

c

1.1	.....	1
1.2	.....	1
1.3	.....	5
1.4	.....	5
2.1	.....	7
2.2	.....	7
2.3	.....	7
2.4	.....	9
2.5	.....	9
2.6	.....	10
2.7	.....	11
3.1	.....	14
3.2	.....	15
3.3	.....	19
4.1	.....	25
4.2	.....	25

1.

1.1

1.2

1.2.1.

1								2021	9	1
2								2021	4	29
3						591		2013	12	7
645										
4						708		2019	4	1
5					2025					
14	34	2025	5	28						
6								103		
					2022	11	9			
7									3	2015
5	29				80		2015	7	1	
8										

~~COOL V~~

2001 50% & C 803 9291



75



~~COOL V~~ \$

36 <
> 2017 5 2017 9 13
37
2016 11 2016 7 6
38
2018 21
2018 8 31

1.2.2.

1 GB 50156-2021
2 GB 6944-2025
3 GB 12268-2025
4 GB 18218-2018
5 GB 17914-2013
6 GB 55036-2022)
7 GB 50058-2014
8 AQ 3009-2007
9 GB/T 6441-1986
10 GB/T 13861-2022
11 GB 50016-2014 2018
12 GB 50140-2005
13 GB 55037-2022
14 GB 50057-2010
15 GB 12158-2024
16 GB/T 50610-2010
17 GB 20952-2020
18 GB 50395-2007
19 GB/T 29639-2020

20

(GB/T 12801-2008)

21

(GB 5083-2023)

22

YJ/T 9007-2019

23

(AQ 3010-2022)

24

AQ 3018-2008

25

GB 30871-2022

26

XF/T 3004-2020

27

-

SH/T

3178-2015

28

GB/T 13869-2017

29

AQ 8001-2007

1.2.3.

1

2005 4

2

2002

11

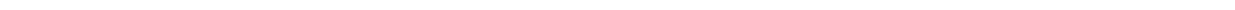
3

2003 7

1.3

1

2



2.4

2.4-1

2.4-1

1	105m ²	
2	198m ²	H=6m
3	20m ²	



I Q d j . . o J # (\ Q Q Q E . . . B . B . . \$ \ i) 5 . 3 . 0
† I * a

2.6

1

5min

2

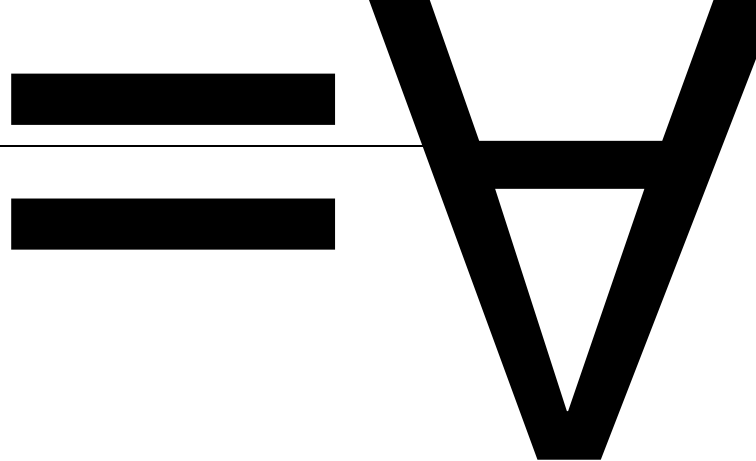
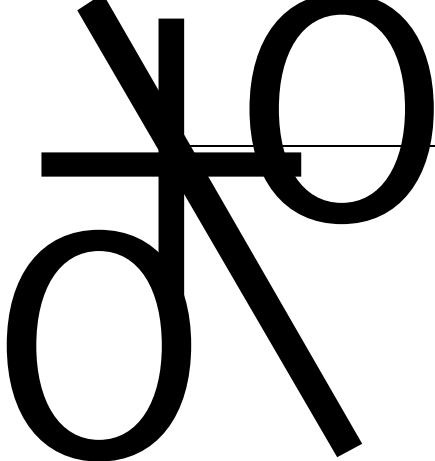
3

1

2

1.0 1.2

2.6-1 2.6-2 2.6-3 2.6-4



2.6-1

2.6-2

2.6-3

2.6-4

2.7 1 1 11 1 117 7 7 7 7 1

2.7.1

1 % %
2) \$ PÐD òB@ñ0 bRdDGpP b &

2023 02 11 2026 02 10

3

LNFYJC/B/TY2025003421

2025 09 19

3

2.7.2

1

2

5

3

4

380/220V

TN-S

UPS

5

3.

3.1

3.1.1

5

GB18218-2018

1

1

2



$Q_1 \quad Q_2 \dots Q_n$

t

3

3.1.3

3.1-1

3.1-1		
1		200t
2		5000t

60m³

0.75

45t

30m³

0.89

26.7t

$$S=45/200+26.7/5000=0.23034<1$$

3.2

3.2.1

	2*		1B	2
1	-	2	-	2
	1630			

92 95 98 3

=1 0.72 0.775

=1 3 4 -46

1.4% 7.6%

415 530

0.813MPa

2

3

1000m³

15min

50m

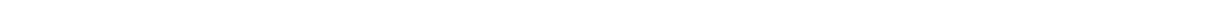
300m

1674



15min

10



1			
2			
3			
4			
5			
6			
7			

3.3.1

1

70m

6 46

2

1987 2 4

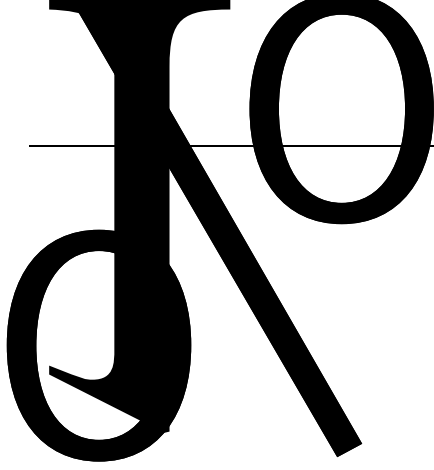
1986 5 2



RES # (TM)

3.

3.306 D



4.

4.1

5.

8

5-1~9

5-1

	1		
	2		
	3		
	4		
	5		

5-2

	1		
	2		
	3		
	1		
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	7		
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	9		
	10		

B/AQ

11

12

13

14

15

16

17

18

1

2

3

1

1

2

GB/T296399

			3.0.4	
2				
	GB 50966		GB50156-2021 3.0.5	
3		GB		
50156	3.0.15		GB50156-2021 3.0.9	30m ³
4				
			GB50156-2021 3.0.25	12
5				
			GB50156-2021 3.0.27	
1				
			GB50156-2021 4.0.1	
2				
			GB50156-2021 4.0.2	
3				
	GB 50156	4.0.4	GB50156-2021 4.0.4	2.3-1
4				
			GB50156-2021 4.0.12	
5				
			GB50156-2021 4.0.13	
1				
			GB50156-2021 5.0.1	

2

4m

6m

8%

			2.2m		
4.0.4		1.5	25m		
				GB50156-2021	
				5.0.12	
					2.3-1
4.0.4	<hr/>				
12					
GB50156	5.0.13			GB50156-2021	
				5.0.13	2.3-2
13	5.0.13-1				
			5.0.11		
				GB50156-2021	
		A		5.0.15	
14					
		C		GB50156-2021	
				5.0.16	

		GB50156-2021 6.1.2		
3		GB 50156-2021 6.1.3	SF	
4	6.1.4 0.08MPa	GB50156-2021 6.1.4	SF	
5	- SH/T3178	GB50156-2021 6.1.5	SF	
6	GB/T 51344	GB 50156-2021 6.1.6	SF	
7	10 ⁹ 10 ⁹ A=0.04Vt	GB50156-2021 6.1.7	SF	
8	11.2	GB50156-2021 6.1.8	SF	
9		GB50156-2021 6.1.9	SF	
10	4mm 80mm	GB50156-2021 6.1.10	SF	

1

GB50156-2021
6.3.1

2

GB50156-2021
6.3.2

55

25mm

25mm

8

100mm

T

50mm

45°

ž ı

200mm

150mm

GB50156-2021

6.3.8

„БН о ̄ ˘ ˙ ˚ ˛

\$a22

GB 50156-2021

6.3.12

GB/T8163

GB/T8163

4mm

4mm

4mm

108 -m

1010

13

GB50156-2021

6.3.1-



30mm

10mm

	<p>1 35kg</p> <p>15m</p> <p>2m³</p> <p>2m³</p>		<p>2</p> <p>2m³</p> <p>6</p>	
	<p>2</p> <p>GB50140</p>	<p>GB50156-2021</p> <p>12.1.2</p>	<p>8kg</p> <p>4</p> <p>5kg CO₂</p> <p>5</p> <p>GB50140</p>	
	<p>1</p> <p>0.25m</p> <p>0.25m</p>	<p>GB50156-2021</p> <p>12.3.2</p>		
	<p>2</p>	<p>GB50156-2021</p> <p>12.3.3</p>		
	<p>1 GB/T2893.5 GB2894</p> <p>GB13495.1 GB15630</p>	<p>AQ3010-2022</p> <p>4.4</p>		
	<p>2</p> <p>GB/T 50493</p>	<p>AQ3010-2022</p> <p>4.5</p>		

13.1.4

5m
3m

4.5m
4.5m

	0.5mm 0.65mm 0.7mm			
5		GB50156-2021 13.2.7		
6		GB50156-2021 13.2.8		
7	380/220V 380V	TN-S TN-C-S	GB50156-2021 13.2.9	
8	30	GB50156-2021 13.2.10		
9		GB50156-2021 13.2.11		
10		5 GB50156-2021 13.2.12		
11		GB50156-2021 13.2.13		
12		GB50156-2021 13.2.14		

13
100



GB50156-2021
13.2.15

14

1 GB50156-2021 1
13.2.16

1

GB50395-2007
5.0.1

2

GB50395-2007
5.0.5

3

1

140kw

2m

GB50156-2021
14.1.3

2

12

5

GB50156-2021
14.1.4

300cm²/m²

2

3

GB50156-2021
14.1.5

1

GB50156-2021
14.2.1

2

\$

GB50009

GB/T 50011

3

0.15 0.2m
1.2m

1.2m
0.2m

0.6m

GB50156-2021
14.2.3

0.6m

100mm

0.5m

4

GB 50016

GB50156-2021
14.2.4

5

GB50156-2021
14.2.7

6

GB50156-2021
14.2.9

7

300m²

GB50156-2021

14.2.13

11

5.0.13

25m

6

“ ” “ ”

7

8

9

10

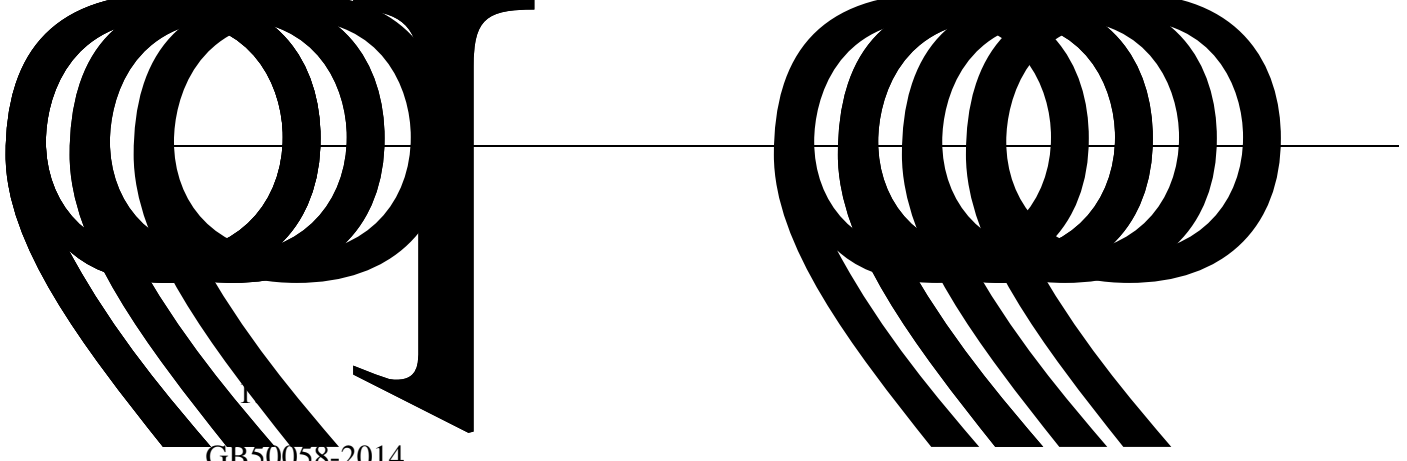
11

2018 74

12

7.

GB50156-2021



GB50058-2014

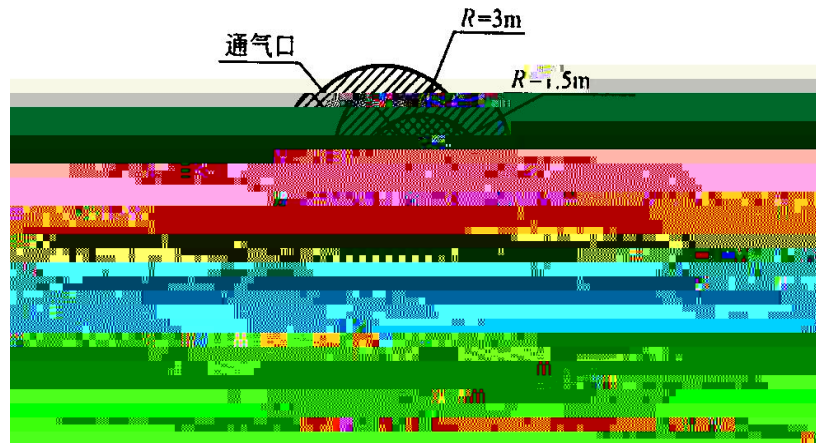
1 0

2 2 1

3
1.5m

3m

2



2

5.

1

0

3

2

1.5m 0.75m

0.5m

1

3

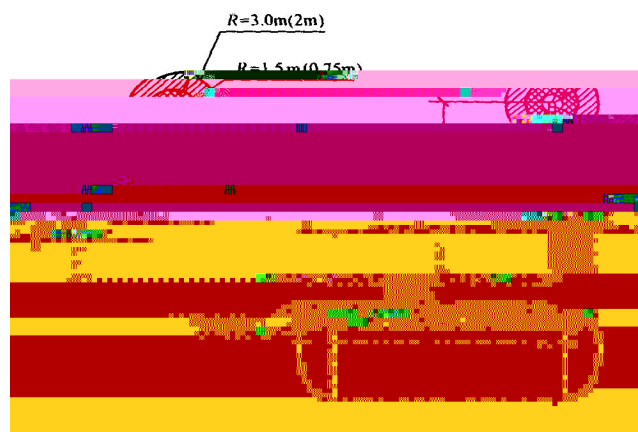
1.5m

1m

3m 2m

1.5m

2



3
