



Customer Document title:

Mechanical Run Test Report

Flowserve Document title: **Mechanical Run Test Report**

Flowserve Document No.: **1400944-017-4000-01**

Document Revision No.: **0**

Flowserve Order No.: **1400944**

Flowserve Serial No.: **1400944CHP017A/B**

Pump Type/Size: **MARK 3 STANDARD /**

Quantity: **2**

Customer Name: **DESMET BALLESTRA NORTH AMERICA**

Customer Tag No: **DESMET TAG#:PW503E.2/1,World Energy TAG#:19-P-875A, DESMET TAG#:PW503E.2/2, World Energy TAG#: 19-P-875B**

Customer PO No.: **28493**

End User: **DESMET BALLESTRA NORTH AMERICA**

Please complete and return:

Document Reviewed by:

Document Reviewed date:

- ☐ **APPROVED. NO ACTION REQUIRED**
- ☐ **APPROVED. RE-SUBMIT AS FINAL**
- ☐ **APPROVED WITH COMMENTS.** DOCUMENT WILL BE MODIFIED AND RESUBMITTED AS FINAL.
- ☐ **REJECTED.** CORRECT AND RE-SUBMIT FOR APPROVAL.
- ☐ **FOR INFORMATION.** REVIEW NOT REQUIRED
- ☐ **AS-BUILT**

- Return any documents sent for review with your comments by the stated return date. All documents not returned two weeks after requested Return date will be considered Approved, no action.
- Purchaser's comments and/or corrections within the scope of contract will be made on the first completed document submitted by Flowserve Corp. and returned.
- Corrections, alterations, additions and/or modifications outside scope of contract or made after first submittal may require an additional engineering service charge.
- Items conditionally approved or with deferred approval by purchaser must be specifically stated otherwise delivery may be affected.

Rev	Revision Description	Released	Release Date
	Final	Morris, Tamika	31-May-22



1 Hour Mechanical Run Test

ORDER INFORMATION

Order no:	1400944_17
Serial no.	1400944CHP017B
Customer	DESMET BALLESTRA NORTH AMERICA
Customer P.O.	28493
Pump Tag No.	DESMET TAG#: PW503E.2/2, CUSTOMER TAG#: 19-P-875B
Tested by	G. BAILEY
Witnessed by	
Date	5/24/2020
Curve no.	3135912B

TECHNICAL INFORMATION

Model	MARK 3
Size	2K4X3-10RV
Imp. dia (In.)	8.25
Open/Closed	CLOSED
Imp. matl.	D4
Case matl.	D4
# of Stages	N/A
Lubrication	OIL
Seal Type	MECH.

GUARANTEED CONDITIONS OF SERVICE

RPM	Flow (GPM)	Total Head (Ft)	NPSHR (Ft)	Sp. Gr.	Visc. (cP)	Temp. (F)
3550	468.1	251	11.0	.888	13.35	171

TEST CONDITIONS

RPM	Flow (GPM)	Total Head (Ft)	NPSHA (Ft)	Sp. Gr.	Visc. (CPU)	Amb.(F)
3583	469	252	35.6	1.00	1.00	73

TEST DATA POINTS

	1	2	3	4	5	6	7	8	9	10	11	12	13
Duration (Min.)	0	10	20	30	40	50	60						
Flow (gpm)	469	470	469	469	470	469	469						
TDH (feet)	252	251	252	252	252	252	252						
Pump speed (rpm)	3583	3583	3583	3584	3583	3585	3584						
Power (BHP)	38	39	38	38	38	39	38						
Ambient Temp (°F)	73	73	75	73	73	73	73						
Brg Hsg Temp (°F)	102	103	104	107	112	119	121						
Water Temp (°F)	85	85	85	86	86	86	86						

Acceptance Criteria					INITIALS		
Smooth operation confirmed: no indication of mechanical defect is detected					GB		
For 5 minutes after shutdown, suction pressure is maintained and no leakage is detected					GB		
Flow rate stayed within +/-5% of rated					GB		
Bearing housing temperature did not exceed 180°F for Oil/Oil Mist or 200°F for Grease lubrication					GB		
Input (line) power did not exceed the rating of the job motor, if applicable					GB		
Vibration reading at the end of run Vibration readings: IBH/IBV/OBH/OBV/OBA in in/sec RMS			.05	.06	.06	.06	.08
Vibrations readings as shown above are compliant with ANSI/HI 9.6.4 specifications						GB	



1 Hour Mechanical Run Test

ORDER INFORMATION

Order no:	1400944_17
Serial no.	1400944CHP017A
Customer	DESMET BALLESTRA NORTH AMERICA
Customer P.O.	28493
Pump Tag No.	DESMET TAG#: PW503E.2/1, CUSTOMER TAG#: 19-P-875A
Tested by	S. WEBSTER
Witnessed by	
Date	5/24/2020
Curve no.	3135912A

TECHNICAL INFORMATION

Model	MARK 3
Size	2K4X3-10RV
Imp. dia (In.)	8.25
Open/Closed	CLOSED
Imp. matl.	D4
Case matl.	D4
# of Stages	N/A
Lubrication	OIL
Seal Type	MECH.

GUARANTEED CONDITIONS OF SERVICE

RPM	Flow (GPM)	Total Head (Ft)	NPSHR (Ft)	Sp. Gr.	Visc. (cP)	Temp. (F)
3550	468.1	251	11.0	.888	13.35	171

TEST CONDITIONS

RPM	Flow (GPM)	Total Head (Ft)	NPSHA (Ft)	Sp. Gr.	Visc. (CPU)	Amb.(F)
3584	469	253	35.6	1.00	1.00	75

TEST DATA POINTS

	1	2	3	4	5	6	7	8	9	10	11	12	13
Duration (Min.)	0	10	20	30	40	50	60						
Flow (gpm)	468	467	468	469	467	467	469						
TDH (feet)	253	252	252	252	252	252	252						
Pump speed (rpm)	3584	3585	3585	3585	3585	3584	3585						
Power (BHP)	38	38	38	38	38	38	38						
Ambient Temp (°F)	75	75	75	75	75	75	75						
Brg Hsg Temp (°F)	117	119	124	126	128	129	130						
Water Temp (°F)	85	85	85	85	86	86	86						

Acceptance Criteria						INITIALS	
Smooth operation confirmed: no indication of mechanical defect is detected						SW	
For 5 minutes after shutdown, suction pressure is maintained and no leakage is detected						SW	
Flow rate stayed within +/-5% of rated						SW	
Bearing housing temperature did not exceed 180°F for Oil/Oil Mist or 200°F for Grease lubrication						SW	
Input (line) power did not exceed the rating of the job motor, if applicable						SW	
Vibration reading at the end of run Vibration readings: IBH/IBV/OBH/OBV/OBA in in/sec RMS			.04	.06	.06	.07	.08
Vibrations readings as shown above are compliant with ANSI/HI 9.6.4 specifications						SW	