

DEHDASHT HIGH DENSITY POLYETHYLENE PROJECT



Contract No.:

DOCUMENT TITLE: Mechanical Data Sheet for Mixing Screw Feeder Package (M-5501)

ass: A Rev. D0

Sheet 1 of 11

DPIC/98-12

Disc. Doc. Material Proj. Code Area Unit Serial. No Code Type Code DPIC9812 001 500 ME DS 4260 5501

MECHANICAL DATA SHEET FOR MIXING SCREW FEEDER PACKAGE (BLACK GRADE) (M-5501)

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M.Haghnevis	S.Farhadzadeh	Mojahed	H.Farhadi	IFA
PREPARE	CHECKED	PPI	NARGAN	PURPOSE OF ISSUE
	7.1mm20072	PREPARE CHECKED	PREPARE CHECKED PPI	PREPARE CHECKED PPI NARGAN



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4	x				
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EXTENSION	N OF SUPPLY						
DESIGN OF THE SYSTEM IN ORDER TO MEET THE SPECIFIED MIXIN	NG CAPACITY						
TWIN SCREW MIXER + BAG FILTER + SKID MOUNTED MIXER VENT	BLOWER + SUCTION AND DISCHARGE PIPING +FLOW CONTROL VALV						
ELECTRIC MOTOR DRIVER INCLUDING SPEED CONTROL PANEL IF	REQUIRED						
■ ADEQUATE DISCHARGE FLOW RATE CONTROL SYSTEM							
FEEDING HOPPER							
BOTTOM DISCHARGE DOOR PNEUMATICALLY ACTUATED (CONTOU	JR DOOR)						
INSPECTION DOORS (No. 2)							
ELECTROMECHANICAL DEVICES (No. 2) FOR DOOR LOCKED							
SOLENOID VALVE (No. 2) FOR DOOR LOCKED							
LIMIT SWITCH (No. 2) FOR DOOR CLOSED							
THERMOELEMENTS WITH LOCAL REPEATER							
SPEED SENSOR FOR EACH SHAFT							
■ ELECTRICAL AND INSTRUMENTATION CONNECTIONS INSIDE PACK	AGE BATTERY LIMITS						
INDICATING CONTROL AND PROTECTION INSTRUMENTS	West laboured to the Control of the						
LOCAL OPERATING PANEL							
FLEXIBLE HOSES AT UNIT BOUNDARY							
GROUNDING CLIPS							
LIFTING LUGS							
ANCHOR BOLTS DESK	GN SUPPLY						
INSULATION SUPPORTS ON MACHINERY PARTS WHOSE OPERATIN	IG TEMPERATURE IS ≥ 60°C						
SPECIAL TOOLS AND WRENCHES FOR MAINTENANCE							
SPARE PARTS FOR COMMISSIONING AND START-UP							
SPARE PARTS FOR 2 YEARS OPERATIONS	SPARE PARTS FOR 2 YEARS OPERATIONS						
AUTOMATION AND INTERLOCK DESCRIPTION							
MATERIAL CERTIFICATION							
DOCUMENTATION, DRAWINGS AND INSTRUCTION MANUAL							
PRESERVATION FOR DELIVERY AND STORAGE							
SEALS WITH FLUSHING PIPING, VALVE, FLOW INDICATORS , PSV, P	RESSURE REGULATION & INDICATROR AND SOLENOID VALVE						
REMOVABLE FRONT BOLTED DOOR TO BE USED TO EMPTY INTO F	LOOR IN CASE OF NEED (HAVING BLINDED BOTTOM DISCHARGE)						
Any accessory, part, or device not specified herein but necessary for							
FLEXIBLE HOSE (only as reference)	4 700						
ALL FLEXIBLE HOSES AT UNIT BOUNDARY SHALL BE WITH INTERNAL PIPE OR OTHER DEVICES SUITABLE TO AVOID POLLUTION WITH PELLETS OR POWDERS IN CASE OF FLEXIBLE BREAKAGE.	(1) AS MENINUM AS POSSIBLE, TO BE						
	ALT 2						



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SERVICE BLENDING AND TRASPORTING OF HDPE POWE	ER WITH SOILD ADD	ITEM	M-5501			
TYPE HORIZONTAL TWIN SCREW MIXER (5)	MODEL		No. OF UNITS	1 (one)		
MFR	MOTOR RATED	esmecs conce	kW			
SOUND PRESSURE LEVEL (SPL) @ 1 m ≤ 85	dB(A) SE	ERVICE TYPE	CONTINUOUS			
APPLICABLE C	ODES AND STANDAR	RDS				
MIXER MFR std.	■ ELECTRIC	MOTORS	IEC			
INSTA	LLATION DATA					
ENVIRONMENT HUMID CORRO	DSIVE	SEA SIDE	☐ WINTER	IZATION		
INSTALLATION INDOOR OUTDOOR	UNDER ROOF	GROUND FL	OOR SKID M			
AREA CLASSIFICATION(9) ZONE 22 DUST GR. IIIB	MAX SURFACE TEM	Control of the Contro	PROTECTION DEGREE	IP 65		
DESIG	ON CONDITIONS					
PRODUCT TO BE FED (2)	HDPE BEADS:	92.5 %wt OF STREA	AM			
PRODUCT TO BE FED (2)	SOLID ADDITIV	VES: 7.5 %wt OF ST	REAM			
PRODUCT HAZARDOUSNESS n. *						
OPERATION No. hours/day		24 hours/day AND	The second secon			
OPERATION TYPE		FULLY AUT	TOMATIC			
PRODUCT CHARACTERISTICS						
PARTICLE SIZE % weight	SEE ANNEX-I					
BULK/REAL DENSITY kg/m³						
REPOSE ANGLE * on horizontal line						
	NORMAL	AS IUDDE DA	WINED: - 0 05 (ADS	NEW WEAT		
FLOWRATE Vh	DESIGN	45 (HUPE PC	OWDER) + 3.65 (ADI	illives)		
0 1 A 1 A 1 A 1 A 1 A 1 A 1 A 1 A 1 A 1	MAX (3)(4) MIN (2)					
FED FROM		ETERING UNITS AN	n screw eeenen			
DISCHARGING INTO	- "	EXTRU				
OPERATING / DESIGN PRESSURE barg		0.05 / -0.02				
OPER. / DESIGN TEMPERATURE "C		90 (MAX 10	00) / 120			
ADDITIVES FEED TEMPERATURE 'C	20					
TEMPERATURE INCREASE *C	<5					
MIXING LNEGHT (MIN DISTANCE BETWEEN mm	NOT SHORTER THAN 2500					
ADDITIVE INLET AND DISCHARGE NOZZLE)						
CLEARANCE BETWEEN SCREW AND CASING mm		10				
CONSTRU	ICTION MATERIALS					
	AISI 304					
GASKET IN CONTACT WITH PRODUCT	WHITE NEOPRENE O	R EQUIVALENT TO	AVOID PRODUCT P	OLLUTION		
OPERATI	NG DESCRIPTION					
THE CONTINUOUS MIXER IS FED BY GRAVITY FROM STABILI		A STATE OF THE PARTY OF THE PAR				
PACKAGE UNIT PK-5601. MAIN STREAM CONTAINING HDPE F				HE MIXER.		
THE STREAMS ARE CONTINUOUSLY MIXED AND THE RESUL	TING MIXTURE IS FEE	D TO THE EXTRUDE	R.			
THE CONTINUOUS MIXER SHALL FEED THE EXTRUDER WITH		AINING THE ACCU	RACY OF THE			
ABOVESAID METERING EQUIPMENT (± 0.5% IN THE WHOLE C						
TECHNICAL REQUIR						
THE MIXER SHALL HAVE A POWDER, DUST AND GAS (NITROG						
TROUBLES DUE TO THE INFILTRATION OF FINE POWDERS IN	THE OPERATING PAR	15 AND FOR HIGH E	DUST CONTAINMEN			



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TECHNICAL REQUIREMENTS FOR THE PACKAGE (CONT.)
ALL INTERNAL PARTS MUST BE BUILT IN ORDER TO AVOID PRODUCT STAGNATION.
THE DIFFERENT PARTS OF MIXER SHALL HAVE AN EASY ACCESS AND SHALL BE EASILY DISASSEMBLED FOR CLEANING.
THE MIXER SHALL BE DESIGNED IN ORDER TO AVOID THE FORMATION OF BLOCKS AND AGGLOMERATES CONNECTED TO
THE ADDITION OF LIQUID ADDITIVES
REMOVABLE COVER TO BE PROVIDED: ONE BEFORE AND ONE AFTER THE FILTER IN ORDER TO OPEN THE MIXER WITHOUT
DISMANTLING THE FILTER
NOTES
(1) FOR AVAILABLE UTILITIES, REFER TO DOCUMENT DPC-PR-SPC-0003.
(2) VENDOR SHALL SPECIFY TURN DOWN RATIO (AT LEAST 40% IS REQUESTED), IF APPLICABLE.
(3) TO BE SPECIFIED ACCORDING TO EXTRUDER DESIGN CAPACITY.
(4) VENDOR SHALL SUGGEST, CHECK AND APPROVE THE INSTALLATION OF THE EQUIPMENT, ACCORDING TO THE
INSTALLATION OF METERING UNITS AND THE EXTRUDER, IN ORDER TO GUARANTEE A CORRECT AND RELIABLE OPERATION.
(5) PADDEL- BLADE AND COUNTER ROTATING, TWO SPEED MOTOR (POLE CHANGING MOTOR OR VFD with NORMAL MOTOR)
(6) MDMT: -4 @ 0.2 barg
(7) ADJUSTABLE AUTOMATIC WEIR SYSTEM IF REQUIRED SHALL BE SUPPLIED BY VENDOR.
(8) NITROGEN FLOW UP TO 100 m ³ /h COUNTERCURRENT TO HDPE FLOW TO BE CONSIDERED
(9) THE HAZARDOUS AREA CLASSIFICATION IS SUBJECTED TO CHANGE.

CONSTRUCTION DATA

mm	LENGTH	mr	n THIC	KNESS	mm
) mm	INTERNAL SU	RFACE POLISI	HING	RI	AS .
m ³	CAPACITY	CHARLES AND ADDRESS OF THE PARTY OF THE PART		m	1
minutes	ROTATION SE	PEED		rp	m
	S	IZE AND SHAP	E OF OUTLET		
TUBULAR		SOLID		NE PIECE CO	NSTRUCTION
☐ ROLLER B	EARINGS		BUSHINGS		
☐ ROLLER B	EARINGS		BUSHINGS		
OIL			GREASE		
DOUBLE STUFF	ING BOX	FLU:	SHED WITH	NITRO	GEN
R+REDUCER	GEAR MOTOR	THROUG	H COUPLING	BELTS	CHAINS
	TYPE		ANTIS	PARKING COL	PLING GUARD
	NOTES				
F PRODUCT CONTACT.					
ITH RELEVANT VALVES	S, PRESSURE RE	DUCER, PRES	SURE GAUGE,	PRESSURE S	AFETY VALVES
ALL BE INCLUDED IN TH	E SUPPLY. VENI	DOR SHALL PR	ROVIDE SHUT	OFF VALVES T	0
OF INTERLOCK ACTU	ATION. SEE AVA	LABLE NITRO	GEN CONDITIO	N DPC-PR-SP	C-0003
֡֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜	mm m³ m³ minutes TUBULAR ROLLER B ROLLER B OIL DOUBLE STUFF R+REDUCER F PRODUCT CONTACT. ITH RELEVANT VALVES ALL BE INCLUDED IN TH	mm INTERNAL SU m³ CAPACITY minutes ROTATION SE SECTION	mm INTERNAL SURFACE POLISI m³ CAPACITY minutes ROTATION SPEED SIZE AND SHAP SOLID ROLLER BEARINGS ROLLER BEARINGS OIL DOUBLE STUFFING BOX TYPE NOTES F PRODUCT CONTACT. PITH RELEVANT VALVES, PRESSURE REDUCER, PRES RALL BE INCLUDED IN THE SUPPLY. VENDOR SHALL PR	mm INTERNAL SURFACE POLISHING m³ CAPACITY minutes ROTATION SPEED SIZE AND SHAPE OF OUTLET SIZE AND SHAPE OF OUTLET SIZE AND SHAPE OF OUTLET BUSHINGS ROLLER BEARINGS BUSHINGS FREDUCER BEAR MOTOR TYPE BANTIS NOTES F PRODUCT CONTACT. WITH RELEVANT VALVES, PRESSURE REDUCER, PRESSURE GAUGE, BUSHINGS BUS	mm INTERNAL SURFACE POLISHING RI m³ CAPACITY mi minutes ROTATION SPEED rp SIZE AND SHAPE OF OUTLET SIZE AND SHAPE OF OUTLET SIZE AND SHAPE OF OUTLET BUSHINGS ROLLER BEARINGS BUSHINGS COLLER BEARINGS THROUGH COUPLING BELTS TYPE ANTISPARKING COLLER NOTES



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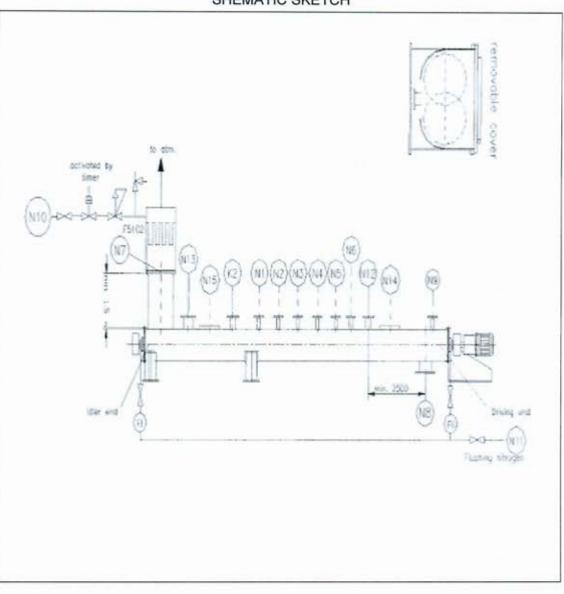
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SHEMATIC SKETCH





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DEHDASHT PETROCHEMICAL INDUSTRY COMPANY

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POS.	NO.	SERVICE	DN	RATING	FLANGE	FINISHING	NOTES
K1	1	PRESSURE CONTROLLER	3"	#300	WN-RF	110000000000000000000000000000000000000	
K2	1	SPARE	3"	#150	WN-RF		(4)
N1	1	POWDER IN	16"	#150	WN-RF		(1)
N2	1	ADDITVE FROM W 5606	6"	#150	WN-RF		(2)
N3	1	ADDITVE FROM W 5601	6"	#150	WN-RF		(2)
N4	1	ADDITVE FROM W 5602	6"	#150	WN-RF		(2)
N5	1	ADDITVE FROM W 5603	6"	#150	WN-RF		(2)
N6	1	ADDITVE FROM W 5604	6"	#150	WN-RF		(2)
N7	1	VENT TO F 5502	20°	#150	WN-RF		(1), (3)
N8	1	POWDER OUTLET	16"	#150	WN-RF		(1)
N9	1	VENT FROM EX 5501	6"	#150	WN-RF		(1)
N10	1	NITROGEN INLET	1"	#300	WN-RF	1	(1)
N11	1	NITROGEN INLET	1/2"	#300	WN-RF		(1)
N12	1	ADDITVE FROM W 5605	6"	#150	WN-RF		(2)
N13	1	VENT FROM RF 5501	2"	#150	WN-RF		(5)
N14	1	INSPECTION DOOR			The state of the s		(1)
N15	1	INSPECTION DOOR					(1)
							_

- TO BE CONFIRMED BY VENDOR
- 2) TO BE CONFIRMED BY PK-5601 VENDOR
- 3) CONNECTION SIZE AND SHAPE SHALL BE IN SCOPE OF BAG FILTER DESIGNER.
- WITH BLIND FLANGE AND PLUG FLUSH TO INNER SURFACE.
- 5) TO BE CONFIRMED BY PK 5501 VENDOR



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SERVICE		FEED DEGASSING FILTE	K(1)	ITEM	/ F-5502		QUANTITY	1
TYPE	BAG FILTE	R		DIAMETER		mm	PLANT UNIT	500
HEAD TYPE			1	HEIGHT OR LE	N.	mm	INCLUDED IN	M-5501
INSULATION	20000000			CAPACITY		m ₃	SERVICE TYPE	CONTINUOUS
INSTALLATION	INDOOR		F	REPROOFIN	G	- 0	RADIOGRAPHY	
DESIGN CODE	- Increase	and the second		- 400		_		
	GAS OR LIC	DIND				SK	ETCH	
FLUID	1000	NITROGEN	H854					
FLOWARE	kg/h	250 (TO BE CONFIRM	ED)					
OPERATING TEMP.	,c	90						
OPERATING PRESSURE	bar(g)	0.05						
MW		28		- 17				
DENSITY	kg/m ³							
VISCOSITY	mPa.s							
FLUID HAZARD	-							
FILTRATION TYPE								
	SOILD TO B	E FILTERED						
SOLID HOPE POWDER / ADDITIVE:				-				
FLOWARE	kg/h	III C FOILDER / ADI	HITES					
DENSITY	kg/m ³							
PARTICLE SIZE	ng/m	2+30 mu						
PARTICLE SIZE DIS	TRIBUTION	mu	-	ract				
THI TOUCH OLLE DIO	THE PROPERTY OF	mu	ract					
		mu		ract				
		mu		ract				
		mu		ract				
	OPERATING	The second secon		1001				
OP CLEAN DIRTY	mbar	10 /50	_	_				
TOTAL EFF. REQ'D		-						
PARTIAL SEPARATI		mu	-	ract				
ANTINE DEPARATI	ON EFF. (9)	mu		ract				
				ract				
		1000						
		mu fract						
					OME OF TER			
W WED LICEUS			Mainuci	ION DATA OF	ONE PILIER	155		-
FILTER MEDIA		TYPE BAG	2-41/55		01000	AREA		m²
PACKING		MATERIAL PPS (Ryton) / 550	gr m:	GASKETS	DENCY		-
AUNING		MATERIAL				HEIGHT		mm
DESIGN PRESS.	Bar(g)	COND.1 0.2			COND 2	-0.02	EVA	EQUIRED
DESIGN PRESS. DESIGN TEMP.	"C	COND.1 0.2			COND.2	120	F.V. T	
MDMT	0	COND.1 120			GOND.2	120	F.V. 11	EMP.
BODY MATERIAL	S.S				COSBOSIO	N ALLOWANCE	E 0	mm
NOZZLES GASKETS					CORROSIO	TALLUTTANG		min
TOLLEGO GRONE IS				NOZZLES				
866	-	ecourae T	EM.		THE PARTY OF THE P	-	-	NOTE
POS. NO		SERVICE	DN	RATING	FLANGE	FINISHIN	VG	NOTE
	-							
	_							
LANCE OF THE PARTY								
NOTES 1) GAS TI		MATIC CLEANING DEVIC			PERATION EFFICIE			



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				BLOWER	_				
SERVICE	MIXER VENT BLOWE	R	TYPE C	ENTRIFUGAL	N	o. REQUIRED	1 (one)	ITEM	C 5502
MFR			MODEL			No. OF STAGES		1	
LOCATION	OUTDOOR UNDER	RROOF INDOOR		AREA CLASSIFICA	TON	ZONE 22 DUST G	ROUP IIIB (WII	LL BE FINALI	ZED LATER)
	OPERATION	NG CONDITION				SPEED VAR	ATION		
SUCKED GAS:				SPEED RATIO:		AGMA SI	ERVICE FACTO	R	
GAS COMPOSITIO	N:			- The Committee of the		.000007720		0241	
CAPACITY:			N	m7/h MECHANICAL GEAR	100	TYPE:			
CAPACITY AT SUC	TION CONDITIONS:			n'th MFR:		MODEL	000		
SUCTION TEMPER	RATURE:			C COUPLING TYPE:		1,000,00			
VISCOSITY AT SU	CTION CONDITIONS:		cP	REDUCER LUBRICA	TION:				
DENSITY AT SUCT	TION CONDITIONS:		Kgi	m³ COUPLINGS LUBRIC	ATION:				
SUCTION PRESSU	IRE:		bar	g BELTS:	-	NO.:		TYPE	
DISCHARGE PRES	SURE:		bar	MOTOR PULLEY:	П	p mm FAN	PULLY:	Dp	p mm
DIFFERENTIAL PR	ESSURE		bar		FI	OWRATE RE	_		
OUTLET SPEED AT	T DISCHARGE:		en/s	ON SUCTION		THE RESERVE OF THE PERSON NAMED IN	LIVERY		
SPEED:			rpm	CONTROL TYPE:	GATE		BU	TTERFLY	
INPUT POWER AT	SHAFT;		kw		ON/O	FF 🗍	CC	NTROL VANE	H
RATED POWER FO	OR DRIVER		kw	DRIVE	MANU	IAL	RE	MOTE	
EFFICIENCY:			%						- Land
ROTATION (VIEWE	ED FROM DRIVER END)	C.W. C.C	.w		DRI	VER (ELECTR	C MOTOR	S)	
GAS TYPE	TOXIC	EXPL	OSIVE	RATED OUTPUT:			FR.	-	
	CORROSIVE	DUST	Y	TYPE & SIZE :		Si	KAPE:		
The second second	CONSTRUCTION	CHARACTERISTICS		SAFETY PROTECTION	N	TI	MP, CLASS:		
IMPELLER:	OPEN	ENCLOSED DIAMETE	R: m	m LUBRICATION:		su	JPPLY: 400 ± 5	5%V, 50 ±3%	HZ, 3Ph
IMPELLER MOUNTIE		BETWEEN BE	ARING	DEGREE OF MECHAN	IICAL PROT	ECTION: IP65 D	ATA SHEET:		
SUCTION:	SINGLE .	DOUBLE [REC	UIRED	TESTING AND	ADDITION	IAL DATA	E.
BLADES NO.:	TYPE:	AIRFOIL FLAT BAC	KWARD	IMP. DTN. BALANCE		MECHANICA	L TEST AT WO	RK SHOP	
BD-DEG NO.	1112	RADIAL		HYDROSTATIC TEST		PERFORMA	NCE TEST AT V	VORKSHOP	8
TIP SPEED:				m/s NOISE LEVEL:	≤ 85 dE	3A @ 1m			
COUPLING:	DIRECT	JOINT [BELTS	TOTAL MASS OF FAN	(INCL. MOT	OR):			kg
INSPECTION DOOR		VOLUTE CLEANING	DOOR	MOMENT OF INERTIA	REFERRE	TO DRIVER SHAFT)		Kg/m ²
SHAFT SEAL	TYP	E:	, band	DRAWINGS:					
SHAFT COOLING	Liqu	JID USED :		PERFORMANCE CUR	VES:				
FLOWARET:	m/h	PRESSURE	ban	MFR. JOB AND ITEM N	Vo.:				
SHAFT JACKET		SHAFT COOLING FAM				SCOPE OF S	UPPLY		
RADIAL BEARING:	MFR.	TYPE: ANTI	FRICTION	MOTOR:	COUPLING:	GUARD:	The second residence	G DRAIN VALV	ES:
THRUST BEARING:	MFR	TYPE: ANTI	FRICTION	REGULATION DAMPE	RS:		PNEUMATIC	CACTUATROS	
LUBRICATION TYPE	0100	GREASE		FOUNDATION BOLTS:	- 10		BASE PLAT	E: 0	
BEARING COOLING	Liqu	JID USED:		SUCTION FILTER			VIBRATION	PROBE ON BE	ARING
FLOWRATE:	m ³ /li	PRESSURE:	bar	SUCTION AND DISCH	ARGE PIPIN	G AND VALVE:	INSTALLATI	ON MATERIAL	
	MA	TERIAL		Una company	- 9,410	CONNECTI	ONS		
CASING:	S.S.	SHAFT:	S.S.	SUCTION FLANGE:	DIREC	TION:	SHAP	·E	
MPELLER:	S.S.	HUB:		THE OWNER WATER TOWN	SIZE /	RATING / FACING:	SECT	ION:	
BLADES:	S.S.	VOLUTE:		DISCHRAGE FLANGE	DIREC	TION:	SHAP	374 %	
BELLOWS:		BASE PLATE:	C.S.		SIZE /	RATING / FACING	SECT	ION:	
NOTES									
(1) DESI	GNED AND SUPPLIED BY	M 5501 VENDOR, VENDOR S	HALL SUBMIT AN	D FILL IN THE DATA SHEET	WITH THE	BID.			
		MINIMUM METAL DESIGN T	_	THE RESERVE AND ADDRESS OF THE PARTY.					





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ANNEX-I

TYPICAL HDPE POWDER PROPERTIES:

Bulk density:

400 to 500 kg/m3

Solid density:

940 to 960 kg/m³ 125 °C

Serial. No

5501

Specific heat:

2.1 kJ/kg K

Melting point:

Angle of repose (typical):

40 to 45° (on horizontal line)

Abrasion: Kinematic angle of surface friction (typical): Non-abrasive 11 to 18°

The product is:

- Dry
- Tending to electrostatic charging
- Combustible
- Free flowing
- Non abrasive

PARTICLE SIZE DISTRIBUTION:

Particle size dist catalyst):	tribution (based on Z509	Particle size distribution (based on Z501 catalyst):			
sieve (µm)	% by wt.	sieve (µm)	% by wt.		
> 400	0.05	> 600	1.2		
315 - 400	0.95	500 - 600	0.9		
250 - 315	4.10	400 - 500	1.5		
200 - 250	7.40	315 - 400	3.9		
160 - 200	19.00	250 - 315	12.7		
125 - 160	21.00	200 - 250	23.9		
63 - 125	38.50	160 - 200	25.1		
32 - 63	7.4	125 - 160	19.4		
< 32	1.6	100 - 125	5.7		
		63 - 100	4.85		
V		32 - 63	0.7		
		< 32	0.15		
d50: 100 - 140	μm	d50: 180 - 220	μm		





DEHDASHT HIGH DENSITY POLYETHYLENE PROJECT



Contract No.:

DOCUMENT TITLE: Mechanical Data Sheet for Mixing Screw Feeder Package (M-

DPIC/98-12

DPIC9812	001	500	ME	DS	4260	5501
Proj. Code	Area	Unit	Disc. Code	Doc. Type	Material Code	Serial. No

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ANNEX-I CONTINUED

TYPICAL HDPE PELLET PROPERTIES:

Bulk density:

500 to 650 kg/m³

Solid density:

940 to 960 kg/m3

Specific heat: Pellet shape: Abrasion:

2.1 kJ/kg K LENTOID Non-abrasive

Melting point: Nominal

125 °C pellets D= 3 - 5 mm

size:

L/D=0.75 - 1

TYPICAL PROPERTIES OF STABILIZERS (ADDITIVES):

Melting Points Range

150 to 210 °C

Softening Point range

55 to 70 °C 0.3 to 30 µm

PSD Range **Dustiness**

Dusty

Flowability some have poor flowability an □ easy to bridge

Additives are:

- Dry
- Tending to electrostatic charging
- Combustible

ADDITIVES DESIGN RANGE:

Particulars	W-5601	W-5602	W-5603	W-5604	W-5605	W-5606 Carbon Black Materbatch (2)	
Stabilizer	Viton FFGB	Calcium Stearate	Zinc stearate	Irganox 1010	Irgafos 168 S		
Feed Capacity (1)	1.5 to 6 kg/h	10 to 50 kg/h	10 to 50 kg/h	20 to 90 kg/h	10 to 100 kg/h	1000 to 3500 kg/h	
Bulk Density	630 to 670 kg/m ³	170 to 210 kg/m ³	170 to 210 kg/m ³	530 to 630 kg/m ³	480 to 570 kg/m ³	480 to 570 kg/m ³	
Grain Size		0.3 to 30 μm	0.5 to 20 µm	10 to 400 µm			

1) Feed Capacity depends on stabilizer and recipe. Range is mentioned in the table. Maximum flow rate to be confirmed according to expected capacity of extruder. If the range is too wide for a single feeder, Vendor shall suggest alternate solution.

2) Carbon Black Materbatch (Carbon corporation, product type PLUSBLACK LL4616)



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DPIC/98-12

Disc. Doc. Material Proj. Code Area Unit Serial. No Code Туре Code **DPIC9812** 001 500 ME DS 4260 5101

MECHANICAL DATA SHEET FOR MIXING SCREW FEEDER PACKAGE (M-5101)

IL.V	ISSUE	D	CHECKED	APP	ROVED	FUNFOSE OF ISSUE
REV	DATE	PREPARE	CHECKED	PPI	NARGAN	PURPOSE OF ISSUE
D0	01-Jun-2020	M.Haghnevis	S.Farhadzadeh	Mojahed	H.Farhadi	IFA
	110000000000000000000000000000000000000					



DEHDASHT HIGH DENSITY POLYETHYLENE PROJECT



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TABULATION OF REVISED PAGES

Page	Rev-D0	Rev-D1	Rev-D2	Rev-D3	Rev-D4
1	X				
2	×				-
3	×				
4	х				
5	x				
6	×				
7	X				
8	х				
9	X				
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34					
35	-	-			

Page	Rev-D0	Rev-D1	Rev-D2	Rev-D3	Rev-I
36					
37					
38					
39					
40	7				
41					
42	0.1				
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44					
45				-	
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DEHDASHT HIGH DENSITY POLYETHYLENE PROJECT



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 Unit
 Disc. Code
 Doc. Type
 Material Code

 DPIC9812
 001
 500
 ME
 DS
 4260

ME DS 4260 5101

Serial. No

EXTENSION OF SUPPLY

DESIGN OF THE SYSTEM IN ORDER TO MEET THE SPECIFIED MIXING CAPACITY

TWIN SCREW MIXER + BAG FILTER + SKID MOUNTED MIXER VENT BLOWER + SUCTION AND DISCHARGE PIPING +FLOW CONTROL VALVE

ELECTRIC MOTOR DRIVER INCLUDING SPEED CONTROL PANEL IF REQUIRED

ADEQUATE DISCHARGE FLOW RATE CONTROL SYSTEM

FEEDING HOPPER

BOTTOM DISCHARGE DOOR PNEUMATICALLY ACTUATED (CONTOUR DOOR)

INSPECTION DOORS (No. 2)

ELECTROMECHANICAL DEVICES (No. 2) FOR DOOR LOCKED

SOLENOID VALVE (No. 2) FOR DOOR LOCKED

LIMIT SWITCH (No. 2) FOR DOOR CLOSED

THERMOELEMENTS WITH LOCAL REPEATER

SPEED SENSOR FOR EACH SHAFT

■ ELECTRICAL AND INSTRUMENTATION CONNECTIONS INSIDE PACKAGE BATTERY LIMITS

INDICATING CONTROL AND PROTECTION INSTRUMENTS

LOCAL OPERATING PANEL

FLEXIBLE HOSES AT UNIT BOUNDARY

GROUNDING CLIPS

LIFTING LUGS

ANCHOR BOLTS

DESIGN

SUPPLY

INSULATION SUPPORTS ON MACHINERY PARTS WHOSE OPERATING TEMPERATURE IS ≥ 60°C

SPECIAL TOOLS AND WRENCHES FOR MAINTENANCE

SPARE PARTS FOR COMMISSIONING AND START-UP

SPARE PARTS FOR 2 YEARS OPERATIONS

AUTOMATION AND INTERLOCK DESCRIPTION

MATERIAL CERTIFICATION

DOCUMENTATION, DRAWINGS AND INSTRUCTION MANUAL

PRESERVATION FOR DELIVERY AND STORAGE

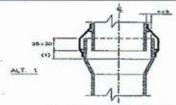
SEALS WITH FLUSHING PIPING, VALVE, FLOW INDICATORS, PSV, PRESSURE REGULATION & INDICATROR AND SOLENOID VALVE

REMOVABLE FRONT BOLTED DOOR TO BE USED TO EMPTY INTO FLOOR IN CASE OF NEED (HAVING BLINDED BOTTOM DISCHARGE)

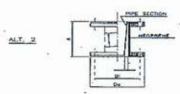
Any accessory, part, or device not specified herein but necessary for the correct unit operation, shall be supplied by Vendor.

FLEXIBLE HOSE (only as reference)

ALL FLEXIBLE HOSES AT UNIT BOUNDARY SHALL BE WITH INTERNAL PIPE OR OTHER DEVICES SUITABLE TO AVOID POLLUTION WITH PELLETS OR POWDERS IN CASE OF FLEXIBLE BREAKAGE.



(1) AS MINIMUM AS POSSIBLE. TO BE DEFINED BY VENDOR



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DEHDASHT HIGH DENSITY POLYETHYLENE PROJECT



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DOCUMENT TITLE: Mechanical Data Sheet for Mixing Screw Feeder Package (M-5101)

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SERVICE BLENDING AND TRASPORTING OF HDPE POWDER	R WITH SOILD ADDI	TIVES	ITEM	M-5101
TYPE HORIZONTAL TWIN SCREW MIXER (5)	MODEL		No. OF UNITS	1 (one)
MFR	MOTOR RATED		kW	
SOUND PRESSURE LEVEL (SPL) @ 1 m ≤85	dB(A) SE	RVICE TYPE	CONTINUOUS	
APPLICABLE CO	DES AND STANDAR	DS		
MIXER MFR std.	ELECTRIC M	MOTORS	IEC	
INSTALL	ATION DATA			
ENVIRONMENT HUMID CORROS	IVE	SEA SIDE	WINTER	ZATION
INSTALLATION INDOOR OUTDOOR UN	NDER ROOF	GROUND FLO	OOR SKID M	OUNTED
AREA CLASSIFICATION(9) ZONE 22 DUST GR. IIIB	MAX SURFACE TE	MP. 200°C	PROTECTION DEGRE	E IP 65
DESIGN	CONDITIONS			
PRODUCT TO BE FED (2)	HDPE BEADS:	99.0 + 99.95 %wt OF	STREAM	
PRODUCT TO BE FED (2)	SOLID ADDITIV	ES: 0.05 + 1.0 %wt	OF STREAM	
PRODUCT HAZARDOUSNESS n. *				
OPERATION No. hours/day		24 hours/day AND		
OPERATION TYPE		FULLY AUT	OMATIC	
PRODUCT CHARACTERISTICS				
PARTICLE SIZE % weight	SEE ANNEX-I			
BULK/REAL DENSITY kg/m ³				
REPOSE ANGLE * on horizontal line	NORMAL			
	NORMAL DESIGN	4E (UDDE DO	OWDER) + 0.45 (ADD	ITIVE CL
FLOWRATE t/h	MAX (3)(4)	45 (HUPE PC	MADEK) + 0.45 (MDL	IIIVES
	MIN (2)			
FED FROM		TERING UNITS AN	D SCREW FEEDER	
DISCHARGING INTO	3,000	EXTRU		
OPERATING / DESIGN PRESSURE barg		0.05 / -0.02	TO 0.2	
OPER. / DESIGN TEMPERATURE °C		90 (MAX 10	0) / 120	
ADDITIVES FEED TEMPERATURE *C		20		
TEMPERATURE INCREASE *C		<5		
MIXING LNEGHT (MIN DISTANCE BETWEEN mm		NOT SHORTER	THAN 2500	
ADDITIVE INLET AND DISCHARGE NOZZLE)		MANAGES TO		
CLEARANCE BETWEEN SCREW AND CASING mm		10		
	TION MATERIALS			
matrials mineral and softmore mineral and softmore matrix and soft	SI 304		- to produce the second second	
and the control of th	HITE NEOPRENE OF	REQUIVALENT TO	AVOID PRODUCT P	OLLUTION
	G DESCRIPTION			
THE CONTINUOUS MIXER IS FED BY GRAVITY FROM STABILIZE	the state of the s			
PACKAGE UNIT PK-5201, MAIN STREAM CONTAINING HDPE PO				HE MIXER.
THE STREAMS ARE CONTINUOUSLY MIXED AND THE RESULTIN	NG MIXTURE IS FED	TO THE EXTRUDE	K.	
THE CONTINUOUS MIXER SHALL FEED THE EXTRUDER WITH R	ECHI ADITY HARIT	AINING THE ACCUS	DACY OF THE	
ABOVESAID METERING EQUIPMENT (± 0.5% IN THE WHOLE CA		AINING THE ACCUI	OF THE	
TECHNICAL REQUIRE		DACKACE		
			IED TO AVOID DOC	IDLE
THE MIXER SHALL HAVE A POWDER, DUST AND GAS (NITROGE TROUBLES DUE TO THE INFILTRATION OF FINE POWDERS IN TH			Control of the Contro	
TROUBLES DUE TO THE INFILITION OF FINE POWDERS IN TH	E OF EIGHTING PART		OD. CONTRACTO	



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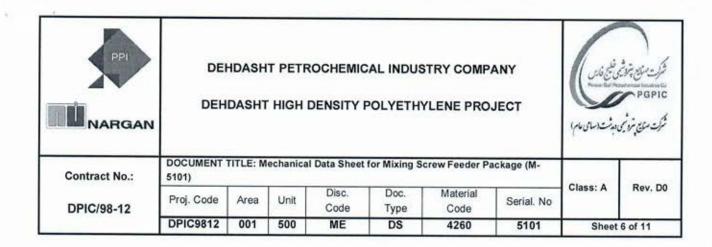
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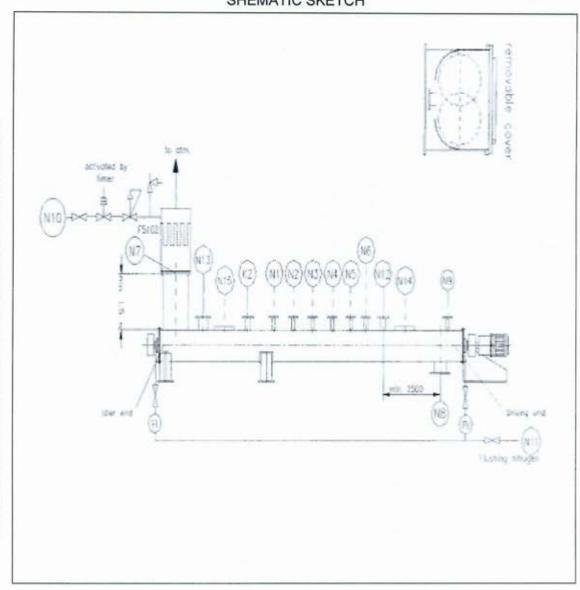
001 500 ME DS 4260 5101 Sheet 5 of 11

TEC	CHNICAL REQU	IREMENTS FOR THE	PACKAGE	(CONT,)	
ALL INTERNAL PARTS MUST BE BUIL	T IN ORDER TO	AVOID PRODUCT STAG	NATION.		
			CONTRACTOR AND ADDRESS OF THE PARTY OF THE P		
THE DIFFERENT PARTS OF MIXER SH	IALL HAVE AN EA	SY ACCESS AND SHAL	L BE EASILY D	SASSEMBLED FOR CLE	ANING.
THE MIXER SHALL BE DESIGNED IN C	ORDER TO AVOID	THE FORMATION OF B	LOCKS AND A	GGLOMERATES CONNEC	CTED TO
THE ADDITION OF LIQUID ADDITIVES					
REMOVABLE COVER TO BE PROVID	ED: ONE BEEODE	AND ONE AFTER THE	EN TED IN OR	OFF TO OPEN THE MIN	ED WITHOUT
DISMANTLING THE FILTER	ED. ONE BEFORE	AND ONE AFTER THE	FILTER IN OR	DER TO OPEN THE MIXI	ER WITHOUT
		NOTES			
(1) FOR AVAILABLE UTILITIES, REFER	R TO DOCUMENT	DPC-PR-SPC-0003.			
(2) VENDOR SHALL SPECIFY TURN D	OWN RATIO (AT L	EAST 40% IS REQUES	TED), IF APPL	CABLE.	
(3) TO BE SPECIFIED ACCORDING TO	EXTRUDER DES	IGN CAPACITY.			
(4) VENDOR SHALL SUGGEST, CHECK	K AND APPROVE	THE INSTALLATION O	THE EQUIPM	ENT, ACCORDING TO T	HE
INSTALLATION OF METERING UNITS	AND THE EXTRU	DER, IN ORDER TO GU	ARANTEE A C	ORRECT AND RELIABLE	OPERATION
(5) PADDEL- BLADE AND COUNTER R	ROTATING, TWO S	PEED MOTOR (POLE C	HANGING MC	TOR OR VFD with NORM	IAL MOTOR)
(6) MDMT: -4 @ 0.2 barg					
(7) ADJUSTABLE AUTOMATIC WEIR S	YSTEM IF REQUI	RED SHALL BE SUPPL	IED BY VENDO	DR.	
(8) NITROGEN FLOW UP TO 100 m ³ /h	COUNTERCURRE	NT TO HDPE FLOW TO	BE CONSIDE	RED.	
(9) THE HAZARDOUS AREA CLASSIFI					
		CONSTRUCTION DATA	4		
SHELL DIAMETER	mm	LENGTH	mm	THICKNESS	mm
CORROSION ALLOWANCE 0	mm	INTERNAL SURFAC	E POLISHING	RM	S
MIXING CHAMBER CAPACITY	m ³	CAPACITY		m ³	
MIXING TIME	minutes	ROTATION SPEED		mm	1

SHELL DIAMETER	mm	LENGTH	mi	n THIC	KNESS	mm
CORROSION ALLOWANCE 0	mm	INTERNAL SU	RFACE POLISI	HING	RM	1S
MIXING CHAMBER CAPACITY	m ³	CAPACITY			m ³	
MIXING TIME	minutes	ROTATION SP	PEED		rpr	n
SIZE AND SHAPE OF INLET	A. C. B. O' 1000 V WY A LANCOUS	S	IZE AND SHAF	E OF OUTLET	The second second	OF CANADA AND AND AND AND AND AND AND AND AN
SHAFT	☐ TUBULAR		SOLID		ONE PIECE CO	NSTRUCTION
END SUPPORTS (1)	☐ ROLLER E	EARINGS		BUSHINGS		
INTERMEDAITE SUPPORTS	☐ ROLLER E	EARINGS		BUSHINGS		
LUBRICATION	OIL			GREASE		
TYPE OF SHAFT SEAL (2)	DOUBLE STUF	FING BOX	FLU	SHED WITH	NITRO	BEN
DRIVEN BY MOTOR+R	EDUCER	GEAR MOTOR	THROUG	H COUPLING	BELTS	CHAINS
COUPLING MFR		TYPE		ANTIS	PARKING COU	PLING GUARD
		NOTES				
(1)BEARINGS SHALL BE OUT OF PI	RODUCT CONTACT.					
(2) NITROGEN FLOWMETERS WITH	RELEVANT VALVE	S, PRESSURE RE	DUCER, PRES	SURE GAUGE,	PRESSURE SA	AFETY VALVES
AND DISTRIBUTION PIPING SHALL	BE INCLUDED IN TH	E SUPPLY. VEND	DOR SHALL PE	ROVIDE SHUT	OFF VALVES T	0
CLOSE THE NITROGEN IN CASE OF	INTERLOCK ACTU	ATION. SEE AVAI	LABLE NITRO	GEN CONDITIO	N DPC-PR-SP	C-0003



SHEMATIC SKETCH





DEHDASHT HIGH DENSITY POLYETHYLENE PROJECT



Contract No.:

DPIC/98-12

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POS.	NO.	SERVICE	DN	RATING	FLANGE	FINISHING	NOTES
K1	1	PRESSURE CONTROLLER	3"	#300	WN-RF		
K2	1	SPARE	3"	#150	WN-RF		(4)
N1	1	POWDER IN	16"	#150	WN-RF		(1)
N2	1	ADDITVE FROM W 5201	6"	#150	WN-RF		(2)
N3	1	ADDITVE FROM W 5202	6*	#150	WN-RF		(2)
N4	1	ADDITVE FROM W 5203	6"	#150	WN-RF		(2)
N5	1	ADDITVE FROM W 5204	6*	#150	WN-RF		(2)
N6	1	ADDITVE FROM W 5205	6"	#150	WN-RF		(2)
N7	1	VENT TO F 5102	20"	#150	WN-RF		(1), (3)
N8	1	POWDER OUTLET	16"	#150	WN-RF		(1)
N9	1	VENT FROM EX 5101	6"	#150	WN-RF		(1)
N10	1	NITROGEN INLET	1"	#300	WN-RF		(1)
N11	1	NITROGEN INLET	1/2"	#300	WN-RF		(1)
N12	1	SPARE FOR ADDTIVE 6"	6"	#150	WN-RF		(2) (4)
N13	1	VENT FROM RF 5101	2*	#150	WN-RF		(5)
N14	1	INSPECTION DOOR		- 7			(1)
N15	1	INSPECTION DOOR					(1)

- TO BE CONFIRMED BY VENDOR 1)
- 2) TO BE CONFIRMED BY PK-5201 VENDOR
- 3) CONNECTION SIZE AND SHAPE SHALL BE IN SCOPE OF BAG FILTER DESIGNER.
- 4) WITH BLIND FLANGE AND PLUG FLUSH TO INNER SURFACE.
- 5) TO BE CONFIRMED BY PK-5101 VENDOR.



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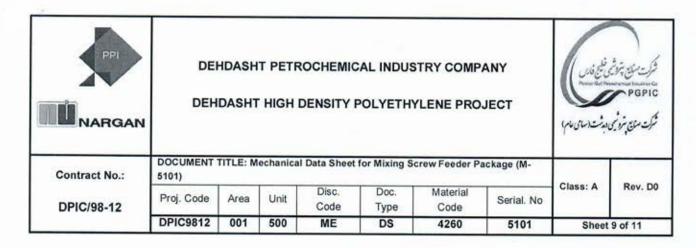
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TYPE HEAD TYPE	BAG FILTER	1	7	DIAMETER		mm	PLANT UNIT	***
HEAD TYPE			min material and a		men	PLANT UNIT	500	
				HEIGHT OR LE	N,	mm	INCLUDED IN	M-5101
INSULATION				CAPACITY		m ₂	SERVICE TYPE	CONTINUOUS
INSTALLATION	INDOOR			FIREPROOFIN	G		RADIOGRAPHY	
DESIGN CODE							District Tolling	
	GAS OR LIQ	UID				S	KETCH	
FLUID		NITROGEN						
FLOWARE	kg/h	250 (TO BE CONFIF	RMED)					
OPERATING TEMP.	°C	90						
OPERATING	bar(g)	0.05						
PRESSURE		and the second						
MW		28						
DENSITY	kg/m ³			7.				
VISCOSITY	mPa.s							
FLUID HAZARD								
FILTRATION TYPE				19				
	SOILD TO BE	E FILTERED						
SOLID		HDPE POWDER / A	DDITIVES					
FLOWARE	kg/h	The state of the s						
DENSITY	kg/m ³							
PARTICLE SIZE		2+30 mu						
PARTICLE SIZE DIS	TRIBUTION	mu		fract				
		mu		fract				
		mu		fract				
		mu		fract				
		mu		fract				
	OPERATING	DATA						
DP CLEAN DIRTY	mbar	I 10 / 50)					
TOTAL EFF. REQ'D		98 /						
PARTIAL SEPARATI		mu		fract				
		mu		fract				
		mu	-	fract				
		mu		fract				
		mu		fract				
			CONSTRUCT	TION DATA OF	ONE FILTER			
FILTER MEDIA		TYPE BA	100000000000000000000000000000000000000		OTTO PROPERTY	AREA		m ²
TETEN MEDIA			3 (Ryton) / 55	iO of m ³	GASKETS	AKEA		100
PACKING		TYPE PP	Strategies as	- gr. m	GAGNETO	HEIGH1		mm
		MATERIAL				, reserved to		7000
DESIGN PRESS	Bar(g)	COND.1 0.2			COND 2	-0.0	2 FV 6	REQUIRED
DESIGN TEMP.	°C	COND.1 120			COND.2	120	7	
MDMT	0	9			9010.2		7.4.	
BODY MATERIAL	S.S				CORROSIO	NALLOWAN	CE 0	mm
NOZZLES GASKETS					20111100101			- 0.012
				NOZZLES				
POS. NO	-	SERVICE	DN	RATING	FLANGE	FINISH	ING	NOTE
PUG. NC		SERVICE	DN	ROLLING.	PLOUGE	rinish	1113	HOIE
-								
	-							
	_							
NOTES								
NOIES		MATIC CLEANING DEV		1	PERATION EFFICIE	HOW BEAL	DED. AND	
1) GAS TI								



				BL	OWER					
SERVICE MI	XER VENT BLOW	ER	TYPE	CENT	RIFUGAL	No. REC	UIRED	1 (one)	ITEM	C 5102
MFR			MODEL			No. Of	STAGES		1	
LOCATION OUT	DOOR UNDE	RROOF INDOOR	經		AREA CLASSIFICATO	N ZONE 2	22 DUST GR	OUP IIIB (WILL	BE FINALIZ	ED LATER)
	OPERAT	NG CONDITION				S	PEED VAR	IATION		
SUCKED GAS:					SPEED RATIO:		AGMA S	ERVICE FACTO	R:	
GAS COMPOSITION:										
CAPACITY:	V - 2-7-30 - 200 - 2			Nm/h	MECHANICAL GEAR		TYPE:			
CAPACITY AT SUCTION	CONDITIONS:			m³/h	MFR:	-	MODEL	1		
SUCTION TEMPERATU	RE:			°C	COUPLING TYPE:					
VISCOSITY AT SUCTIO	N CONDITIONS:			сP	REDUCER LUBRICATIO	IN:				
DENSITY AT SUCTION	CONDITIONS:			Kg/m ³	COUPLINGS LUBRICAT	ION:				
SUCTION PRESSURE:				barg	BELTS:		NO.	ne transcription	TYPE	
DISCHARGE PRESSUR	E:			barg	MOTOR PULLEY:	Dp	mm FAI	PULLY:	.0	p mn
DIFFERENTIAL PRESSI	JRE	12 12		bar		FLOW	RATE RE	GULATION		
OUTLET SPEED AT DIS	CHARGE:			m/s	ON SUCTION			LIVERY		
SPEED:	-			rpm	CONTROL TYPE:	GATE		BU	TTERFLY	
INPUT POWER AT SHA	FT:			kw		ON/OFF		cc	NTROL VANE	
RATED POWER FOR D	RIVER			low	DRIVE:	MANUAL		RE	MOTE	
EFFICIENCY:			3820500	%						
ROTATION (VIEWED FF	ROM DRIVER END)	c.w	C.C.W			DRIVER	(ELECTR	IC MOTOR	S)	
GAS TYPE	AS TYPE EXPLOSIVE				RATED OUTPUT:			FR.:	-	
erse.s.erse.	CORROSIVE		DUSTY		TYPE & SIZE :		8	HAPE		
CONSTRUCTION CHARACTERISTICS					SAFETY PROTECTION		T	EMP. CLASS:		
MPELLER:	OPEN		ETER:	mm	LUBRICATION:		S	UPPLY: 400 ±	5%V, 50 ±3%	HZ, 3Ph
MPELLER MOUNTING:	OVERHUNG	BETWEE	N BEARING		DEGREE OF MECHANICA	AL PROTECTIO	N: IP65 D	ATA SHEET:	0.0	- M
SUCTION:	SINGLE	DOUBLE			REQU	IRED TES	TING AND	ADDITION	VAL DATA	1
BLADES NO.:	TYPE:	AIRFOIL FLAT	BACKWARD		IMP, DTN, BALANCE		MECHANIC	AL TEST AT WO	RK SHOP	
ALADES NO.	1004	RADIAL			HYDROSTATIC TEST		PERFORMA	NCE TEST AT V	WORKSHOP	
TIP SPEED:				m/s	NOISE LEVEL:	≤ 85 dBA @	1m			
COUPLING	DIRECT	JOINT	BELTS		TOTAL MASS OF FAN (IN	CL. MOTOR):				8g
NSPECTION DOOR		VOLUTE CLEAN	ING DOOR		MOMENT OF INERTIA (R	EFERRED TO D	RIVER SHAF	T)		Kg/m²
SHAFT SEAL	□ TY	PE:			DRAWINGS:					
SHAFT COOLING	LIC	OUID USED :			PERFORMANCE CURVE	5:				
LOWARET:	m ³	h PRESSURE:		barg	MFR. JOB AND ITEM No.:					
SHAFT JACKET		SHAFT COOLING	FAN			SC	OPE OF S	UPPLY		
RADIAL BEARING:	MFR.	TYPE:	ANTIFRICTION		MOTOR: CO	UPLING:	GUARD:	-	IG DRAIN VAL	VES:
THRUST BEARING:	MFR.	TYPE:	ANTIFRICTION		REGULATION DAMPERS			PNEUMATI	CACTUATRO	S: 🗍
UBRICATION TYPE:		GREASE			FOUNDATION BOLTS:	-		BASE PLAT	E:	17,97
BEARING COOLING:	LK	QUID USED:			SUCTION FILTER			VIBRATION	PROBE ON B	EARING
LOWRATE:	m ³	h PRESSURE:		barg	SUCTION AND DISCHAR	GE PIPING AND	VALVE:	INSTALLAT	ION MATERIA	
MATERIAL							CONNECT	IONS		
CASING:	S.S.	SHAFT:	S.S.		SUCTION FLANGE:	DIRECTION:		SHAI	PE	
MPELLER:	S.S.	HU8:				SIZE / RATIN	G / FACING:	SECT	non:	
BLADES:	S.S.	VOLUTE:			DISCHRAGE FLANGE:	DIRECTION:		SHAI	PE:	
SELLOWS:		BASE PLATE:	C.S.			SIZE / RATIN	G / FACING:	SEC	TION	
NOTES										
	D AND SUBBUIED B	Y M 5101 VENDOR, VEND	OB CHAIL CLIDA	IT AND SI	I IN THE DATA SHEET W	TH THE BID				
	A LUIS OUT LIEU B				WITH THE WATE SHEET W					



DEHDASHT HIGH DENSITY POLYETHYLENE PROJECT



Contract No.:

DOCUMENT TITLE: Mechanical Data Sheet for Mixing Screw Feeder Package (M-5101)

Class: A

DPIC/98-12

Disc. Doc. Material Proj. Code Area Unit Serial. No Code Type Code DPIC9812 001 ME 500 DS 4260 5101

Rev. D0

Sheet 10 of 11

ANNEX-I

TYPICAL HDPE POWDER PROPERTIES:

Bulk density:

400 to 500 kg/m3

Solid density: 940 to Melting point : 125 °C 40 to 45° (on horizontal line)

940 to 960 kg/m³

Specific heat:

2.1 kJ/kg K

125 °C

Angle of repose (typical):

Abrasion:

Non-abrasive

Kinematic angle of surface friction (typical):

11 to 18°

The product is:

- Dry
- Tending to electrostatic charging
- Combustible
- Free flowing
- Non abrasive

PARTICLE SIZE DISTRIBUTION:

Particle size distribution (based on Z509 catalyst):		Particle size distribution (based on Z501 catalyst):		
sieve (µm)	% by wt.	sieve (µm)	% by wt.	
> 400	0.05	> 600	1.2	
315 - 400	0.95	500 - 600	0.9	
250 - 315	4.10	400 - 500	1.5	
200 - 250 7.40		315 - 400	3.9	
160 - 200	19.00	250 - 315	12.7	
125 - 160	21.00	200 - 250	23.9	
63 - 125	38.50	160 - 200	25.1	
32 - 63	7.4	125 - 160	19.4	
< 32	1.6	100 - 125	5.7	
		63 - 100	4.85	
		32 - 63	0.7	
		< 32	0.15	
d50: 100 - 140	μm	d50: 180 - 220	μm	





DEHDASHT HIGH DENSITY POLYETHYLENE PROJECT



Sheet 11 of 11

Rev. D0

Class: A

Contract No.:

DOCUMENT TITLE: Mechanical Data Sheet for Mixing Screw Feeder Package (M-

5101)

DPIC/98-12

DPIC9812	001	500	ME	DS	4260	5101	╀
Proj. Code	Area	Unit	Disc. Code	Doc. Type	Material Code	Serial. No	l
5101)						400	I

ANNEX-I CONTINUED

TYPICAL HDPE PELLET PROPERTIES:

Bulk density:

500 to 650 kg/m³

Solid density:

940 to 960 kg/m3

Specific heat : Pellet shape: 2.1 kJ/kg K

Melting point : Nominal

pellets D= 3 - 5 mm

Abrasion :

LENTOID Non-abrasive

cizo.

L/D=0.75 - 1

125 °C

TYPICAL PROPERTIES OF STABILIZERS (ADDITIVES):

Melting Points Range

150 to 210 °C

Softening Point range

55 to 70 °C

PSD Range

0.3 to 30 µm

Dustiness

Dusty

Flowability

some have poor flowability an ☐ easy to bridge

Additives are:

- Dry
- Tending to electrostatic charging
- Combustible

ADDITIVES DESIGN RANGE:

Particulars	W-5201	W-5202	W-5203	W-5204	W-5205
Stabilizer	Viton FFGB	Calcium Stearate/ (PB Hostastat M RN 7067 GR)	Zinc stearate	Irganox 1010	Irgafos 168 S
Feed Capacity (1)	1.5 to 6 kg/h	10to100 kg/h (100 – 220 kg/h)	9 to 80 kg/h	3.5 to 90 kg/h	4 to 100 kg/h
Bulk Density	630 to 670 kg/m ³	170 to 210 kg/m³ (400 to 600 kg/m³)	170 to 210 kg/m ³	530 to 630 kg/m ³	480 to 570 kg/m ³
Grain Size		0.3 to 30 μm (not available)	0.5 to 20 µm	10 to 400 μm	

 Feed Capacity depends on stabilizer and recipe. Range is mentioned in the table. Maximum flow rate to be confirmed according to expected capacity of extruder. If the range is too wide for a single feeder, Vendor shall suggest alternate solution.

 The feeder W-5202 will be used to dose any one of the two mentioned stabilizers (at a time only one of the two stabilizers is fed through the feeder).

3) Values in brackets for W-5202 are for additive PB Hostastat M RN 7067 GR.