

A  
B  
C  
D  
E  
F

A  
B  
C  
D  
E  
F

1

2

3

4

5

6

7

1

2

3

4

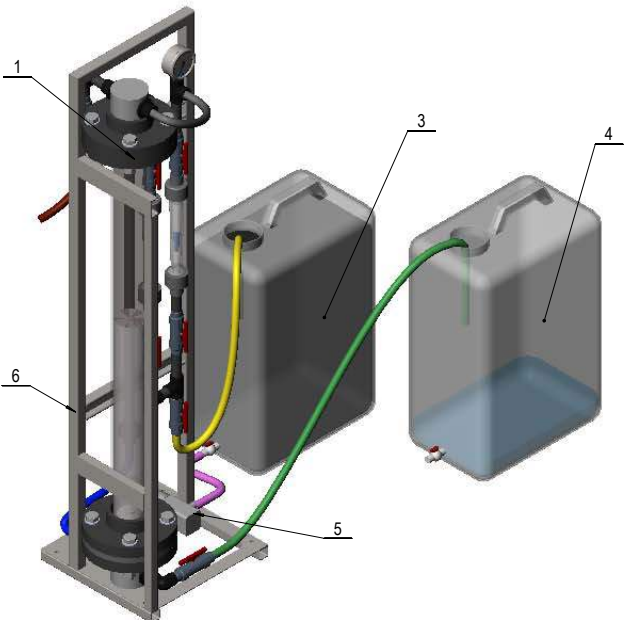
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6

7

Deep bed model

Shallow bed model



MAIN EQUIPMENT LIST

CODE	NAME	SIZE	NUMBER	MATERIAL
1	shallow bed filter	DN65mm H=936mm	1	UPVC
2	deep expand bed filter	DN65mm H=750mm	1	UPVC
3	raw water bucket	220mm*340mm*490mm 30L	1	PVC
4	filtered water bucket	220mm*340mm*490mm 30L	1	PVC
5	feed/backwash pump	220V 22.8W	1	
6	equipment base	can be fixed by bolts	1	SUS304

MANUFACTURER OR DESIGNER:

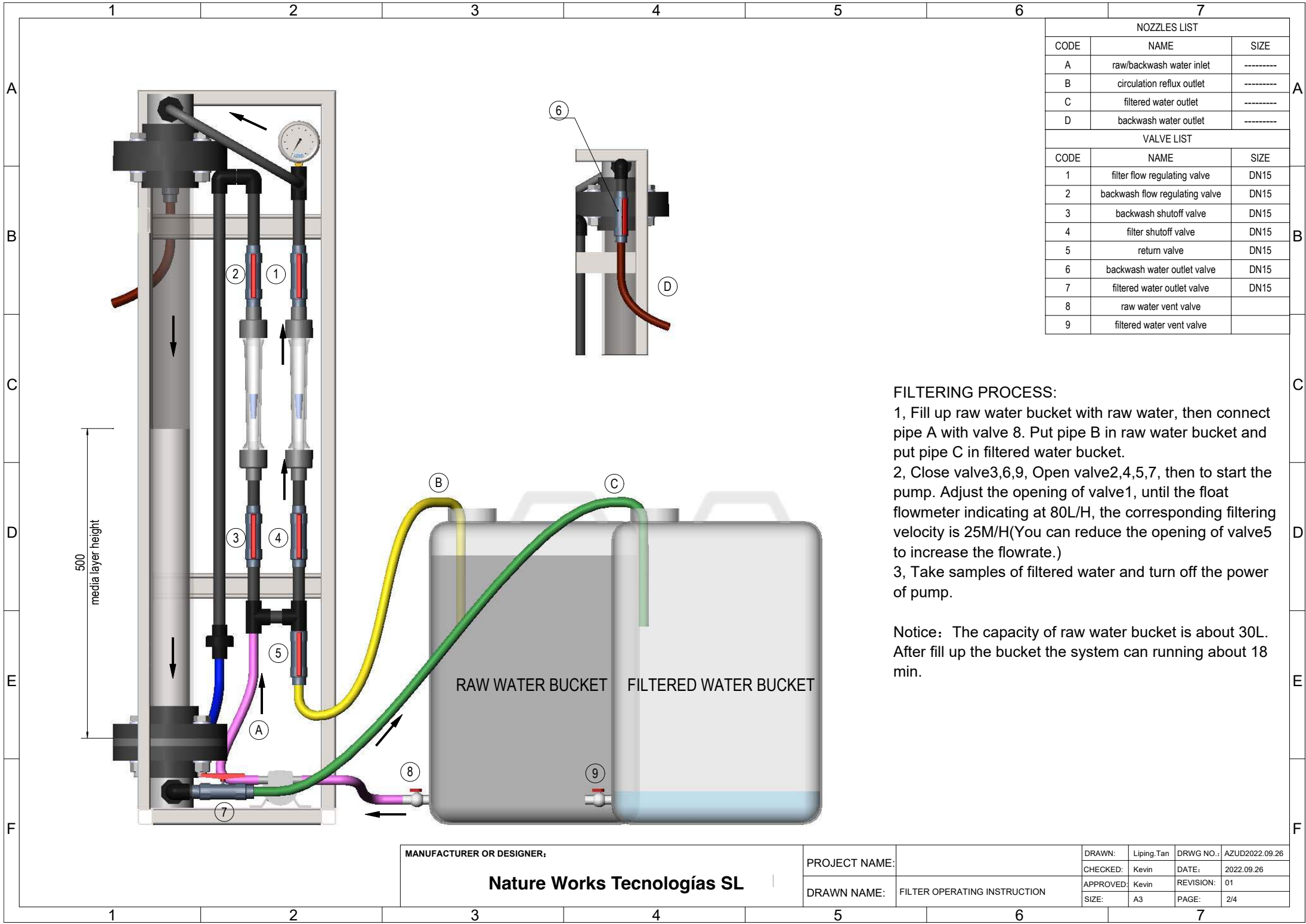
**Nature Works Tecnologías SL**

PROJECT NAME:

DRAWN NAME:

SHALLOW/DEEP MEDIA TEST EQUIPMENT

DRAWN:	Liping.Tan	DRWG NO.:	AZUD2022.09.26
CHECKED:	Kevin	DATE:	2022.09.26
APPROVED:	Kevin	REVISION:	01
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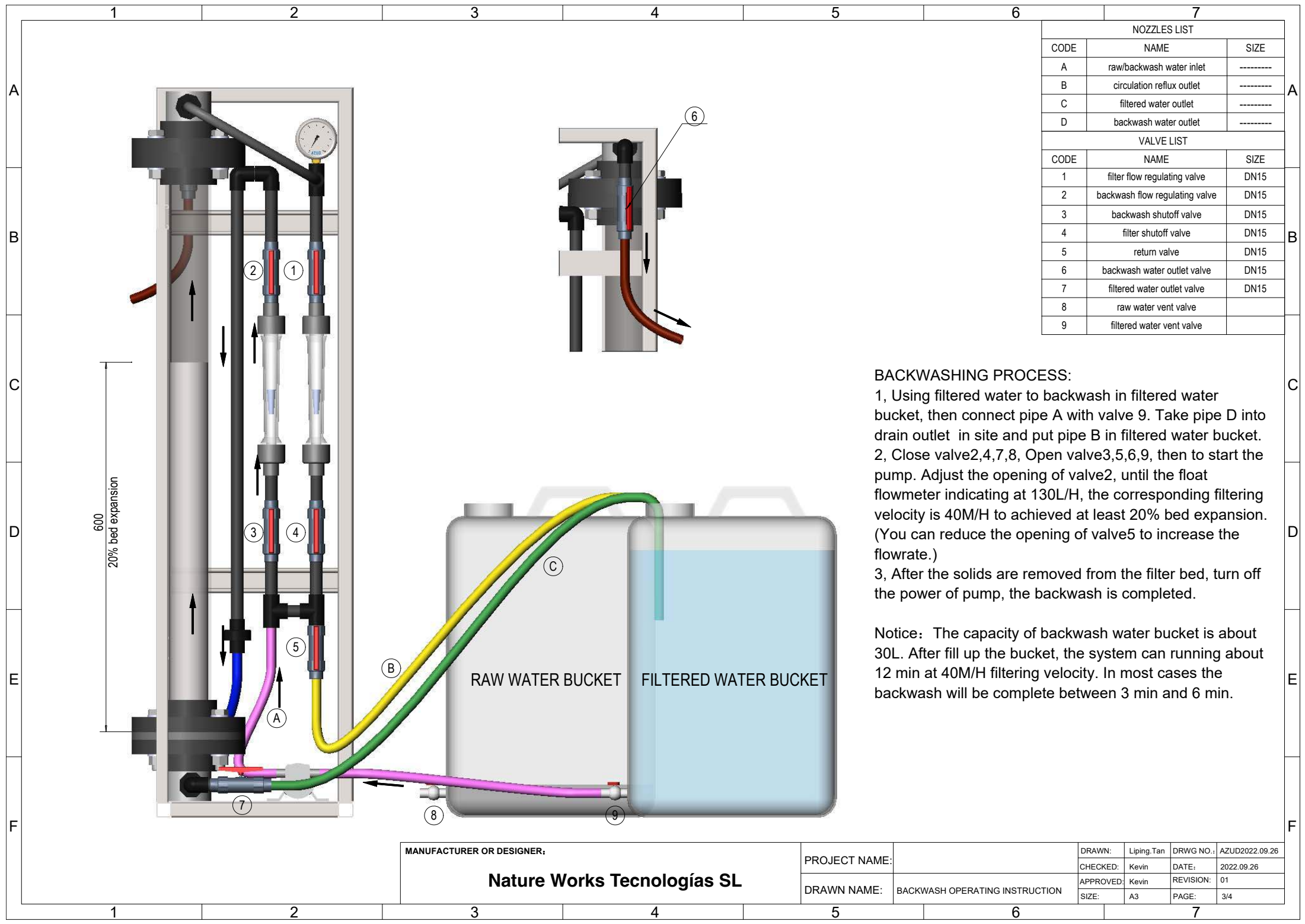
NOZZLES LIST		
CODE	NAME	SIZE
A	raw/backwash water inlet	-----
B	circulation reflux outlet	-----
C	filtered water outlet	-----
D	backwash water outlet	-----
VALVE LIST		
CODE	NAME	SIZE
1	filter flow regulating valve	DN15
2	backwash flow regulating valve	DN15
3	backwash shutoff valve	DN15
4	filter shutoff valve	DN15
5	return valve	DN15
6	backwash water outlet valve	DN15
7	filtered water outlet valve	DN15
8	raw water vent valve	
9	filtered water vent valve	

**FILTERING PROCESS:**

- 1, Fill up raw water bucket with raw water, then connect pipe A with valve 8. Put pipe B in raw water bucket and put pipe C in filtered water bucket.
- 2, Close valve 3, 6, 9, Open valve 2, 4, 5, 7, then to start the pump. Adjust the opening of valve 1, until the float flowmeter indicating at 80L/H, the corresponding filtering velocity is 25M/H (You can reduce the opening of valve 5 to increase the flowrate.)
- 3, Take samples of filtered water and turn off the power of pump.

Notice: The capacity of raw water bucket is about 30L. After fill up the bucket the system can running about 18 min.

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		DRAWN NAME:	FILTER OPERATING INSTRUCTION	APPROVED:	Kevin
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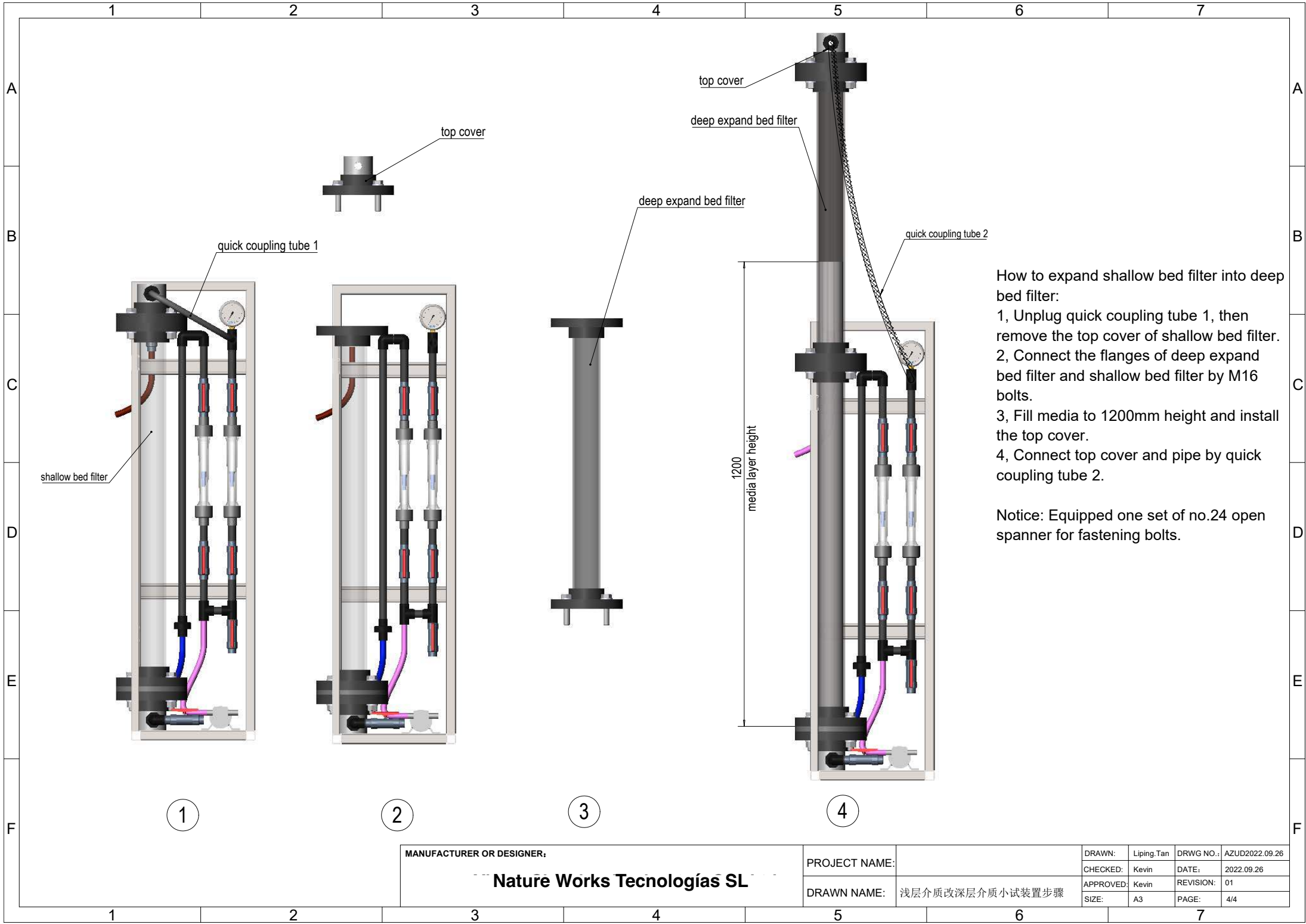
NOZZLES LIST		
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VALVE LIST		
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5	return valve	DN15
6	backwash water outlet valve	DN15
7	filtered water outlet valve	DN15
8	raw water vent valve	
9	filtered water vent valve	

**BACKWASHING PROCESS:**

- Using filtered water to backwash in filtered water bucket, then connect pipe A with valve 9. Take pipe D into drain outlet in site and put pipe B in filtered water bucket.
- Close valve 2, 4, 7, 8, Open valve 3, 5, 6, 9, then to start the pump. Adjust the opening of valve 2, until the float flowmeter indicating at 130L/H, the corresponding filtering velocity is 40M/H to achieved at least 20% bed expansion. (You can reduce the opening of valve 5 to increase the flowrate.)
- After the solids are removed from the filter bed, turn off the power of pump, the backwash is completed.

Notice: The capacity of backwash water bucket is about 30L. After fill up the bucket, the system can running about 12 min at 40M/H filtering velocity. In most cases the backwash will be complete between 3 min and 6 min.

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		DRAWN NAME:	BACKWASH OPERATING INSTRUCTION	APPROVED:	Kevin	REVISION:
			SIZE:	A3	PAGE:	3/4



How to expand shallow bed filter into deep bed filter:

- 1, Unplug quick coupling tube 1, then remove the top cover of shallow bed filter.
- 2, Connect the flanges of deep expand bed filter and shallow bed filter by M16 bolts.
- 3, Fill media to 1200mm height and install the top cover.
- 4, Connect top cover and pipe by quick coupling tube 2.

Notice: Equipped one set of no.24 open spanner for fastening bolts.

MANUFACTURER OR DESIGNER:

**Nature Works Tecnologías SL**

PROJECT NAME:

DRAWN NAME:

浅层介质改深层介质小试装置步骤

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