Set / Set Pressure	N/A			
	34.	Solenoid Valve Manufacture	N/A			
	35.	Solenoid Valve Model No.	N/A			
	36.	Pilot Valve	N/A			
	37.	Adjustable Bleed Controls	N/A			
	38.	Quick Exhaust Valve	N/A			
TEST DATA	39.	Shell Pressure (Psig)	5625			
	40.	Seat Pressure PPE (Psig)	4125			
	41.	Test Fluid	WATER			
	42.	Min. Operating Times (sec)	45-60			
	43.					
	44.					
	45.					
NOTES	1	TAG#'S: XV-1223019, XV-1223024, XV-1223025, XV-1223084, XV-1223085, XV-1223102				
	2	VALVES PAINTED PER ORBIT SPECIFICATION NO. SP-03-00183 ACTUATORS PAINTED PER BETTIS SPECIFICATION 077877 619 REV.C				

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CUSTOMER: CONSORCIO / PETROBRAS
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REVISIONS

REV.	BY	DATE	DESCRIPTION
-	WP	30SEPT05	INITIAL RELEASE

GENERAL	1.	Tag Number	SEE NOTE# 1			
	2.	Qty	3			
	3.	Service	N/A			
		Fluid	N/A			
	4.	Line Size	6”			
	5.	Manufacture	ORBIT			
	6.	Figure Number	1623H8L RTJ			
	7.	Temperature Rating	-20/+800F			
BODY	8.	Body Type	FULL PORT			
	9.	Body Size / Port Size	6” / 6”			
	10.	End Connection and Size	6” ANSI 1500CL			
	11.	Body Material	ASTM A216 WCC			
	12.	Packing Material	GRAPHITE			
	13.	Bonnet Type	OS&Y			
	14.	Trim Material - Core	17-4 SS			
		- Stem	420 SS			
		- Seat	17-4 SS			
	15	- Seat Insert	316 SS			
	16	Seat Tightness	API 598			
ACTUATOR	17.	Manufacture	BETTIS			
	18.	Model	6 X 5 GVO-HP-DA			
	19.	Action	DOUBLE ACTING			
	20.	Fail Positionl	LAST			
	21.	Hydraulic Supply Pressure (max)	1500 psi			
	22.	Hydraulic Supply Pressure (min)	1250 psi			
	23.	Manual Operator	YES			
	24.					
	25.	Max. Diff. Press. PPE	3600 psi			
	26.	Max. Diff. Press. SE	2800 psi			
SWITCHES	27.	Manufacture	Topworx			
	28.	Model No.	DXP-L21GSEB			
	29.					
	30.					
	31.					
	32.					
ACCESSORIES	33.	Air Set / Set Pressure	N/A			
	34.	Solenoid Valve Manufacture	N/A			
	35.	Solenoid Valve Model No.	N/A			
	36.	Pilot Valve	N/A			
	37.	Adjustable Bleed Controls	N/A			
	38.	Quick Exhaust Valve	N/A			
TEST DATA	39.	Shell Pressure (Psig)	5625			
	40.	Seat Pressure PPE (Psig)	4125			
	41.	Test Fluid	WATER			
	42.	Min. Operating Times (sec)	30-45			
	43.					
	44.					
	45.					
NOTES	1	TAG#'S: XV-1223073, XV-1223074, XV-1223075				
	2	VALVES PAINTED PER ORBIT SPECIFICATION NO. SP-03-00183 ACTUATORS PAINTED PER BETTIS SPECIFICATION 077877 619 REV.C				

VALVE DATA SHEET

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CUSTOMER: CONSORCIO / PETROBRAS
PROJECT : PRA-1

REVISIONS

REV.	BY	DATE	DESCRIPTION
-	WP	30SEPT05	INITIAL RELEASE

GENERAL	1.	Tag Number	SEE NOTE# 1			
	2.	Qty	2			
	3.	Service	N/A			
		Fluid	N/A			
	4.	Line Size	3”			
	5.	Manufacture	ORBIT			
	6.	Figure Number	1623H8L RTJ			
	7.	Temperature Rating	-20/+800F			
BODY	8.	Body Type	FULL PORT			
	9.	Body Size / Port Size	3” / 3”			
	10.	End Connection and Size	3” ANSI 1500CL			
	11.	Body Material	ASTM A216 WCC			
	12.	Packing Material	GRAPHITE			
	13.	Bonnet Type	OS&Y			
	14.	Trim Material - Core	410 SS			
		- Stem	420 SS			
		- Seat	410 SS			
	15	- Seat Insert	NONE			
	16	Seat Tightness	API 598			
ACTUATOR	17.	Manufacture	BETTIS			
	18.	Model	5 X 3 GVO-HP-DA			
	19.	Action	DOUBLE ACTING			
	20.	Fail Positionl	LAST			
	21.	Hydraulic Supply Pressure (max)	1500 psi			
	22.	Hydraulic Supply Pressure (min)	1250 psi			
	23.	Manual Operator	YES			
	24.					
	25.	Max. Diff. Press. PPE	2900 psi			
	26.	Max. Diff. Press. SE	2560 psi			
SWITCHES	27.	Manufacture	Topworx			
	28.	Model No.	DXP-L21GSEB			
	29.					
	30.					
	31.					
	32.					
ACCESSORIES	33.	Air Set / Set Pressure	N/A			
	34.	Solenoid Valve Manufacture	N/A			
	35.	Solenoid Valve Model No.	N/A			
	36.	Pilot Valve	N/A			
	37.	Adjustable Bleed Controls	N/A			
	38.	Quick Exhaust Valve	N/A			
TEST DATA	39.	Shell Pressure (Psig)	5625			
	40.	Seat Pressure PPE (Psig)	3200			
	41.	Test Fluid	WATER			
	42.	Min. Operating Times (sec)	8-15			
	43.					
	44.					
	45.					
NOTES	1	TAG#'S: XV-1223146, XV-1223151				
	2	VALVES PAINTED PER ORBIT SPECIFICATION NO. SP-03-00183 ACTUATORS PAINTED PER BETTIS SPECIFICATION 077877 619 REV.C				