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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										

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2015 7 1

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2015 80 2015 8 19

23

2020 1 2020 5 30

24

2011 95 2011 7 1

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2013 12 2013 2 5

26

2011 142 2011 7 1

27

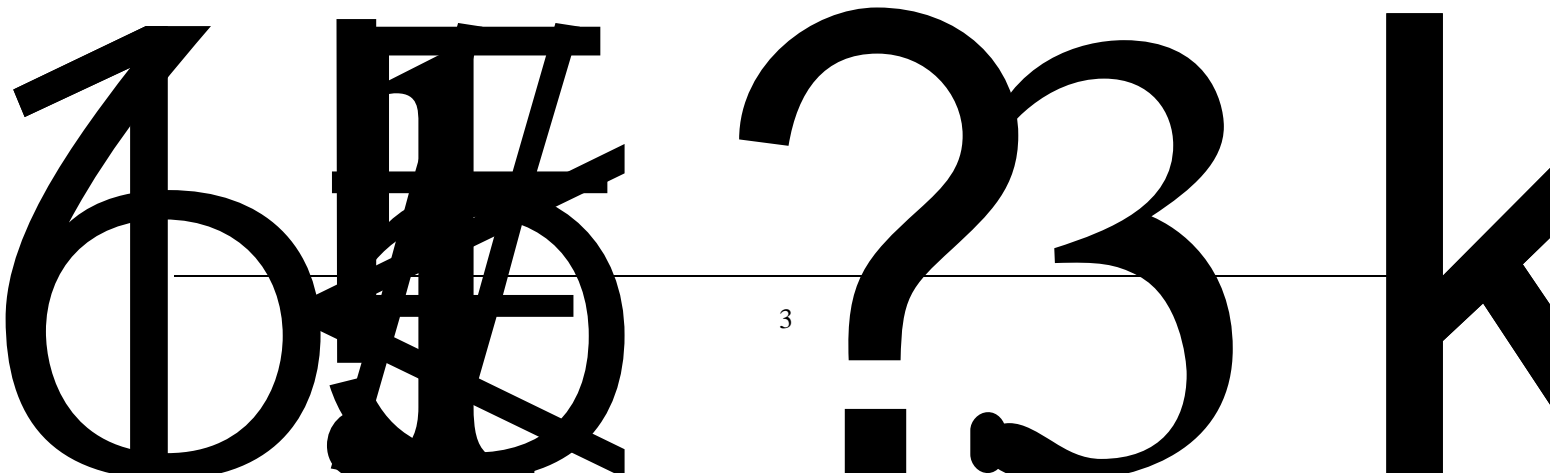
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20	(GB/T12801-2025)	
21	(GB 5083-2023)	
22	YJ/T 9007-2019	
23	(AQ 3010-2022)	
24	AQ 3018-2008	
25	GB30871-2022	
26	XF/T 3004-2020	
27	-	SH/T
3178-2015		
28	GB/T 13869-2017	
29	AQ 8001-2007	

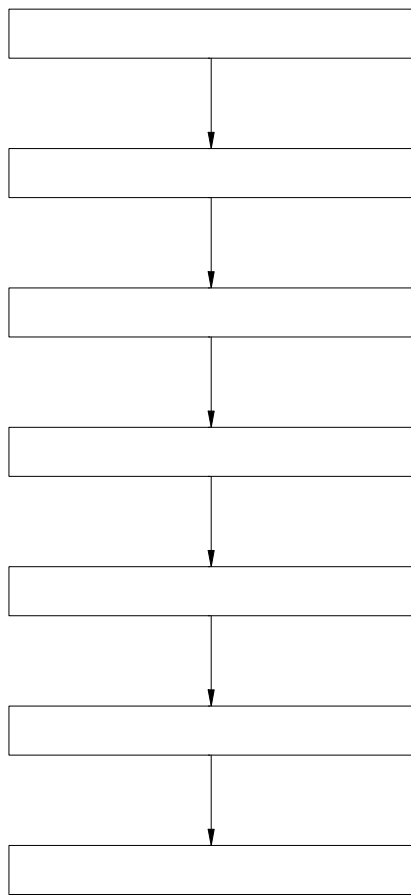
1.2.3.

1	2005	4	
2			2002
11			
3		2003	7

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	1891m ²	SF	4	1	1
4					
	1				
4	2 30m ³	2	30m ³		
	GB50156-2021		3.0.9		
	90m ³				

2.1

21.5m				1	H=6m
	15.9m 13m	352		2	H=6m
H=8m			12m 11m 23.2m		

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8.3

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-28.2

28.2

-15.7

2

70.5%

82%

54%

3

101.

2

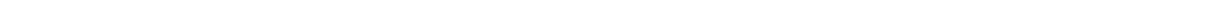
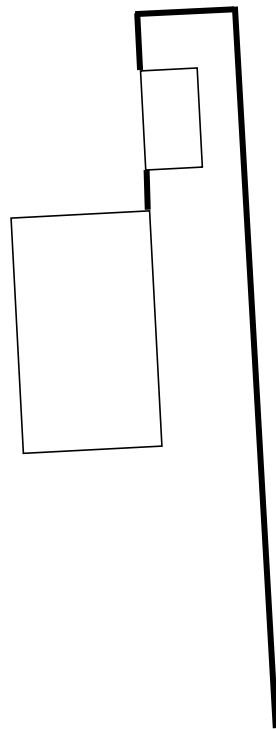
2

4m

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2-1

2-2



2-1		m	
		12.5	24
		-	-
		5.5	15.9
1	H=6m	-	5
352			5.5
	H=8m		5
2	H=6m	-	5
			12.5
		-	-
			5
1	H=6m	-	5
352			5
	H=8m		5
2	H=6m	-	5
			12.5
		-	-
			5
1	H=6m	-	5
352			5

	H=8m		5	23.2
2	H=6m	-	5	11
			10	21.5
		-	-	-
			3	18
1	H=6m	-	5	15
352			3	38
	H=8m		5	36.5
2	H=6m	-	5	37
			10	25.3
		-	-	-
			3	15.9
1	H=6m	-	5	12.8
352			3	43.8
	H=8m		5	42.2
2	H=6m	-	5	42.7
			10	35.5
		-	-	-

	1 H=6m		-	5	13.5
	352			3	22
	H=8m			5	32
	2 H=6m		-	5	21

2-2

m

2.4

2-3

2-3

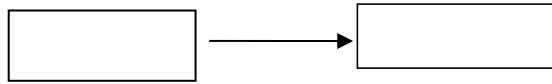
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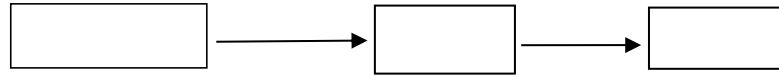
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2.7.1

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380/220V

TN-S

UPS

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5kg

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5kg

CO₂

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35kg

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5kg

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2m³

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4m

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3.1.3

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3-1

1		200t
2		5000t

60m³ 0.75

45t 60m³ 0.89 53.4t

$$S = 45/200 + 53.4/5000 = 0.23568 < 1$$

3.2

3.2.1

2* 1B 2

1 - 2 - 2

1630

E10

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1000m³

ú Ø+X Np §

€
V, B, W, S, Q, Os, L, > Q

o

23

15min

3.2.2

3.3

3-2

3-2

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2			
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3.3.1

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4.1

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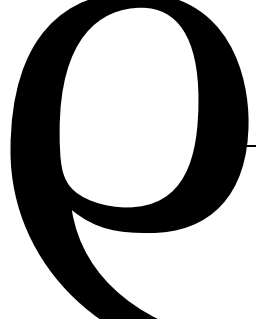
5-1

	8		
	9		
	10		
	11		
	12		
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	15		
	16		
	17		
	18		
	1		
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	1		
	2	GB/T29639-2020	
	3		
	1		
	2		
	3		

2025 1 17

5-3

	1			
		GB50156-2021 3.0.4		
	2	GB50156 3.0.9	30m ³	
		GB50156-2021 3.0.9		
	3			
		GB50156-2021 3.0.25		
	4		9	
		GB50156-2021 3.0.27		
	1			
		GB50156-2021 4.0.1		
	2			
		GB50156-2021 4.0.2		
	3			
	4.0.4	GB50156-2021 4.0.4		



4.0.4

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GB50156-2021
4.0.12

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GB50156-2021
4.0.13

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GB50156-2021
5.0.1

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6m 4m

1.2m³

100mm 1.2m

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GB50156-2021
(5.0.7

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GB50156-2021
5.0.8

8
300m²
GB50156-2021
5.0.9

9
4.0.4
“ ”
GB50156-2021
5.0.10
“ ”

10
GB50156-2021
5.0.11

11
2.2m

4.0.4 1.5 25m

	12 GB50156 5.0.13-1	GB50156-2021 5.0.13	2-1 2-2	
	13 C	GB50156-2021 5.0.16		

5-4

1

GB50156-2021
6.1.1

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 10^9

SF

GB50156-2021
6.1.7

$A=0.04Vt$

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SF

GB50156-2021
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SF

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	11		GB50156-2021 6.1.13	
	12		GB50156-2021 6.1.14	
	13	90% 95%	GB50156-2021 6.1.15	
	14		GB50156-2021 6.1.16	
	0.8L/h			
	15	SH 3022	GB50156-2021 6.1.17	SF
	1		GB50156-2021 6.2.1	
	2	50L/min	GB50156-2021 6.2.2	5-50L/min
	3		GB50156-2021 6.2.3	

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04

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GB50156-2021

6.3.5

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GB50156-2021

6.3.6



	<p>8</p> <p>100mm T</p> <p>50mm 45°</p> <p>200mm</p> <p>150mm</p> <p>200mm</p>	<p>GB50156-2021 6.3.8</p>	<p>100mm</p> <p>45°</p> <p>150mm</p>	
	<p>9</p> <p>4m</p> <p>2m</p>	<p>GB50156-2021 6.3.9</p>	<p>4m</p>	
	<p>10</p> <p>50mm</p>	<p>GB50156-2021 6.3.10</p>	<p>50mm</p>	
	<p>11</p> <p>2KPa~3KPa</p> <p>1.5KPa~2KPa</p>	<p>GB50156-2021 6.3.11</p>		
	<p>12</p> <p>GB/T8163</p>	<p>GB50156-2021 6.3.12</p>		

4mm

			0.5m	
17		GB50156-2021 6.3.18		
18	6.3.12			
1	2.8m/s			
2		GB50156-2021 6.3.19		
19	GB/T21447	GB50156-2021 6.3.20		
20		GB50156-2021 6.5.1	SF	
21	GB50108			
	200mm 500mm	GB50156-2021 (6.5.2	SF	

5-5

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1 5kg
6L 2 2
1 35kg
15m
5 c

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AQ3010-2022

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90min

GB50156-2021

13.1.3

90min

4

4.5m

5m

GB50156-2021

13.1.4

4.5m

3m

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GB50156-2021

13.1.5

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LPG LNG CNG 4.5m 5m 4.5m 5m 4.5m 5m

GB50156-2021

13.1.6

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13.2.12

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13.2.14

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	2	5.0.5		
	3	5.0.8		
	1	GB50156-2021 13.5.1		
	2. 1 2	GB50156-2021 13.5.2		
	3.	GB50156-2021 13.5.4		

5-7

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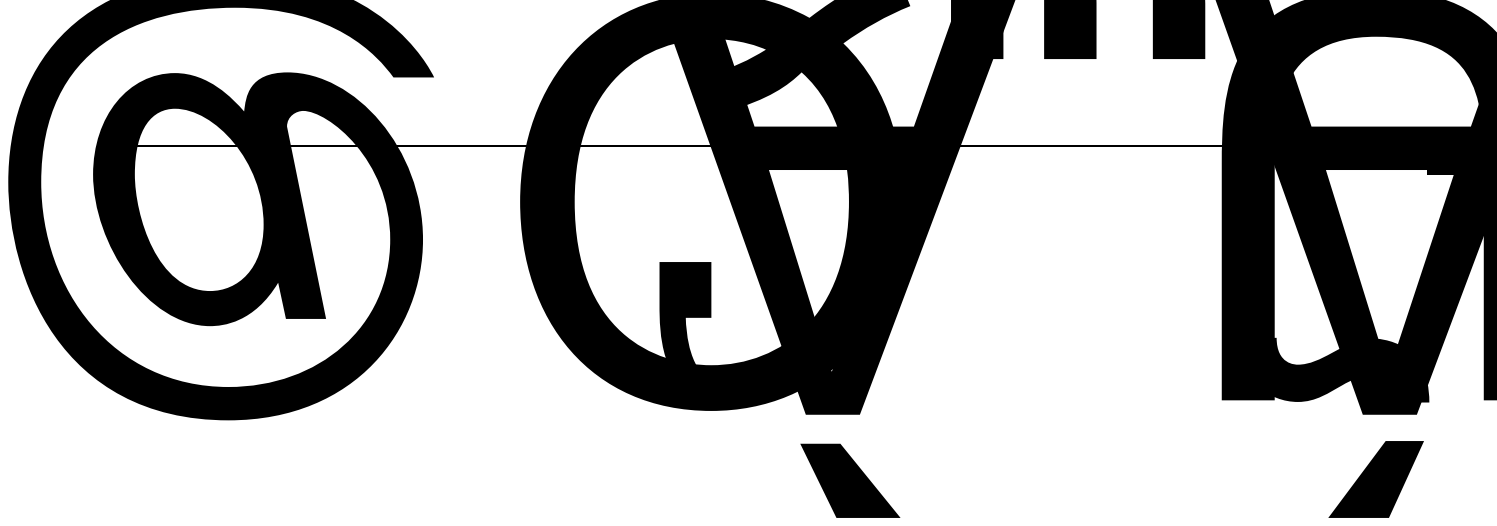
	7 B GB50016		GB50156-2021 14.2.11	B	
	8	3h	GB50156-2021 14.2.12		
	9		GB50156-2021 14.2.13		
	10 25m 3.0h	5.0.13	GB50156-2021 14.2.14		
	11		GB50156-2021 14.2.15		
	12		GB50156-2021 14.2.16		
	1		GB50156-2021 14.3.1		

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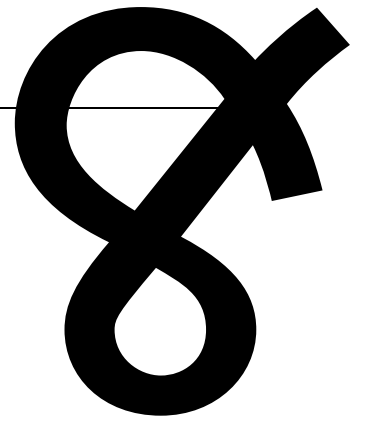
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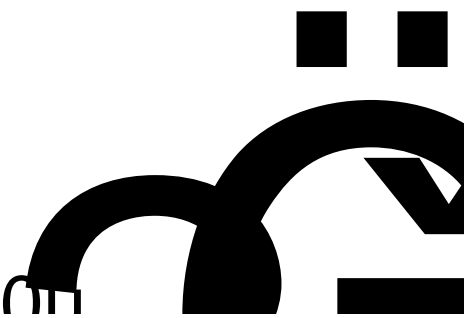
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	1000m3		
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	5	5	0	0
	31	31	0	0
	22	19	0	3
	45	36	0	9
	10	10	0	0
	28	27	0	1
	16	9	0	7
	20	11	0	9
	3	3	0	0
	180	151	0	29

5-9

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1		5kg	5kg 4 8
2		35kg	1 2
		5kg	- 2
			2m ³ 2m ³
			5 6

3		5kg	-	6
		5kg CO ₂	-	7

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3. 1
1 1
2 4.5m
0.15m 3m 2

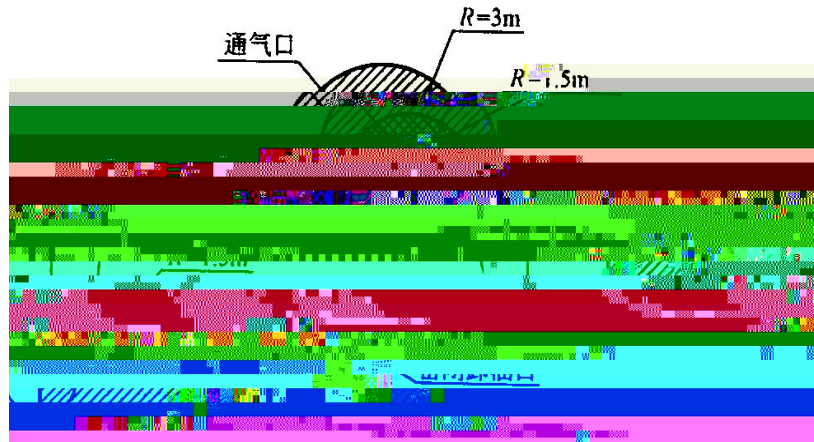


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3m

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2

1.5m 0.75m

0.5m

1

3

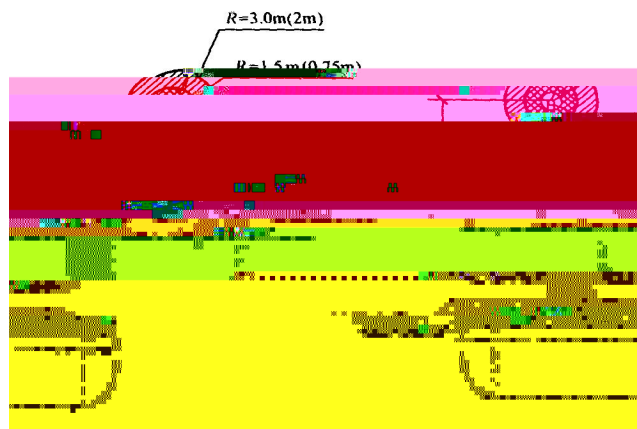
1.5m

1m

3m 2m

1.5m

2



3

