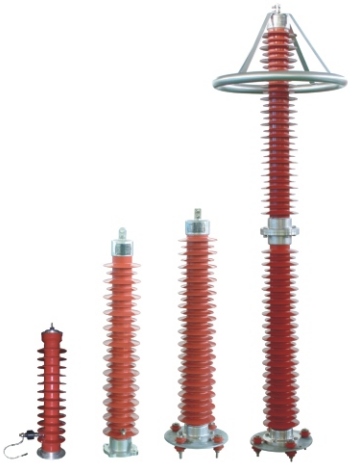
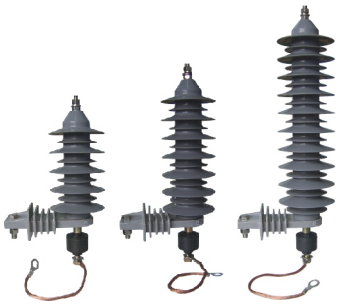




Surge arrester series

1 Introduction

Surge arrester is a kind of voltage limiter, which is used to protect transmission & distribution equipments (such as transformer, switch, capacitor, voltage transformer, generator, motor and power cable etc.) from being damaged by over-voltage. As main components of metal surge arresters, our resistors feature non-linear characteristics (V-I), quick steep wave response, strong current-flow capacity and anti-ageing ability and so on. They greatly improve the protection ability and reliability of surge arresters.

We adopt the process of whole-injection formation and sealing from both terminal sides for composite housed metal oxide surge arresters and they feature good sealing performance, excellent anti-explosion, anti-dirty, anti-power eroding, anti-ageing, small volume and light weight etc. They are also easy for installation and maintenance.

Porcelain housed metal oxide surge arresters are of good construction, lasting sealing performance, even potential distribution and reliable pressure relief apparatus.

2 Model and Its Meaning

YH 10 W-12

- 12: Rated voltage (kV)
- W: W: Without gaps
- 10: Nominal discharge current (kA)
- YH: YH- Polymeric housed metal oxide surge arrester; Y- Porcelain housed metal oxide surge arrester

3 Normal Service Conditions of Metal Oxide Surge Arrester Without Gaps for A.C. System

3.1 Ambient temperature: -40℃～+40℃;
3.2 Altitude: not more than 2000m;
3.3 Frequency of power source is not less than 48Hz, not more than 62Hz;;
3.4 Power frequency voltage applied between terminals of surge arrester must not overpass continuous operating voltage of surge arrester;
3.5 Earthquake intensity is not higher than 7 degree;
3.6 Max. wind velocity is lower than 35m/s.

4 Main technical parameters (application standard: IEC60099-4)

Metal oxide surge arrester polymeric housing without gaps for a.c. system (5kA series)

Type	Rated voltage (kV) (r.m.s)	Continuous operating voltage (kV) (r.m.s)	Lightning impulse residual voltage under nominal discharge current (≤kV) (Peak)	Line discharge class	Creepage distance (mm)	2ms square wave impulse current withstand (A)	4/10μ high current impulse withstand (kA) (Peak)	Fig No.
YH5W-6	6	5.1	18		320	150	65	1
YH5W-9	9	7.65	27		430	150	65	2
YH5W-12	12	10.2	36		430	150	65	2
YH5W-15	15	12.75	45		530	150	65	3
YH5W-18	18	15.3	54		530	150	65	3
YH5W-21	21	16.8	63		640	150	65	4
YH5W-24	24	19.2	72		640	150	65	4
YH5W-27	27	21.6	81		740	150	65	5
YH5W-30	30	24	90		890	150	65	6
YH5W-33	33	26.4	99		890	150	65	7
YH5W-36	36	28.8	108		1115	150	65	7

Metal oxide surge arrester polymeric housing without gaps for a.c. system (10kA series)

Type	Rated voltage (kV) (r.m.s)	Continuous operating voltage (kV) (r.m.s)	Lightning impulse residual voltage under nominal discharge current (≤kV) (Peak)	Line discharge class	Creepage distance (mm)	2ms square wave impulse current withstand (A)	4/10 μ high current impulse withstand (kA) (Peak)	Fig No.
YH10W-6	6	5.1	18	1	320	250	100	8
YH10W-9	9	7.65	27	1	430	250	100	9
YH10W-12	12	10.2	36	1	430	250	100	9
YH10W-15	15	12.75	45	1	530	250	100	10
YH10W-18	18	15.3	54	1	530	250	100	10
YH10W-21	21	16.8	63	1	640	250	100	11
YH10W-24	24	19.2	72	1	740	250	100	12
YH10W-27	27	21.6	81	1	740	250	100	12
YH10W-30	30	24	90	1	890	250	100	13
YH10W-33	33	26.4	99	1	890	250	100	13
YH10W-36	36	28.8	108	1	1115	250	100	14
YH10W-42	42	33.6	126	2	1260	400	100	15
YH10W-48	48	39	139	2	1260	400	100	15
YH10W-54	54	42	160	2	1260	400	100	15
YH10W-60	60	48	178	2	1465	400	100	16
YH10W-66	66	52.8	196	2	1465	400	100	16
YH10W-72	72	57	214	2	2255	400	100	17
YH10W-84	84	67.2	244	2	2255	400	100	17
YH10W-90	90	72.5	249	2	2255	400	100	17
YH10W-96	96	75	265	3	3555	800	100	18
YH10W-108	108	84	281	3	3555	800	100	18
YH10W-120	120	96	300	3	4153	800	100	19
YH10W-150	150	120	416	3	5040	800	100	20
YH10W-200	200	156	520	3	7110	800	100	21

Metal oxide surge arrester polymeric housing without gaps for a.c. system (20kA series)

Type	Rated voltage (kV) (r.m.s)	Continuous operating voltage (kV) (r.m.s)	Lightning impulse residual voltage under nominal discharge current (≤kV) (Peak)	Line discharge class	Creepage distance (mm)	2ms square wave impulse current withstand (A)	4/10 μ high current impulse withstand (kA) (Peak)	Fig No.
YH20W-108	108	84	281	3	3555	800	100	18
YH20W-120	120	96	300	3	4153	800	100	19
YH20W-150	150	120	416	3	5040	800	100	20
YH20W-200	200	156	520	3	7110	800	100	21

Metal oxide surge arrester porcelain housing without gaps for a.c. system (5kA series)

Type	Rated voltage (kV) (r.m.s)	Continuous operating voltage (kV) (r.m.s)	Lightning impulse residual voltage under nominal discharge current (≤kV) (Peak)	Line discharge class	Creepage distance (mm)	2ms square wave impulse current withstand (A)	4/10 μ high current impulse withstand (kA) (Peak)	Fig No.
Y5W-6	6	5.1	18		280	150	65	22
Y5W-9	9	7.65	27		320	150	65	23
Y5W-12	12	10.2	36		320	150	65	23
Y5W-15	15	12.75	45		450	150	65	24
Y5W-18	18	15.3	54		450	150	65	24
Y5W-21	21	16.8	63		450	150	65	24
Y5W-24	24	19.2	72		510	150	65	25
Y5W-27	27	21.6	81		510	150	65	25
Y5W-30	30	24	90		890	150	65	26
Y5W-33	33	26.4	99		890	150	65	26
Y5W-36	36	28.8	108		890	150	65	26

Metal oxide surge arrester porcelain housing without gaps for a.c. system (10kA series)

Type	Rated voltage (kV) (r.m.s)	Continuous operating voltage (kV) (r.m.s)	Lightning impulse residual voltage under nominal discharge current (≤kV) (Peak)	Line discharge class	Creepage distance (mm)	2ms square wave impulse current withstand (A)	4/10μ high current impulse withstand (kA) (Peak)	Fig No.
Y10W-6	6	5.1	18	1	280		100	27
Y10W-9	9	7.65	27	1	320		100	28
Y10W-12	12	10.2	36	1	320		100	28
Y10W-15	15	12.75	45	1	450		100	29
Y10W-18	18	15.3	54	1	450		100	29
Y10W-21	21	16.8	63	1	450		100	29
Y10W-24	24	19.2	72	1	510		100	30
Y10W-27	27	21.6	81	1	510		100	30
Y10W-30	30	24	90	1	890		100	31
Y10W-33	33	26.4	99	1	890		100	31
Y10W-36	36	28.8	108	1	890		100	31
Y10W-42	42	33.6	126	2	1256	400	100	32
Y10W-48	48	39	139	2	1256	400	100	32
Y10W-54	54	42	160	2	1256	400	100	32
Y10W-60	60	48	178	2	1440	400	100	33
Y10W-66	66	52.8	196	2	1440	400	100	33
Y10W-72	72	57	214	2	1440	400	100	33
Y10W-84	84	67.2	244	2	2200	400	100	34
Y10W-90	90	72.5	249	2	2200	400	100	34
Y10W-96	96	75	265	3	3350	800	100	35
Y10W-108	108	84	281	3	3350	800	100	35
Y10W-120	120	96	300	3	3948	800	100	36
Y10W-150	150	120	416	3	4400	800	100	37
Y10W-200	200	156	520	3	6700	800	100	38

Metal oxide surge arrester porcelain housing without gaps for a.c. system (20kA series)

Type	Rated voltage (kV) (r.m.s)	Continuous operating voltage (kV) (r.m.s)	Lightning impulse residual voltage under nominal discharge current (≤kV) (Peak)	Line discharge class	Creepage distance (mm)	2ms square wave impulse current withstand (A)	4/10μ high current impulse withstand (kA) (Peak)	Fig No.
Y20W-108	108	84	281	3	3350	800	100	35
Y20W-120	120	96	300	3	4106	800	100	36
Y20W-150	150	120	416	3	4400	800	100	37
Y20W-200	200	156	520	3	6700	800	100	38
Y20W-444	444	324	1106	4	17052	2000	100	39

5 Outline and dimension

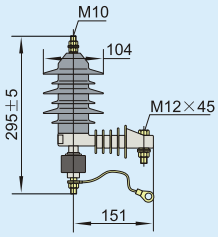


Fig 1

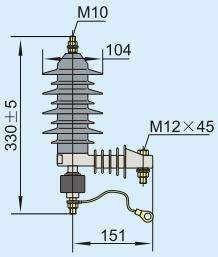
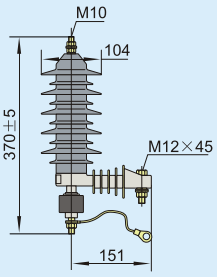


Fig 2



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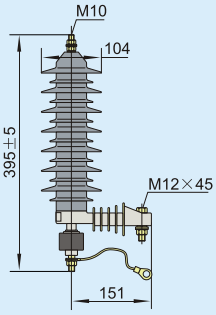


Fig 4

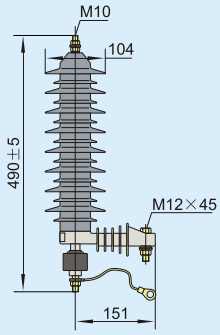


Fig 5

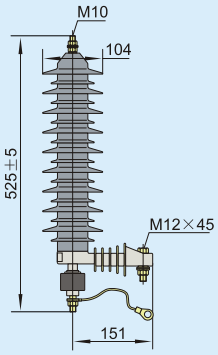


Fig 6

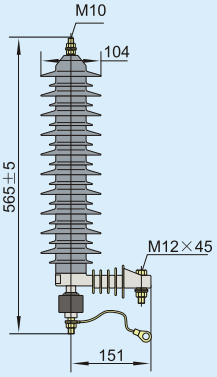


Fig 7

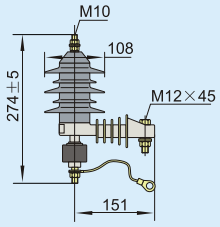
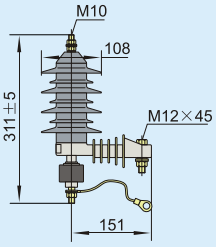


Fig 8



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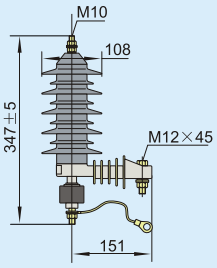


Fig 10

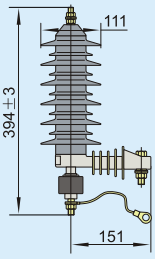


Fig 11

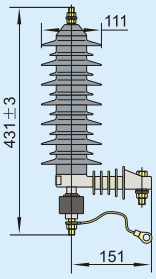
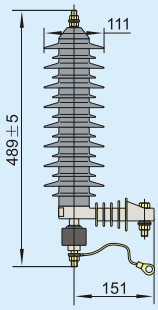


Fig 12



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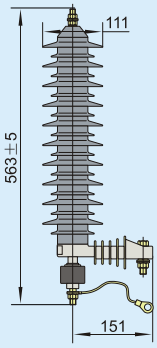


Fig 14

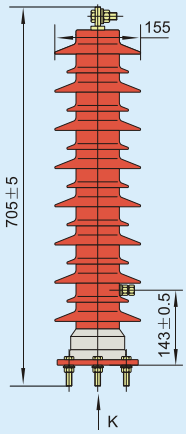
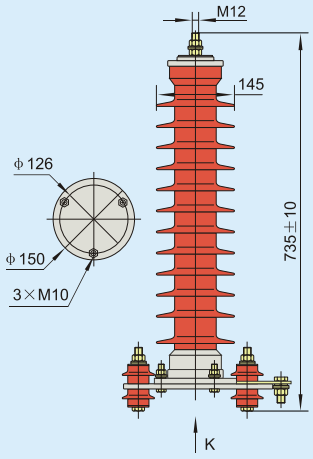


Fig 15



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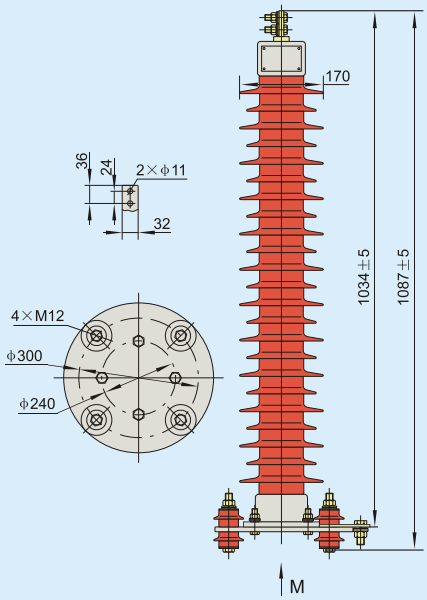


Fig 17

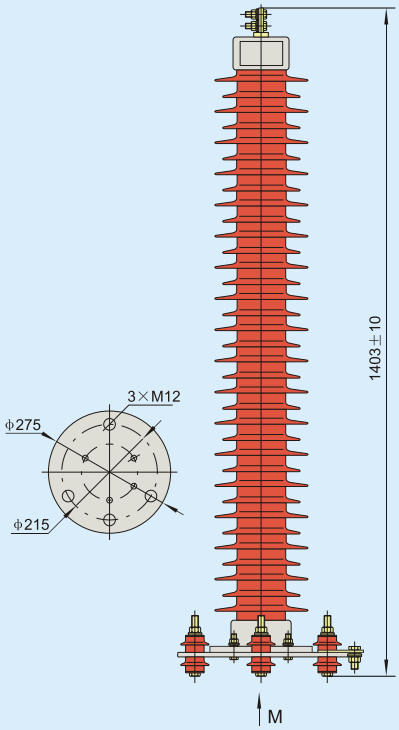


Fig 18

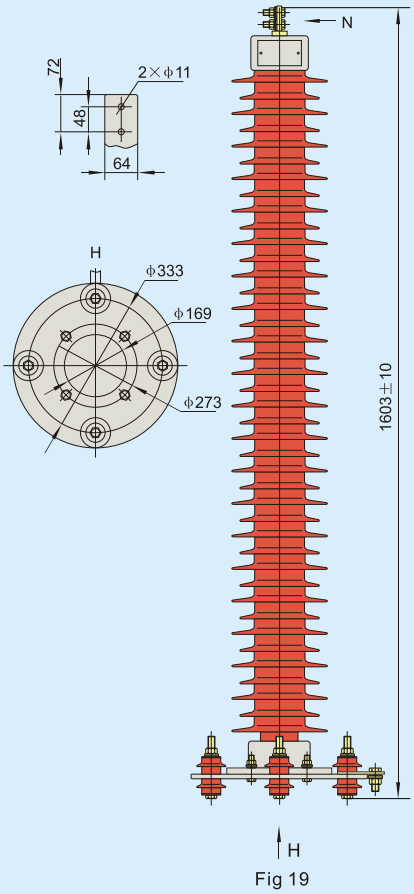


Fig 19

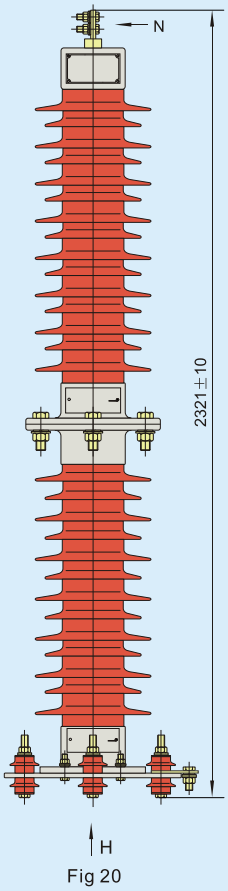


Fig 20

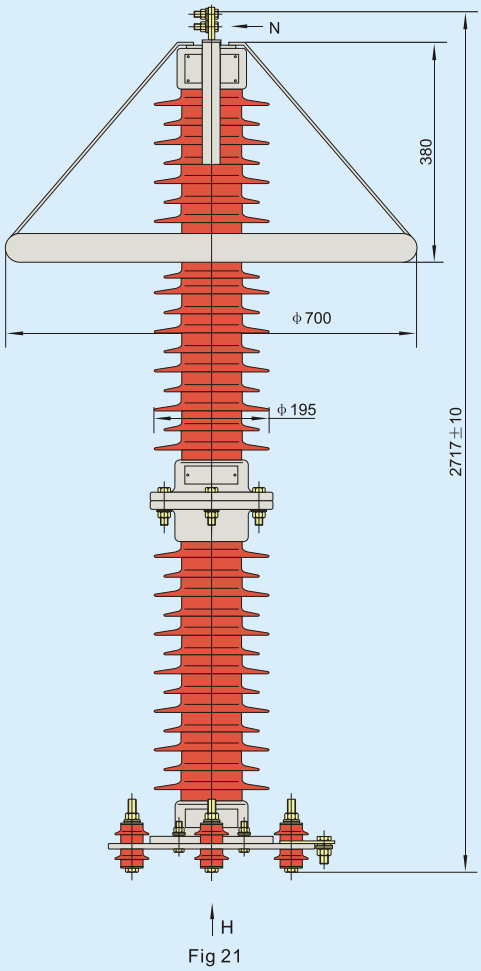
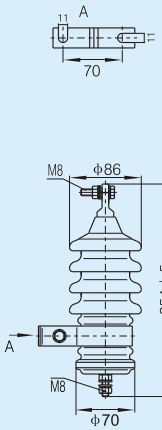


Fig 21



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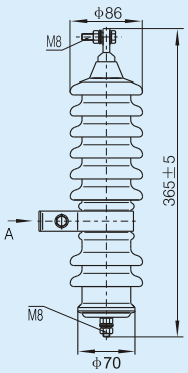

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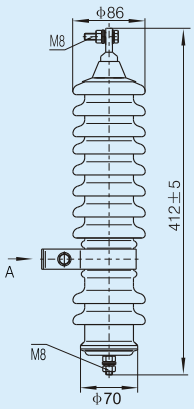


Fig 24

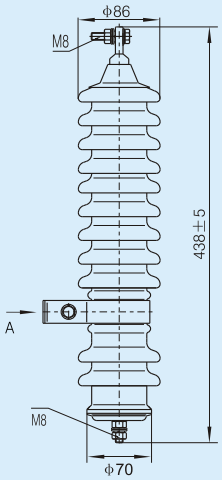


Fig 25

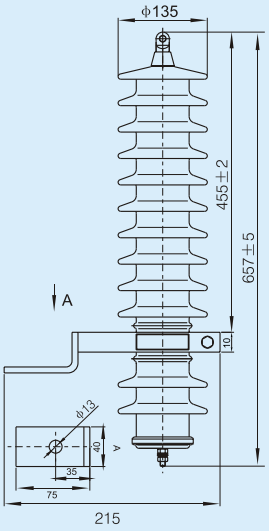


Fig 26

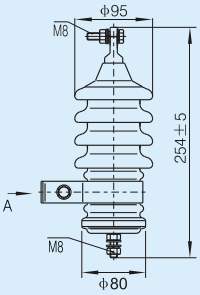


Fig 27

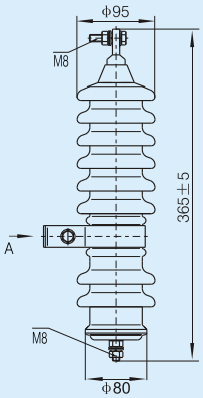


Fig 28

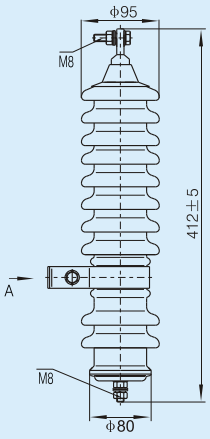
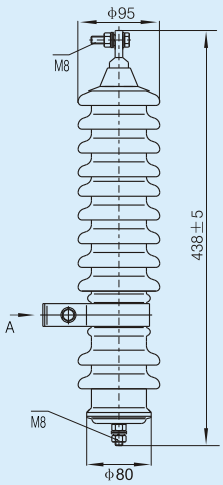


Fig 29



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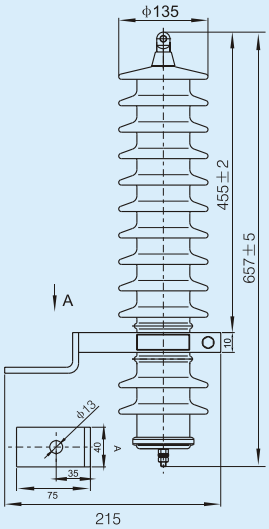


Fig 31

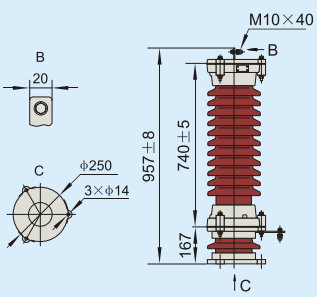


Fig 32

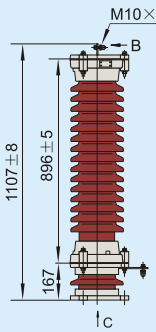


Fig 33

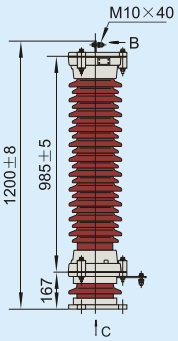
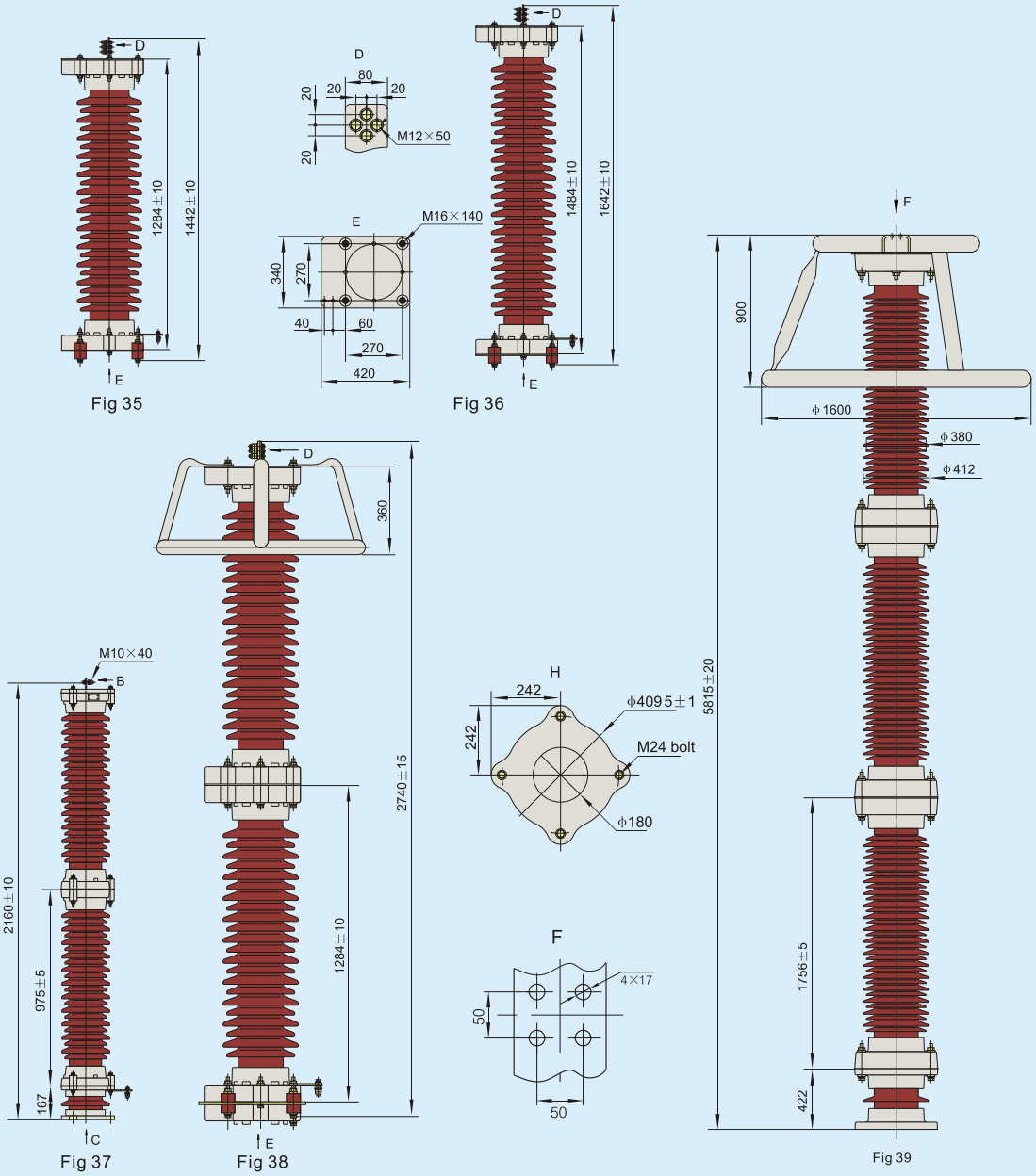


Fig 34



6 Information required when enquiry and order

6.1 System Max. operating voltage;
6.2 System neutral connection;
6.3 Rated voltage or Max. continuous operating voltage of surge arrester;
6.4 Nominal discharge current;
6.5 Type of house;
6.6 Contamination degree and creepage distance;
6.7 Any special requirements;
6.8 Accessories.