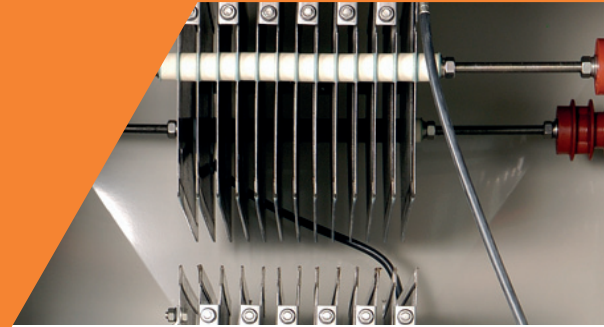


Wärtsilä JOVYLOAD NGR

PRODUCT LEAFLET



Wärtsilä JOVYATLAS produces grounding resistors, also called neutral point grounding resistors, in different designs and versions for currents up to 10 kA for 1 sec. with an insulation voltage up to 70 kV. They are inserted in power supply facilities between the star centre of a generator and the earth connection and limit in the event of malfunction the earth fault current to permitted values. The production of grounding resistors takes place on the basis of stainless steel grid resistors of the type HWS and SPR.

GROUNDING RESISTORS WORLDWIDE IN OPERATION

The grounding resistors Wärtsilä JOVYLOAD NGR are in operation worldwide at the level of 1000 up to 36000 volts, e.g. on near-shore converter stations or offshore platforms, on which several AC transformers are installed. Numerous companies in the on-and offshore wind energy industry have placed their trust in technology from Wärtsilä JOVYATLAS.

STATE-OF-THE-ART MANUFACTURING METHODS

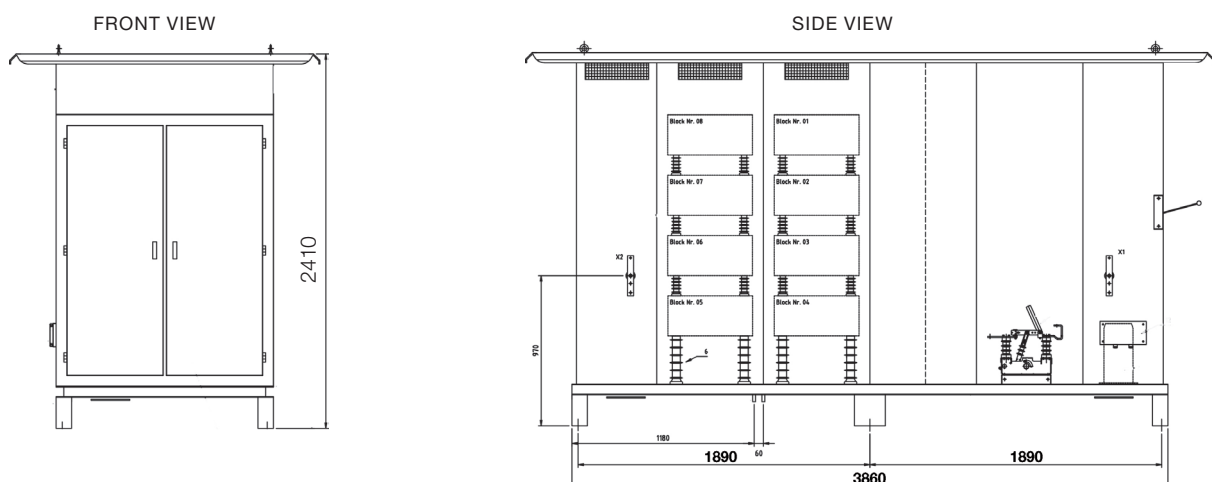
Wärtsilä JOVYATLAS offers grounding resistors in the protection classes IP00, IP20, IP23 and IP54. All grounding resistors are designed according to the international standards of IEEE-STD 32-1972. The production of grounding resistors meets the cutting-edge manufacturing methods. By means of simulation models the resistance materials are exploited to their maximum during the manufacturing

process – thus a cost-optimised production of grounding resistors is enabled, of which our customer directly can benefit.

STRUCTURE AND DESIGN

Grounding resistors JOVYLOAD NGR consist of an active (electrical) part, which comprises the resistor blocks plus the monitoring units and a special housing (passive part) designed for the respective application. The steel sheet housings for grounding resistors are available in a galvanised version, in stainless steel or coated version. For the coating a high performance powder coating system based on polyester is used. Depending on size and weight of the active part, a self-supporting housing is applied or the grounding resistors are mounted on a solid base frame. The used resistor elements of the type HWS and SPR consist of robust stainless steel plates.

Fig.1 Technical Drawing Wärtsilä JOVYLOAD NGR



TYPE OVERVIEW

	Termination	Voltage [kV]	Current [A]	Time [sec]	Dimensions W x H x D [mm]	Weight [kg]
12 kV	EW 12 kV - 1	6,35	50	10	800 x 800 x 925	80
	EW 12 kV - 2	6,35	100	10	800 x 800 x 925	90
	EW 12 kV - 3	6,35	200	10	990 x 800 x 925	115
	EW 12 kV - 4	6,35	300	10	990 x 800 x 925	130
	EW 12 kV - 5	10,50	400	10	990 x 1150 x 925	200
	EW 12 kV - 6	10,50	500	10	800 x 1500 x 925	230
	EW 12 kV - 7	10,50	600	10	800 x 1500 x 925	240
	EW 12 kV - 8	10,50	700	10	800 x 1500 x 925	255
	EW 12 kV - 9	10,50	800	10	900 x 1500 x 925	275
	EW 12 kV - 10	10,50	900	10	800 x 1850 x 925	305
	EW 12 kV - 11	10,50	1000	10	800 x 1850 x 925	320
	EW 12 kV - 12	10,50	1250	10	990 x 1500 x 925	390
	EW 12 kV - 13	10,50	1500	10	900 x 1850 x 925	460
	EW 12 kV - 14	10,50	1750	5	800 x 1500 x 925	310
	EW 12 kV - 15	10,50	2000	5	900 x 1500 x 925	340
24 kV	EW 24 kV - 1	20,00	200	10	1200 x 1800 x 1170	330
	EW 24 kV - 2	20,00	300	10	1200 x 1800 x 1170	390
	EW 24 kV - 3	20,00	500	10	1100 x 2150 x 1170	460
	EW 24 kV - 4	20,00	800	5	1200 x 1800 x 1170	410
	EW 24 kV - 5	20,00	1000	5	1000 x 2150 x 1170	420
	EW 24 kV - 6	20,00	1500	3	1000 x 2150 x 1170	420
	EW 24 kV - 7	20,00	2000	3	1000 x 2150 x 1170	520
	EW 24 kV - 8	20,00	2000	5	1200 x 2150 x 1170	650

- **ROBUST AND STABLE CONSTRUCTION**
- **HIGH OPERATIONAL SAFETY**
- **CIRCUIT BREAKER/LOAD BREAK/VACUUM CIRCUIT BREAKER SWITCHES OPTIONALLY AVAILABLE**
- **CUSTOMISED MANUFACTURING FEASIBLE**
- **GALVANISED, POWDER COATED HOUSING, STAINLESS STEEL HOUSING OPTIONALLY AVAILABLE**
- **STANDARDS IEEE-STD 32-1972**
- **PROTECTION CLASSES IP 00, IP 20, IP 23, IP 54 POSSIBLE**

Fig.2 Wärtsilä JOVYLOAD NGR - Detailed View

