

NEXT-GENERATION RECTIFIERS FOR ELECTROLYZERS

- Optimal architecture
- Minimum LCoH
- Grid friendly
- Modular power converter solution

STANDARDS



Safety regulations

IEC 62477-1
IEC 61439-1
IEC 60529
2014/35/EC
IEC 61508



EMC regulations

IEC 61000-6-2
IEC 61000-6-4
2014/30/EC



Environmental regulations

IEEE 693
IEC 60721-3-1
IEC 60721-3-2
IEC 60068-2-6
IEC 60068-2-27
IEC 60068-3-3



UL certification

UL1741
CSA C22.2 No.107-1

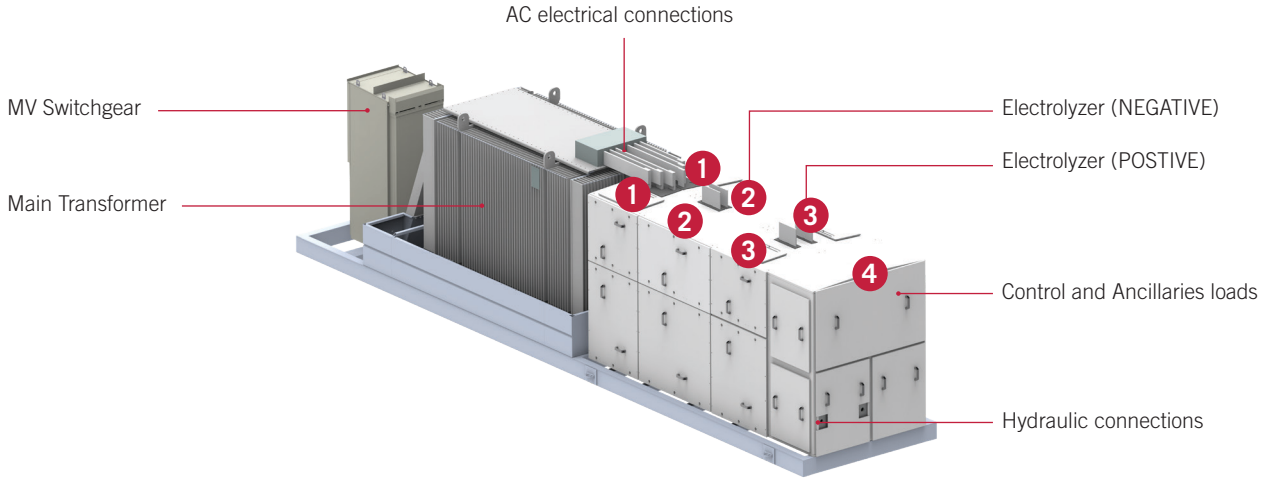


Grid connection

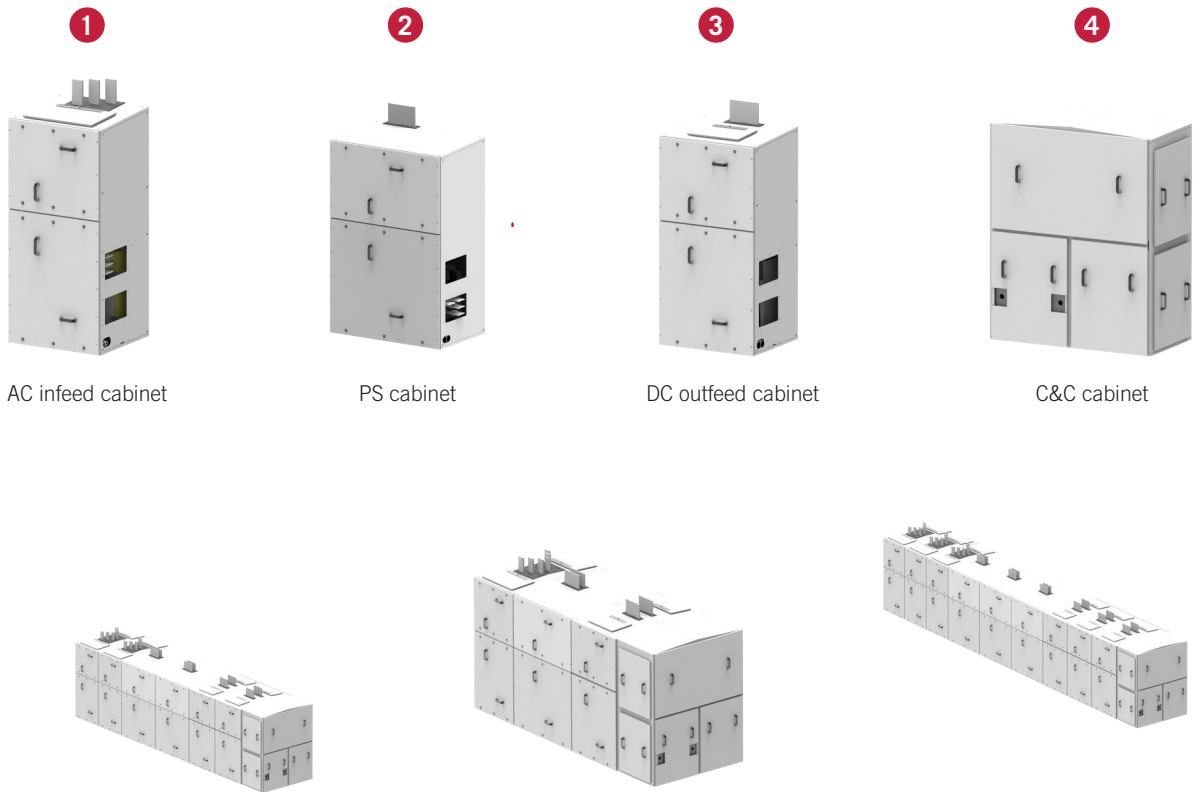
IEEE 519
IEC 61000-3-4

Next-generation rectifier solutions for electrolyzers

OVERVIEW



MODULAR DESIGN



Big brother solution up to 36 kA DC and 22.5 MW to cover from one up to 6 electrolyzers.

Specifications included in this datasheet could change without notice. Please contact Ingeteam's sales department in case of any queries.

P<8MW

8MW<P<16MW

16MW<P<24MW

RECTIFIERS

Independent Conversion Lines	2	2	2
Grid rated voltage	750Vac±10%	750Vac±10%	750Vac±10%
Grid rated frequency	50/60 Hz ± 5%	50/60 Hz ± 5%	50/60 Hz ± 5%
Power factor range	0 - 1	0 - 1	0 - 1
Reactive power compensation capability	Yes	Yes	Yes
Input AC current	2x3.75kA	2x7.5kA	2x11.25kA
Maximum harmonic distortion	IEE519/IEC61300-3-4 Extended option on request	IEE519/IEC61300-3-4 Extended option on request	IEE519/IEC61300-3-4 Extended option on request
Current DC	2x6kA	4x6kA	6x6kA
Voltage DC	<1250V	<1250V	<1250V
DC Current ripple	<5%t * Extended option <3%	5%t * Extended optional <3%	5%t * Extended optional <3%
Nominal efficiency at rated conditions	>98%	>98%	>98%
Cooling inlet temperature range	3°C – 40°C Extended option – 50°C	3°C – 40°C Extended option – 50°C	3°C – 40°C Extended option – 50°C
Cooling	Liquid (water) Heat exchanger included	Liquid (water) Heat exchanger included	Liquid (water) Heat exchanger included
Operation Ambient Temperature	-40°C to 50°C	-40°C to 50°C	-40°C to 50°C
Life time	>25 years	>25 years	>25 years
IP Protection degree	IP65	IP65	IP65
Certification	CE UL or CSA on request	CE UL or CSA on request	CE UL or CSA on request
Protection degree	CH5	CH5	IVC5H

STEP DOWN TRANSFORMER

Medium voltage	Up to 36 kV	Up to 36 kV	Up to 36 kV
Type	KNAN / AN On request	On request	On request

MV SWITCHGEAR (RMU)

Medium voltage	36 kV class	36 kV class	36 kV class
Rated current	630 A	630 A	630 A
Cooling system	Natural air ventilation	Natural air ventilation	Natural air ventilation
Protection degree	IP54	IP54	IP54
Type	2L1A/OL1A1L/1L1A/OL1A	2L1A/OL1A1L/1L1A/OL1A	2L1A/OL1A1L/1L1A/OL1A
Protections	50N/51N	50N/51N	50N/51N

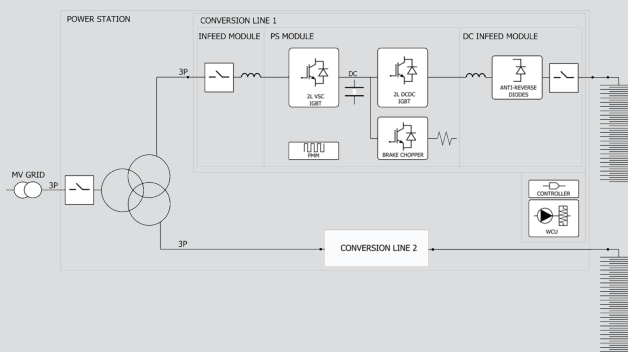
OVERALL SYSTEM DATA

L x W x H	9900 x 2100 x 2600 mm	13300 x 2300 x 3000 mm	18000 x 2500 x 3500 mm
Weight	< 25t	< 40t	< 53t
Altitude limits	2000 m	2000 m	2000 m
Transport	Standard container	Standard container	Standard container
Auxiliary power supply	400Vac@7.5kW	400Vac@12kW	400Vac@16kW

Note

(*) At nominal conditions when point of connection (POC) is compliant with IEC 61000-3-6

P<8MW Power conversion simplified line diagram



Specifications included in this datasheet could change without notice. Please contact Ingeteam's sales department in case of any queries.

Ingeteam

www.ingeteam.com