81-W-501
COOLING TOWER PACKAGE
VOLUME WATER FLOW RATE 5000 m3 (Each cells)

81-P-501 A/B/C/D/E/F/G	
COOLING WATER PUMPS	
CAPACITY (Nor/Rated)	5300/6360 m3/hr
MAX DIFFERENTIAL PRESSURE	5.44 Bar
NUMBER OF PUMPS	5+2

81-W-502
COOLING TOWER FILTRATION PACKAGE

81-W-503
CORROSION INHIBITOR DOSING PACKAGE

81-W-506
BIOCIDE DOSING PACKAGE

81-W-504
DISPERSANT DOSING PACKAGE

81-W-505
SODIUM CARBONATE DOSING PACKAGE

81-SU-501
BACK WASH WASTE WATER SUMP

81-P-502 A/B	
BACK WASH WASTE WATER SUMP PUMP	
CAPACITY (Rated):	5 m3/hr
MAX DIFFERENTIAL PRESSURE:	2.1 Bar (NOTE 16)

81-W-501 A/C/E & B/D/F

TOTALLY REVISED

01

NNF

DESALINATED WATER LINE

81-W-506 BIOCIDE DOSING PACKAGE

81-W-505 SODIUM CARBONATE DOSING PACKAGE

81-W-503 CORROSION INHIBITOR DOSING PACKAGE

81-W-504 DISPERSANT DOSING PACKAGE

Replace each other

SIC

M

81-W-501

add "81-MF-501 A/C/E & B/D/F" near 81-W-501 A/C/E & B/D/F

AI (HYDROCARBON)

AI (FREE CHLORINE)

COOLING WATER RETURN FROM HEADER

5001

LIC

81-W-502 COOLING WATER FILTRATION PACKAGE

BACK WASH WASTE WATER

TO WASTE WATER TREATMENT PACKAGE (83-W-901)

Note 15

NOTE 10

NNF

Please revise to " Desalinated water (make up) from tank (83-TK-808)"

B.L

DESALINATED WATER (MAKEUP)

5002

5004

81-P-502A/B

5007 NOTE 7

M

NOTE 6

81-P-501 A/B/C/D/E/F/G

FIC

81-SU-501

TIC

AI (pH)

AI (CONDUCTIVITY)

AI (Cl⁻)

5006

Please delete the array and connect this line as shown.

FIC

please relocate Note15 to shown place.

COOLING WATER BLOWDOWN TO WASTER WATER TREATMENT PACKAGE (83-W-901)

NOTE 15

5005

NOTE 9

5008

COOLING WATER SUPPLY TO DISTRIBUTION

5003

STEAM DRUM BLOW DOWN WATER FROM (81-E-118)

please revise based on new revision.

STREAM NO.	5001	5002	5003	5004	5005	5006	5007 (NOTE 7)	5008
TEMPERATURE, °C	47	25	37	37	37	37	37	60
PRESSURE, Barg	3.5	5.5	5.5	0.31	5.5	5.5	2	4.5
TOTAL MASS FLOW, kg/h	2.5E+07	532430	2.5E+07	2.6E+07	74882	1248029	520	2900
DENSITY, kg/m3	990.7	1007.5	998.4	998.3	998.4	998.4	998.3	983
VISCOSITY, Cp	0.57	0.89	0.69	0.69	0.69	0.69	0.69	0.46

REFERENCE DRAWINGS	DWG. NUMBER

Note :

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.
5. 7 ELECTRICAL PUMPS ARE CONSIDERED FOR COOLING WATER PUMPS. (5 DUTY PUMPS + 2 SPARE PUMPS).
6. REQUIRED CONTROL FLOW VALVE SHALL BE CONSIDERED BY FILTRATION PACKAGE VENDOR.
7. STREAM PRESSURE AND BACK WASH FLOW RATE ARE PRELIMINARY AND WILL BE FINALIZED BY VENDOR DURING DETAIL DESIGN.
8. DELETED.
9. DELETED.
10. 6 (5+1) COOLING WATER CELLS CONSIDERED.
11. DELETED.
12. DELETED.
13. DELETED.
14. DELETED.
15. THE LOCATION OF PACKAGE 83-W-901 WILL BE CHECKED AND FINALIZED DURING DETAILED DESIGN ENGINEERING PHASE AS PER CONTRACT.
16. WILL BE FINALIZED LATER. 01

Legend :

REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED
01	ISSUED FOR APPROVAL	20-Sep-2025	A.HOSEINGOO	M.JAMSHIDI	M.H.ESHRAGHI
00	ISSUED FOR COMMENT	18-Dec-2024	M.FALAHI	M.JAMSHIDI	E.SHAFAGHATI

OWNER: شرکت پتروشیمی پارس

MC: A.P.G

CONTRACTOR/CONSULTANT: شرکت پرهنر سنت Parsh Sanat Pet.

PROJECT TITLE:

PROPANE DEHYDROGENATION (PDH) PROJECT

DOCUMENT TITLE:

PFD for Cooling Tower System

DOC NO.:	PROJ.CODE	Sec.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3981	50	DE	PR	PFD	020

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