



سامان پڑھان نام آور (سپینا) خاص

BIARJOMAND CEMENT CO.

Description:

Equipment List

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No.	Description	Item	Qty.	Capacity	Working Pressure	Remarks
1.1	air compressor with frequency convertor	841-101 A/B/C/D	4	28.4 (m ³ /min)	10 bar g	Oil Injected-1 Stand by
1.2	air compressor without frequency convertor	841-101 A/B/C/D	4	30 (m ³ /min)	10 bar g	Oil Injected-1 Stand by
2	After Cooler	841-201	2	45 (m ³ /min)	10 bar g	Water Cooled
3	Water Separator	841-301 A/B/C/D	4	30 (m ³ /min)	10 bar g	1 Stand by
4	Air Receiver	841-401A/B/C/D	4	8m ³	10 bar g	Equipped With Auto Drain, Manometer, Manhole, & Temperature Indicator
5	Air Receiver	841-402 A/B	2	4m ³	10 bar g	
6	Air Receiver	841-403 A/B/C	7	3m ³	10 bar g	
7	Dryer	841-501 A/B/C	3	27 (m ³ /min)	10 bar g	Heat Reactivated-1 Stand by
8	Pre Filter	841-601A/B	2	53 (m ³ /min)	10 bar g	Up to 1µm Air Up to 0.5 mg/m ³ Oil
9	Main Filter	841-701A/B	2	53 (m ³ /min)	10 bar g	Up to 0.01µm Air & Oil
10	Dust filter	841-801A/B	2	53 (m ³ /min)	10 bar g	Up to 1µm Dust
11	Fan Filter	841-901 A/B/C	3	48000 (m ³ /hr)	—	—



BIARJOMAND CEMENT CO. (option 1)

Description: Rotary Screw Compressor Specification

Item: 841-101 A/B/C/D

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No.	Description	Specification	Remarks
1	Compressor Type	Rotary screw - Oil injected Air cooled	With Sequence Controller for Automatic Start & Stop of Three Compressors.
2	Manufacturer & Model	...	
3	Air End Manufacturer	...	
4	Quantity	4 Sets	1 Set as Standby
5	Operating Capacity (FAD)	Min 28.4 m ³ /min	at 1800 rpm
6	Nominal Capacity (FAD)	... m ³ /min	
7	At Site Condition Capacity	... m ³ /min	
8	Operating Pressure	10 Bar g	
9	Rotor Diameter	...mm	
10	Male Rotor Speed range	900-1800 rpm	with frequency convertor
11	Tip Speed at 1800 rpm	...m/s	
12	Max Outlet Oil Content	...mg/m ³	
13	Oil Capacity	...Liters	
14	Outlet Temp + Ambient Temperature	10 ~ 15 °C	
15	Power Supply	400 V/3ph/50 Hz	
16	Drive Motor	... Kw -...RPM	
17	Drive Motor Insulation / Protection Class	F / IP55	
18	Cooling Air Flow	... m ³ /h	
19	Cooling Fan Motor	... Kw	
20	Fan Motor Insulation / Protection Class	...	
21	Fan Motor Manufacturer	F / IP55	
22	Housing Painting	...	
23	Sound Level	... db(A)	
24	Dimensions (L×W×H)	...	
25	Discharge Connection	DN...PN...	
26	Site Condition Altitude/Max Ambient Temp	1200 m / 45 °C	
27	Drive Type (Direct/Belt)	Direct	
28	Radiator Manufacture	...	
29	Oil Separator Manufacturer	...	
30	Control Panel Manufacturer	...	Included Sequence Controller
31	Accessories		Automatic Condensate Drain Local Press. Gauge
32	Weight	...	

Note: 1) Materials & manufacturing methods should meet the routine standards.

2) Blanks should be filled in completely by vendors.

3) compresdor range 900-1800 rpm (30-60 HZ) from ABB or Emetron

4) the compressor should be supplied with higher cooling capacity with coefficient 1.6 equal to (200x1.6=320 kw) and preferably two radiator 2x160 kw



BIARJOMAND CEMENT CO. (option 2)

Description: Rotary Screw Compressor Specification

Item: 841-101 A/B/C/D

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No.	Description	Specification	Remarks
1	Compressor Type	Rotary screw - Oil injected Air cooled	With Sequence Controller for Automatic Start & Stop of Three Compressors.
2	Manufacturer & Model	...	
3	Air End Manufacturer	...	
4	Quantity	4 Sets	1 Set as Standby
5	Operating Capacity (FAD)	Min 30 m ³ /min	
6	Nominal Capacity (FAD)	... m ³ /min	
7	At Site Condition Capacity	... m ³ /min	
8	Operating Pressure	10 Bar g	
9	Rotor Diameter	...mm	
10	Male Rotor Speed	1500 rpm	
11	Tip Speed	...m/s	
12	Max Outlet Oil Content	...mg/m ³	
13	Oil Capacity	...Liters	
14	Outlet Temp + Ambient Temperature	10 ~ 15 °C	
15	Power Supply	400 V/3ph/50 Hz	
16	Drive Motor	... Kw -...RPM	
17	Drive Motor Insulation / Protection Class	F / IP55	
18	Cooling Air Flow	... m ³ /h	
19	Cooling Fan Motor	... Kw	
20	Fan Motor Insulation / Protection Class	...	
21	Fan Motor Manufacturer	F / IP55	
22	Housing Painting	...	
23	Sound Level	... db(A)	
24	Dimensions (L×W×H)	...	
25	Discharge Connection	DN...PN...	
26	Site Condition Altitude/Max Ambient Temp	1200 m / 45 °C	
27	Drive Type (Direct/Belt)	Direct	
28	Radiator Manufacture	...	
29	Oil Separator Manufacturer	...	
30	Control Panel Manufacturer	...	Included Sequence Controller
31	Accessories		Automatic Condensate Drain Local Press. Gauge
32	Weight	...	

Note: 1) Materials & manufacturing methods should meet the routine standards.

2) Blanks should be filled in completely by vendors.

3) the compressor should be supplied with higher cooling capacity with coefficient 1.6 equal to (200x1.6=320 kw) and preferably two radiator 2x160 kw

No.	Description	Specification	Remarks
1	Application	—	Cooling Compressed Air to 52 °C
2	Type	Water Cooled (Horizontal)	
3	Quantity	2 Sets	
4	Manufacturer	...	
5	TEMA Type	BEM	
6	Media Shell Tube	Water Compressed Air	
7	Flow Rate Shell Tube	... m³/h 45 m³/min	
8	Shell Temperature Inlet Outlet	30 °C 35 °C	
9	Tube Temperature Inlet Outlet	62 °C 52°C	
10	Design Temperature Shell Tube	80 °C 80 °C	
11	Operating Pressure Shell Tube	4 Bar g 10 Bar g	
12	Allowable Pressure Drop Shell Tube	0.6 Bar g 0.2 Bar g	
13	Design Pressure Shell Tube	8 Bar g 12 Bar g	
14	Test Pressure Shell Tube	12 Bar g 18 Bar g	
15	Material Shell Tube Tube Sheet Gasket Flanges	A 106 B SS304L (10mm Thk 1 mm) SS304L CAF A105	CAF: Reinforced Compressed Asbestos Fiber
16	Corrosion Allowance Shell Tube	1.5 ~ 2 mm 1.5 ~ 2 mm	
17	Manufacture Standard	TEMA & ASME Sec.8 Div.1	
18	Heating Area	....m²	
19	Weight/Dimension	.... Kg /	
20	Accessories	...	Auto Drain

Note: - Materials & manufacturing methods should meet the routine standards.

- Blanks should be filled in completely by vendors.

Description: **Water Separator**
Item: **841-301 A/B/C/D** **Page: 4/12**

No.	Description	Specification	Remarks
1	Type	Vertical	
2	Capacity	30 m ³ /min	
3	Quantity	4 Sets	1 Set as Standby
4	Operating Pressure	10 Bar g	
5	Test Pressure	... Bar g	
6	Material	RSt37	
7	Shell Thickness	...	
8	Head Thickness	...	
9	Inner Painting/thk	Zinc Rich Epoxy/150μ	
10	Outer Painting/thk	Zinc Rich Epoxy/140μ	
11	Diameter & Height	... mm , ... mm	
12	Manufacture Standard	طراحی و ساخت طبق استاندارد ساخت ASME SEC.8 DIV.1	
13	Connection Class/Size	150# / DN ...	
15	Accessories	Auto Drain	

Note: - Materials & manufacturing methods should meet the routine standards.

- Blanks should be filled in completely by vendors.

Description:

Air Receiver 8 m³ Specification

Item:

841-402 A/B/C/D

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No.	Description	Specification	Remarks
1	Type	Vertical	
2	Capacity	8 m ³	
3	Quantity	4 Sets	
4	Operating Pressure	10 Bar g	
5	Test Pressure	15 Bar g	
6	Material	SA 516 GR 70	
7	Shell Thickness	... mm	
8	Head Thickness	... mm	
9	Inner Painting/thk	Zinc Rich Epoxy/75μ	
10	Outer Painting/thk	Zinc Rich Epoxy/150μ	
11	Diameter & Height	... mm , ... mm	
12	Manufacture Standard	...	
13	Connection Class/Size	150# / DN ...	
14	Manhole's Dimensions	...	
15	Accessories	Leg Supported Mechanical Auto Drain Safety Valve - Manometer Thermometer	

Note: - Materials & manufacturing methods should meet the routine standards.

- Blanks should be filled in completely by vendors.

Description:

Air Receiver 4 m³ Specification

Item:

841-404 A/B

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No.	Description	Specification	Remarks
1	Type	Vertical	
2	Capacity	4 m ³	
3	Quantity	2 Sets	
4	Operating Pressure	10 Bar g	
5	Test Pressure	15 Bar g	
6	Material	SA 516 GR 70	
7	Shell Thickness	... mm	
8	Head Thickness	... mm	
9	Inner Painting/thk.	Zinc Rich Epoxy/75μ	
10	Outer Painting/thk.	Zinc Rich Epoxy/150μ	
11	Diameter & Height	... mm , ... mm	
12	Manufacture Standard	طراحی و ساخت طبق استاندارد ساخت ASME SEC.8 DIV.1	
13	Connection Class/Size	150# / DN ...	
14	Manhole's Dimensions	...	
15	Accessories	Leg Supported Mechanical Auto Drain Safety Valve - Manometer Thermometer	

Note: - Materials & manufacturing methods should meet the routine standards.

- Blanks should be filled in completely by vendors.

Description:	Pre Filter Specification	
Item:	841-601 A/B	Page: 9/12

No.	Description	Specification	Remarks
1	Manufacturer	...	European Made
2	Type	HEPA	Microfibremedium
3	Quantity	2 Sets	1 Set as Standby
4	Capacity	Min. 53 m ³ /min	
5	Nominal Capacity	... m ³ /min	
6	Operating Pressure	10 Bar g	
7	Particle Removal	1 μm	
8	Oil Removal	0.5 mg/m ³	
9	Pressure Drop (Dry/Saturated)	... / ... Bar g	
10	Dimensions	... mm	
11	Connection	DN ...	
12	Accessories	ΔP Indicator - Auto Drain	
13	Weight	... Kg	

Note: - Materials & manufacturing methods should meet the routine standards.
- Blanks should be filled in completely by vendors.



سازمان بهداشت و آموزش پزشکی

Description:

Main Filter Specification

Item:

841-701 A/B

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No.	Description	Specification	Remarks
1	Manufacturer	...	European Made
2	Type	HEPA	Microfibremedium
3	Quantity	2 Sets	1 Set as Standby
4	Nominal Capacity	Min. 53 m ³ /min	
5	Operating Pressure	10 Bar g	
6	Test Pressure	... Bar g	
7	Particle & Water Removal	0.01 µm	
8	Oil Removal	0.01 mg/m ³	
9	Pressure Drop (Dry/Saturated)	... / ... Bar g	
10	Dimensions	...mm	
11	Connection	DN ...	
12	Accessories	ΔP Indicator - Auto Drain	
13	Weight	... Kg	

Note: - Materials & manufacturing methods should meet the routine standards.

- Blanks should be filled in completely by vendors.

No.	Description	Specification	Remarks
1	Manufacturer	...	European Made
2	Type	HEPA	Microfibremedium
3	Quantity	2 Sets	1 Set as Standby
4	Nominal Capacity	Min. 53 m³/min	
5	Operating Pressure	10 Bar g	
6	Test Pressure	... Bar g	
7	Particle Removal	1 µm	
8	Oil Removal	0.5 mg/m³	
9	Pressure Drop (Dry/Saturated)	... / ... Bar g	
10	Dimensions	... mm	
11	Connection	DN ...	
12	Accessories	ΔP Indicator - Auto Drain	
13	Weight	... Kg	

Note: - Materials & manufacturing methods should meet the routine standards.

- Blanks should be filled in completely by vendors.



سندھ صحت اور خاندان کے شعبہ

Description:

Fan Filter Specification

Item:

841-902 A/B/C

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No.	Description	Specification	Remarks
1	Nominal Capacity	48000 CFM	Interlock with Compressors
2	Manufacturer & Model (Fan Filter)	...	
3	Quantity	3 Sets	1 Set as Standby
4	Max. Ambient Temp	52 °c	
5	Altitude	215 m	
6	Damper Type & Material	...	
7	First Filter -Efficiency	50%,V Type Aluminum	
8	Second Filter-Efficiency	60%,plited	
9	Type of fan	Backward Curve	
10	Quantity of fan	...	
11	Diameter of fan	...	
12	Drive Motor	.... KW ....RPM	European Made
15	Power Supply	400 V/3ph/50 Hz	
16	Drive Type	...	
17	Casing Insulation Type/Thk.	5mm-poly tech	
18	Casing Material	...mm-Galvanized	
19	Connections	.....
20	Sealing Type	.....
21	Dimension (H×W×L)	.....
22	Manufacturer & Model of Pulley	.....
23	Manufacturer & Model of Belt	.....
24	Manufacturer & Model of Ball Bearing	.....
25	Shaft Material	.....
26	Allowable Pressure Drop	.....
27	Max.Static Pressure Drop	.....
28	Dimension Outlet Channel	.....
29	Accessories	Pressure Transmitter on outlet /FC Drive /Control Panel	
30	Weight	.....

Note: - Materials & manufacturing methods should meet the routine standards.

- Blanks should be filled in completely by vendors.
- Fan Filter capacity should be approved by compressor supplier for cooling air demand of each compressor