

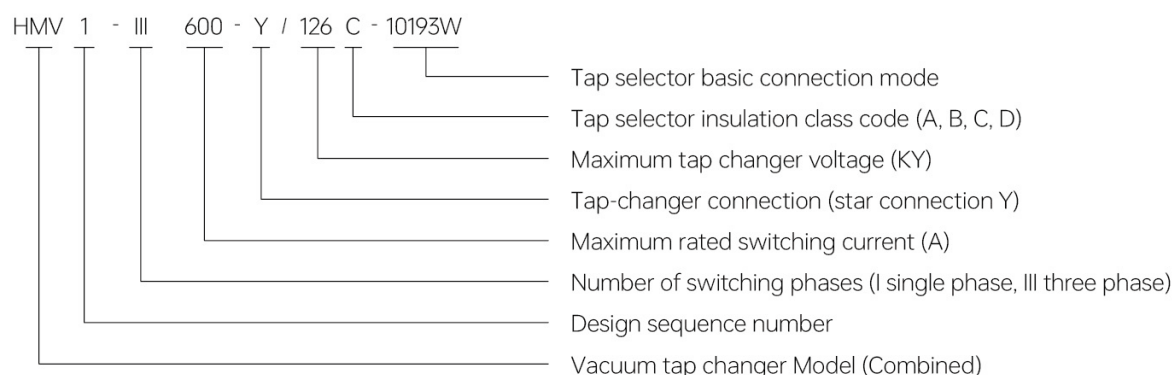
HMV1 combined vacuum on-load tap-changer

HMV1 combined on-load tap-changer

1. HMV1 model description

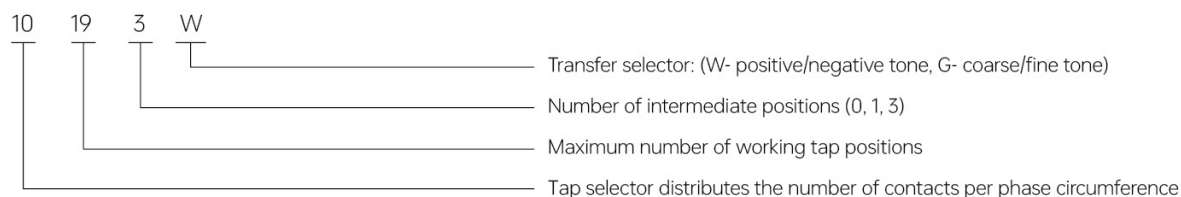
1.1 Model representation

HMV1 on-load tap-changer according to its phase number, maximum rated through current, maximum voltage, tap-selector insulation level and connection mode of different combinations, there are a variety of specifications, model parameters are described as follows:



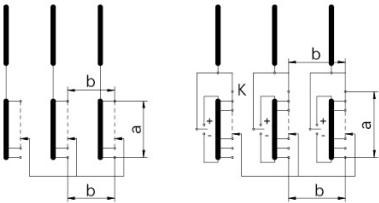
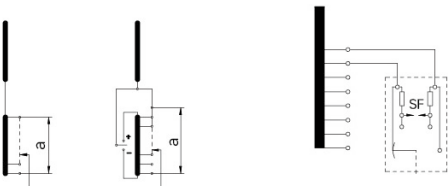
1.2 Basic connection method of tap selector

Tap selectors are available in a variety of sizes according to the voltage regulation range of the transformer and the connection mode of the windings. The specification of the tap selector consists of the tap selector distributing the number of contacts, the number of operating positions, the number of intermediate positions and the conversion selector. In the basic connection mode, the meanings of parameters are described as follows:

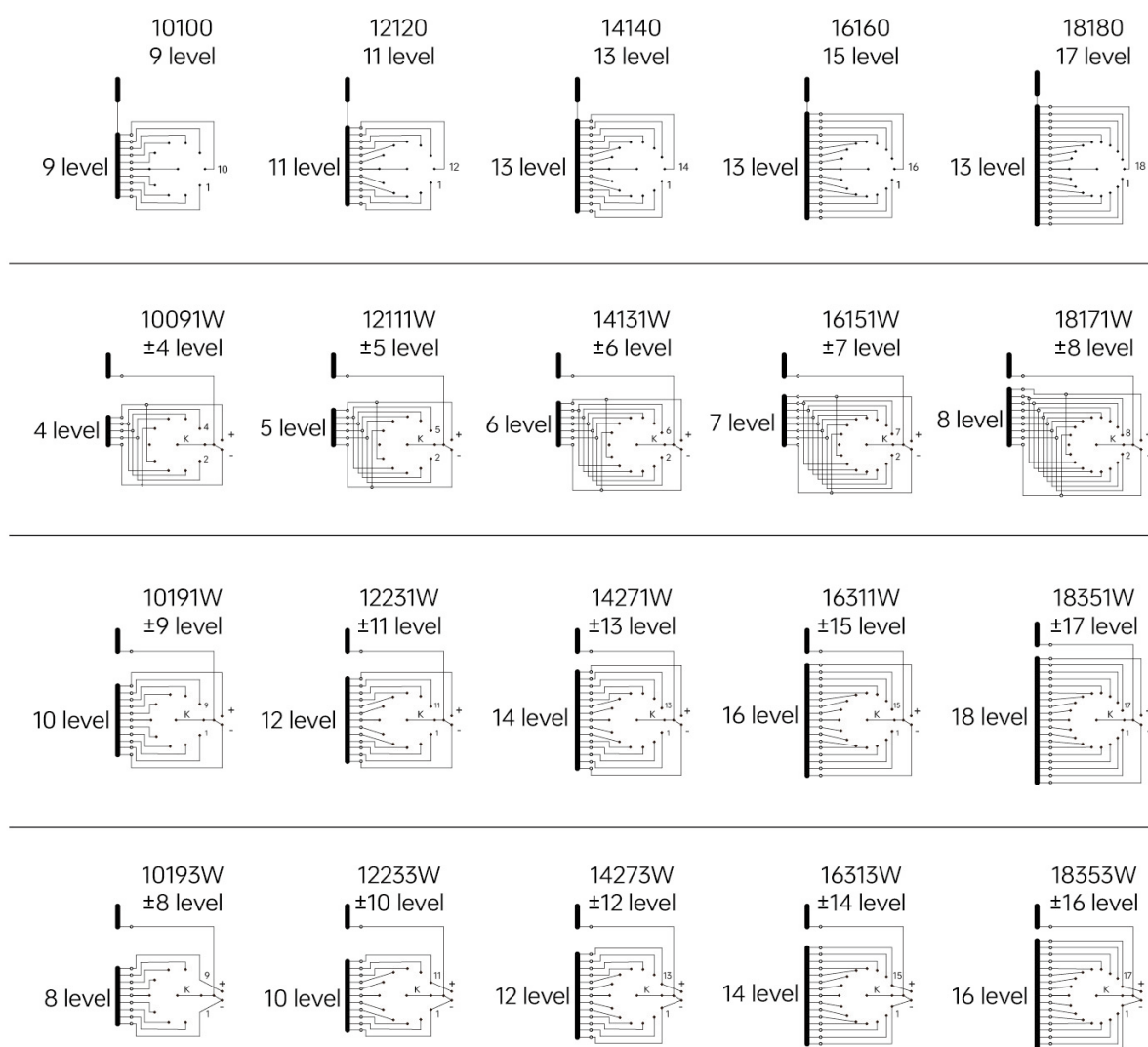


2. HMV1 internal insulation level

insulation distance symbol	Tap selector type A		Tap selector Type B		Tap selector type C		Tap selector type D	
	kV 1.2/50μs	kV 50Hz1min	kV 1.2/50μs	kV 50Hz1min	kV 1.2/50μs	kV 50Hz1min	kV 1.2/50μs	kV 50Hz1min
a	135	50	265	50	350	82	490	105
b	135	50	265	50	350	82	490	146
C1	200	95	485	143	545	178	590	208
C2	200	95	495	150	550	182	590	225
d	135	50	265	50	350	82	490	105

Insulation distance of each part of the voltage regulator coil	
III 500、III 600、III 800	I 500、I 600、I 800、I 1200、I 1500
 Linear key flipflop	 Linear key flipflop The interstage insulation level Δa with spark gap SF is: 5Hz 1min 20kV and 1.2/50μs 90kV

3. Basic wiring diagram of HMOV1



4. H MV1 technical specifications

item	Classification feature		Ⅲ 500	Ⅲ 600	Ⅲ 800	I 500	I 600	I 800	I 1200	I 1500
1	Maximum rated passing current (A)		500	600	800	500	600	800	1200	1500
2	Rated frequency (Hz)		50 or 60							
3	Number of phases and connection mode		Three-phase Y connects to the center point			Single-phase arbitrary connection mode				
4	Maximum grading voltage (V)		3300							
5	Rated capacity (kVA)		1400	1500	2640	1400	1500	2640	3100	3500
6	Withstand short circuit Ability (kA)	Thermal stability (3 s RMS)	8	8	16	8	8	16	24	24
		Dynamic stability	20	20	40	20	20	40	60	60
7	Number of working positions		Linear keys 7, 10, 12, 14, 16, 18, 24 Positive and negative adjustment ±3~±23							
8	Tap off Off insulation level (kV)	Rated voltage	35	66	110	150	220			
		Maximum operating voltage	40.5	72.5	126	170	252			
		Power frequency test voltage (1min)	85	140	230	325	460			
		Impulse test voltage (1.2/50)	200	350	550	750	1050			
9	Tap selector		According to the insulation level is divided into 4 sizes: number A, B, C, D							
10	Mechanical life		No less than 1.5 million times							
11	Electrical life		No less than 350,000 times							
12	Toggle Switch Oil chamber	Working pressure	3×10 ⁴ Pa							
		Sealing performance	6×10 ⁴ Pa 24h no leakage							
		Overpressure protection	Rupture cap(4~5)×10 ⁴ Pa							
		Protective relay	QJ4-25 Set oil speed 1.0m/s±10%							
13	Oil discharge (L)		about 190~270							
14	Oil charge (L)		about 125~190							
15	Weight (Kg)		about 240~350							
16	Equipped with electric mechanism		HED-200							

Note: 1. The stage capacity is equal to the product of the stage voltage and the load current, and the rated stage capacity is the maximum continuously allowed stage capacity.

2. When selecting the single-phase tap-changer formed by the parallel surface of the three-phase tap-changer contacts, the transformer line country shunt should be considered, H MV1 I 800 two shunt, H MV1 I 1200, I 1500 three shunt.

3. The voltage regulation series can be designed according to the user's needs within the range of working positions in the table above.

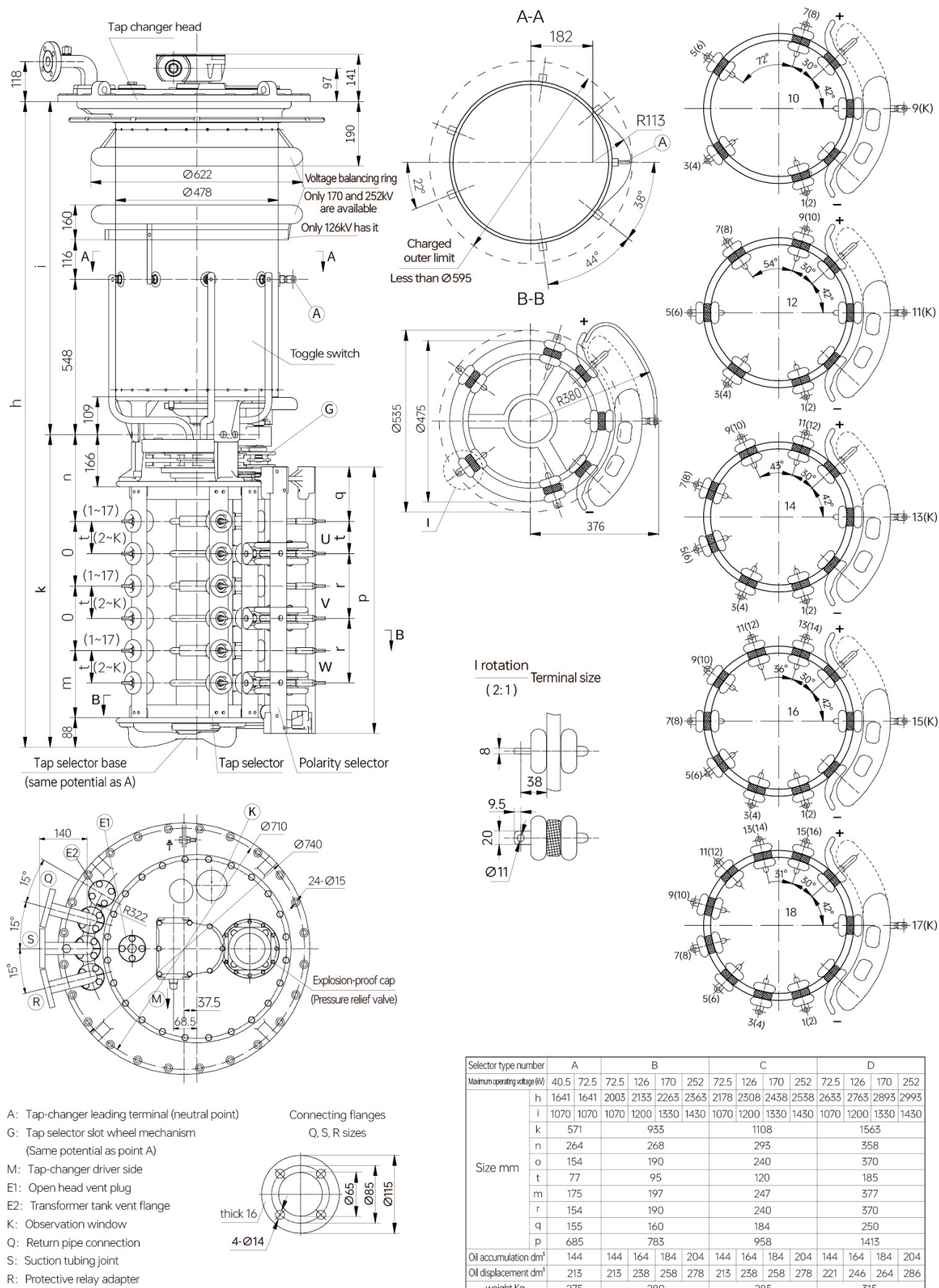


Figure 2 Positive and negative tones of HMV1 III500/600/800

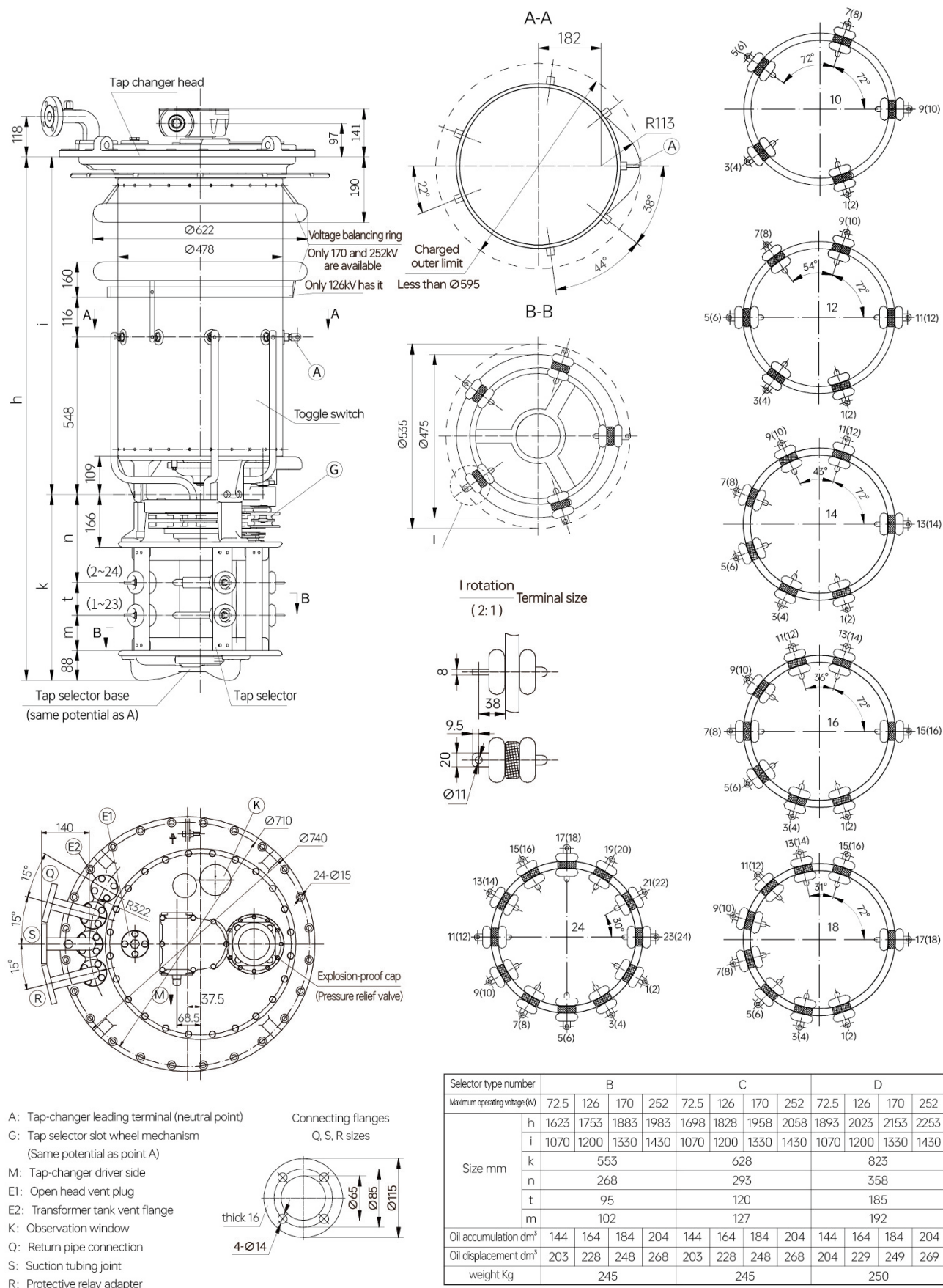


Figure 3 HMV1 I 500/600 linear tone

07

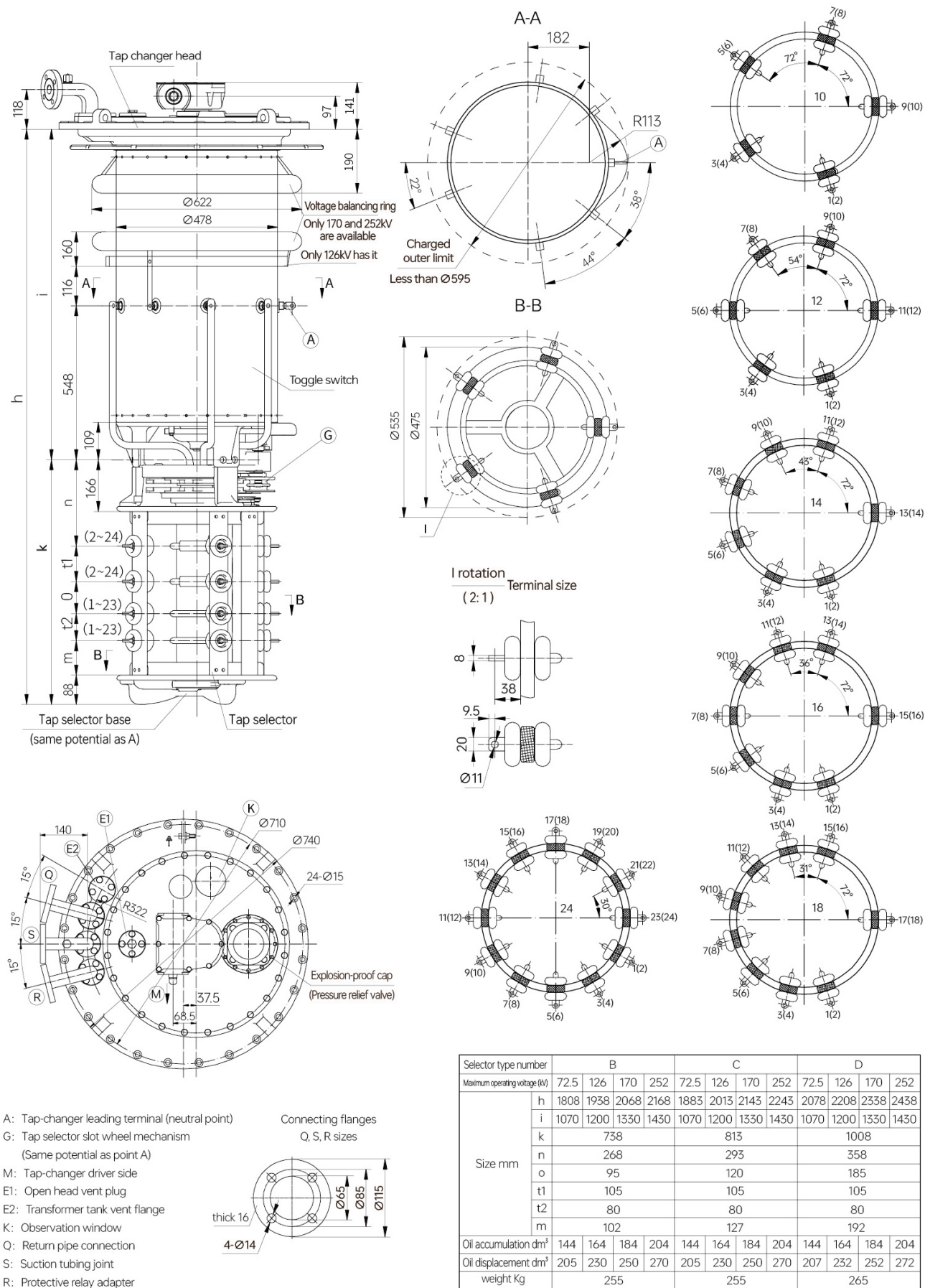


Figure 5 HMV1 1800 linear tone

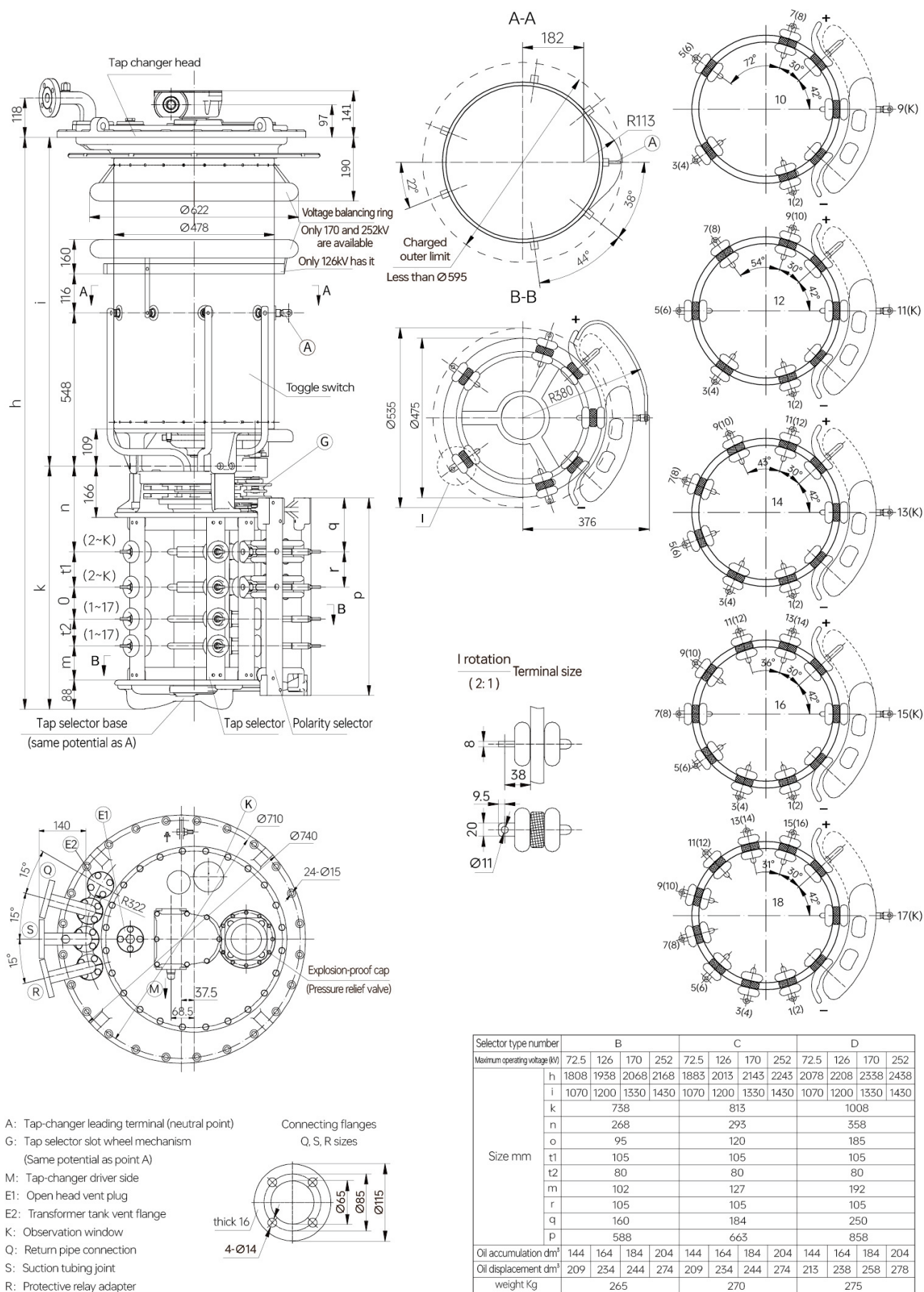


Figure 6 Positive and negative tones of HMV1 1800

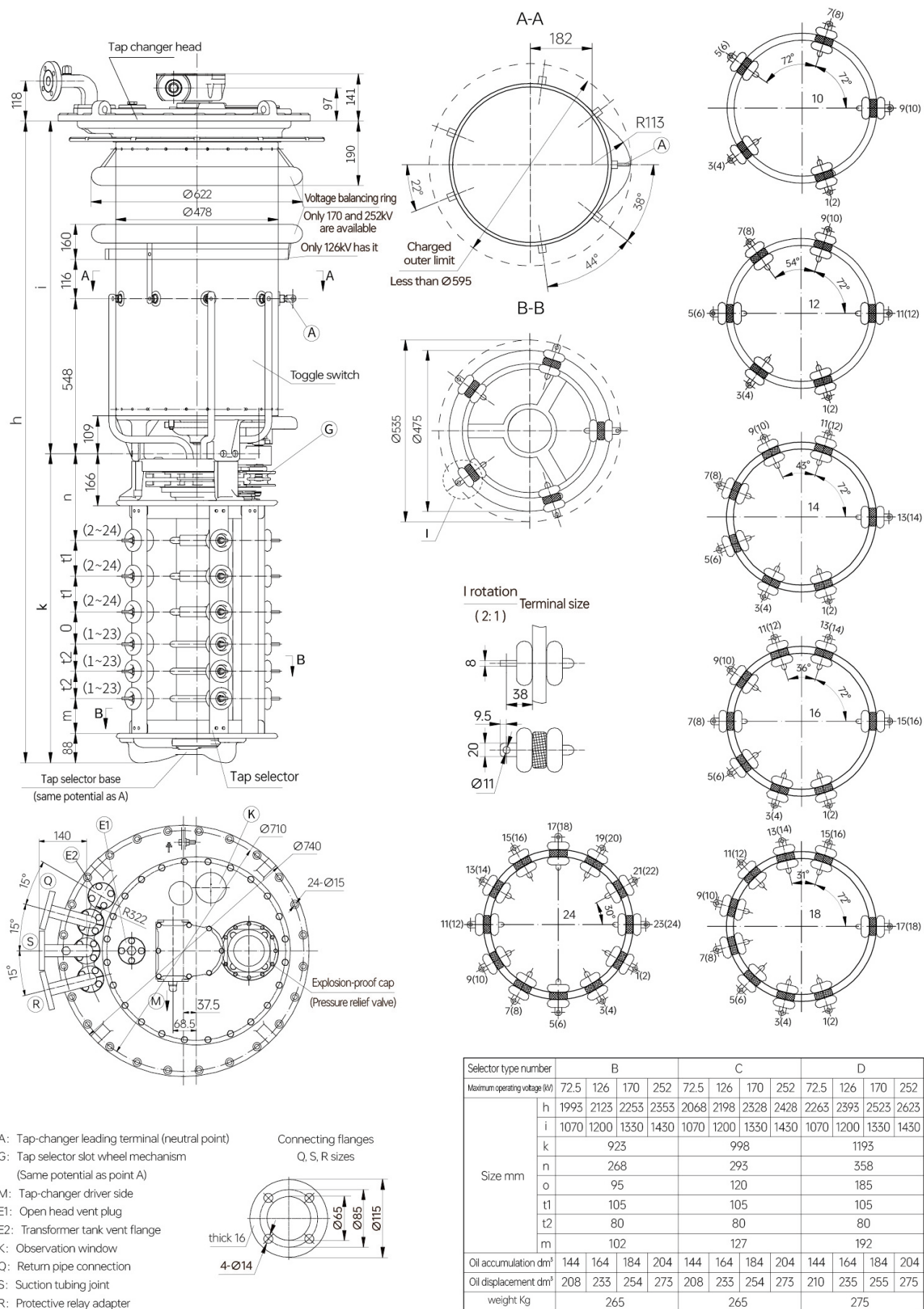
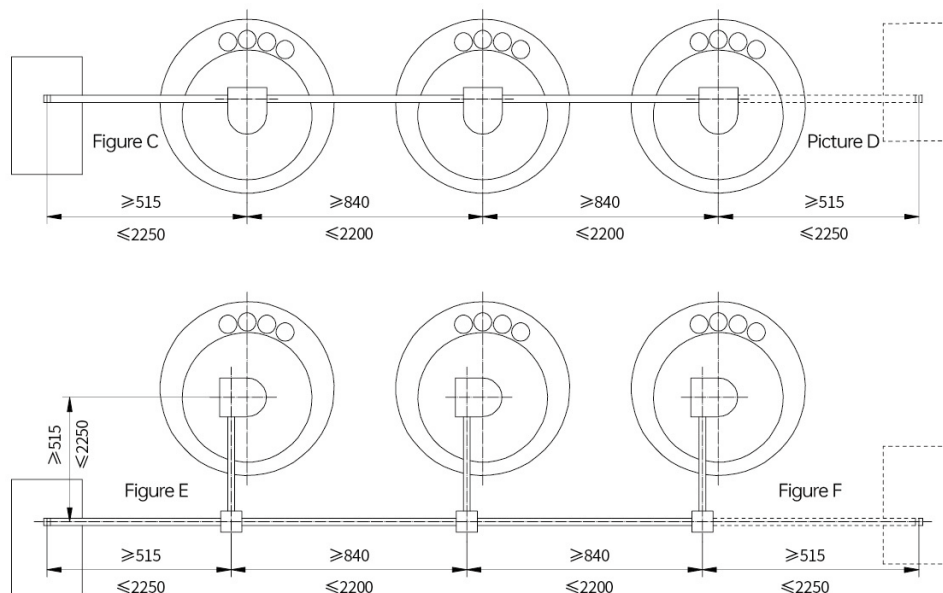


Figure 7 HMV1 I 1200/1500 linear tone

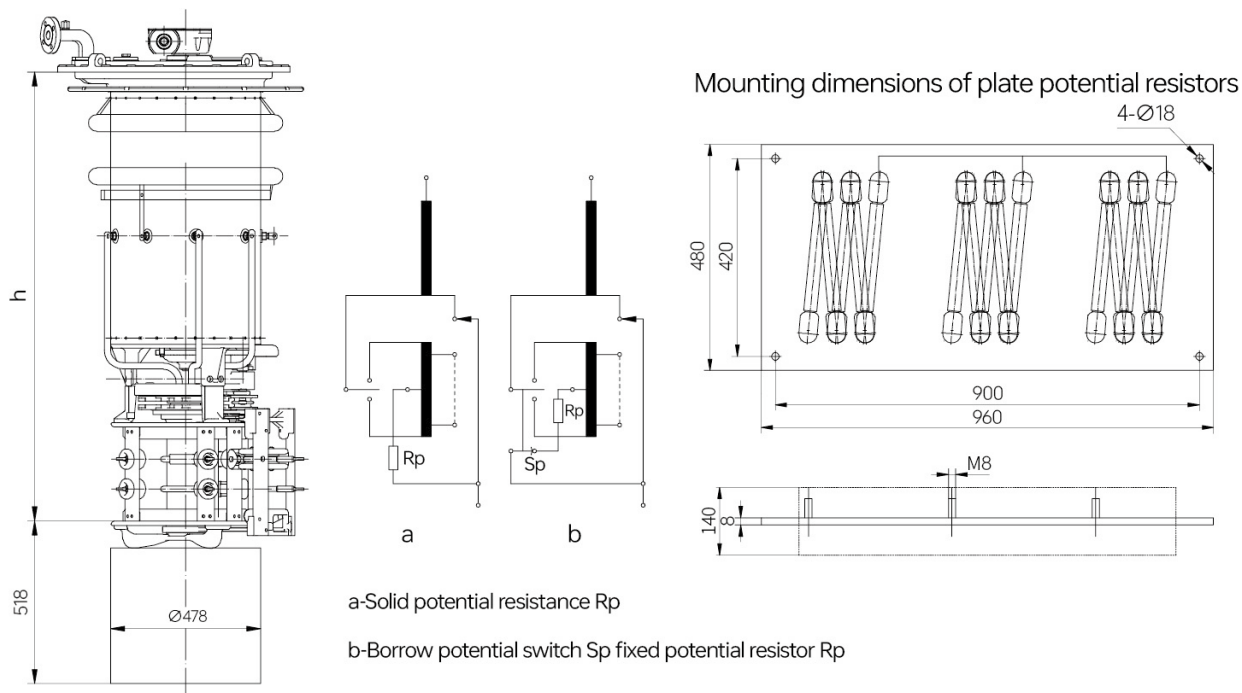
8. HVM1 three mechanical linkage layout

In order to facilitate the user's three mechanical linkage arrangement, HVM1 three mechanical linkage gives four schemes, such as Figure C, Figure D, Figure E and Figure F, for user's reference. If there are other layout parties, as agreed by both parties.



8. HVM1 potential resistor and potential switch

The tap-changer winding is "suspended" when the tap-changer selector is in action. Because there is a coupling capacitor C between the main winding and the tap-winding, and a coupling capacitor C between the tap-winding and the box shell, the conversion selector generates spark discharge. In order to reduce the spark discharge gas, the potentiometric resistor is fixed or connected by a potentiometric resistor switch.



www.huaqishili.com



Shanghai Huaqi power Equipment
Manufacturing Co., LTD

Address: No. 377, Baoyuan 2 Road, Jiangqiao Town,
Jiading District, Shanghai
Tel: 021-56011920 Mobile: 13818882381
Email: huaqill@aliyun.com

Huaqi Power Equipment Manufacturing
(Nantong) Co., LTD

Add: No. 2057, Development Avenue, Baocang Town,
Haimen District, Nantong City, Jiangsu Province
Mobile: 13776859681