



Toase-eh Park Sanati Gohar Ofogh  
Petrochemical Co.  
**CONCEPTUAL, BASIC and DETAIL DESIGN  
ENGINEERING OF STYRENE PARK OFFSITE**



Document Title: Belt & Pulley Data Sheet

Document No.: EI027-DMF-VD-ME-DSH-018-R0

Rev. R1

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# STYRENE PARK OFFSITE

**Document Title:**  
**Belt & Pulley Data Sheet**

Rev.	Issued Date	DESCRIPTION	PREPARED	CHECKED	APPROVED
R1	31-08-2024	IFA	F.Aghaienezhad	J.Beigloo	A.Gholizadeh
R0	22-06-2024	IFA	F.Aghaienezhad	J.Beigloo	A.Gholizadeh



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**REVISION RECORD SHEET**

Page Page	Revisions							Page	Revisions						
	R0	R1	R2	R3	R4	R5	R6		R0	R1	R2	R3	R4	R5	R6
1	X	X						41							
2	X	X						42							
3	X	X						43							
4	X	X						44							
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 	<b>Toase-eh Park Sanati Gohar Ofogh Petrochemical Co.</b> <b>CONCEPTUAL, BASIC and DETAIL DESIGN ENGINEERING OF STYRENE PARK OFFSITE</b>	 
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Material test certificate 3.1 for is needed for Belt

DATA SHEET FOR PULLEY BELT TRANSMISSION			
BASIC DATA FOR TRANSMISSIONS			
1	Customer items/DTT items	AIR COOLER	
2	Belt type	V-Belt	
3	Total quantity of belt		2Set
4	Motor power	(KW)	7.5
5	Motor frame size		-
6	Speed motor	(rpm)	1440
7	Speed fan	(rpm)	382
8	Speed ratio		3.76
9	Minimum service factor		1.4
10	Real service factor		1.8
11	Min. Max. Center Distance	(mm)	835 ±85
12	Center distance	(mm)	754.3
13	Belt width<QTY	(mm)	-- /2Set
14	Belt order info		CAPXPA2332
15	Belt drive life	(Hours)	V- belt estimated life~20000
16	Transmitted power	(kW)	13.75
17	Driver	QTY	2
		code	PBT106SPA2
		Pitch Dia	(mm) 106
		Pitch of Groove	(mm) -
		Number of Grooves	2
		Width	-
		Bush no	1610
		Bore	(mm) -
Material/Weight	GG20 /-		
18	Driven	QTY	2
		code	PBT400SPA2
		Pitch Dia	(mm) 400
		Pitch of Groove	(mm) -
		Number of Grooves	2
		Width	-
		Bush no	2517
		Bore	(mm) -
Material/Weight	GG 20 /-		
19	Deflection force	(N)	-
20	Deflection	(mm)	-
21	Maximum tension	(N)	561
22	Noise	dB(A)	85



## INPUT DATA

<b>Transmission type</b>	2 Pulleys power transmission
<b>Product family</b>	NEXT®
<b>Type</b>	Narrow Raw Edge (XPZ,XPA,XPB,XPC)
<b>Section</b>	XPA

<b>Power [kW]</b>	7.50
<b>Speed [RPM]</b>	1440.0
<b>Torque [Nm]</b>	49.7
<b>Required service factor</b>	1.4

## BELT

<b>Code</b>	CAPXPA2332
<b>Length [mm]</b>	2332.00
<b>Number of belts / ribs [-]</b>	2

## RESULT

<b>Resulting service factor</b>	1.8
<b>Transmissible power [kW]</b>	13.75
<b>Linear speed [m/s]</b>	8.0
<b>Center-to-center [mm]</b>	754.3

## PULLEYS

	Solid hub pulley code	Taper bushing code	External	Number of ribs	Pulley diameter [mm]	X [mm]	Y [mm]
<b>Driver</b>	PT106SPA2	PBT106SPA2	No	2	106.00	0	0
<b>Driven</b>	PT400SPA2	PBT400SPA2	No	2	400.00	754.26	0

	Transmission ratio	Speed [RPM]	Wrap angle [°]	Power [kW]	Torque [Nm]	Static shaft load [N]
<b>Driver</b>	--	1440.0	157.5	7.50	49.7	1693.3
<b>Driven</b>	0.26	381.6	202.5	7.50	187.7	1693.3

## TENSIONING

Maximum tension [N]	561	Minimum tension [N]	432
		Vibration frequency method	
Free segment length [mm]		New belt frequency [Hz]	Run-in belt frequency [Hz]
<b>Driver-Driven</b>	739.8	52 ± 2%	46 ± 2%