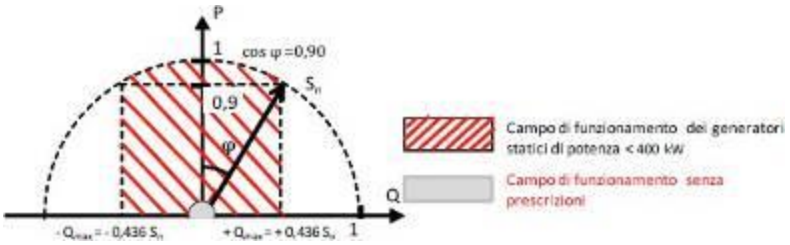
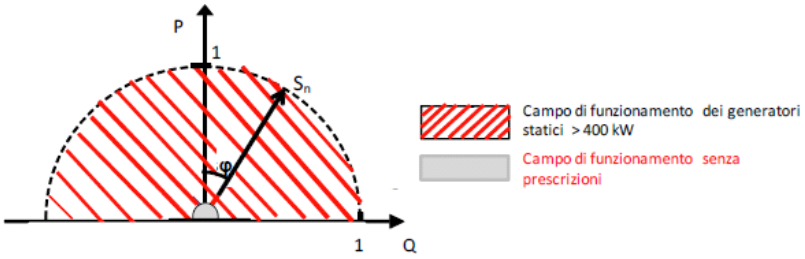
N.6.1 Verifica della capability di erogazione della potenza reattiva * /reactive power production capability*	
Potenza massima dell'impianto di destinazione: *Maximum power of the destination plant:*	☐ PV $_{plant}$ < 400 KW *(see picture 1A)* ☒ PV $_{plant}$ ≥ 400 KW *(see picture 1B)* ☐ Wind generator *(see picture 1C)*
Tollerance:	ΔQ ≤ ±5% for each measured points For values of P≤10%*Sn → ΔQ ≤ ±10%Sn
Sampling:	For each of the 11 levels of active power, 1 values of inductive reactive power and 1 values of capacitive reactive power must be recorded, as **averaged values in 1 min**, based on the measurements at the **fundamental frequency in a window of 200ms**,
Ambient temperature (°C) .....:	25
Humidity (RH %) .....:	68
Input voltage .....:	700V (typical value specified by the manufacturer)
Deviation for wind generator (FC e DFIG) - N,6,1,2: Test performed according: **IEC 61400-21 Ed, 2, §, 6,7,1 and §, 7,7,1,**	

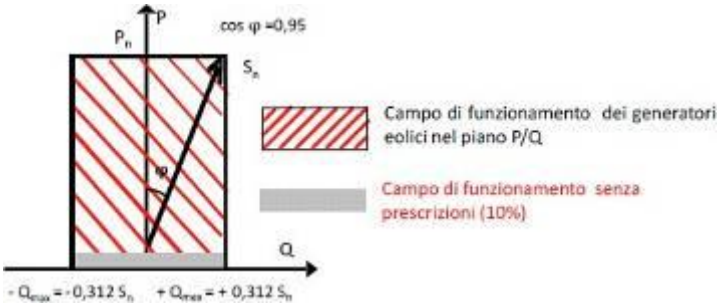
Picture 1A



Picture 1B



Picture 1C



Reactive power production with set point Q = 0							
Power-Bin	Active Power		Reactive Power		DC Power		Power Factor cos phi
	W	P,U	Var	P,U	W	P,U	
0% ± 5%	60	0.14	-902	-2.05	74	0.17	0.066
10% ± 5%	3909.17	0.10	126.59	0.32	4082.25	0.10	0.996
20% ± 5%	7970.92	0.20	134.00	0.34	8215.50	0.21	0.999
30% ± 5%	12033.27	0.30	384.20	0.96	12367.45	0.31	0.999
40% ± 5%	16085.56	0.40	356.96	0.89	16526.71	0.41	0.999
50% ± 5%	20130.22	0.50	295.10	0.74	20682.15	0.52	0.999
60% ± 5%	24162.50	0.60	249.44	0.62	24832.47	0.62	0.999
70% ± 5%	28158.42	0.70	299.42	0.75	28952.18	0.72	0.999
80% ± 5%	32200.12	0.81	318.99	0.80	33167.66	0.83	0.999
90% ± 5%	36210.04	0.91	365.35	0.91	37340.30	0.93	0.999
100% ± 5%	40214.72	1.01	408.34	1.02	41539.25	1.04	0.999
Reactive power production with set point Qmax|cap							
Power-Bin	Active Power		Reactive Power		DC Power		Power Factor cos phi
	W	P,U	Var	P,U	W	P,U	
0% ± 5%	144.21	0.33	44111.33	100.25	959.37	2.18	0.003
10% ± 5%	3887.53	8.83	43260.17	98.32	4697.11	10.68	0.089
20% ± 5%	8312.24	18.89	42673.20	96.98	9117.21	20.72	0.191
30% ± 5%	13101.13	29.78	41602.15	94.55	13943.24	31.69	0.300
40% ± 5%	17079.15	38.81	40458.71	91.95	17970.22	40.84	0.389
50% ± 5%	21706.08	49.33	38272.11	86.98	22656.23	51.49	0.493
60% ± 5%	26206.14	59.56	35281.15	80.18	27164.22	61.74	0.596
70% ± 5%	30786.51	69.97	31618.61	71.86	31801.20	72.27	0.698
80% ± 5%	34746.61	78.97	26439.27	60.09	35779.10	81.32	0.796
90% ± 5%	39754.47	90.35	18684.29	42.46	40869.10	92.88	0.905
100% ± 5%	40805.12	92.74	1713.22	3.89	41975.37	95.40	0.993
Reactive power production with set point Qmax|ind							
Power-Bin	Active Power		Reactive Power		DC Power		Power Factor cos phi
	W	P,U	Var	P,U	W	P,U	
0% ± 5%	1335.57	3.03	-43416.30	-98.67	2917.15	6.63	0.031
10% ± 5%	5297.78	12.04	-43219.63	-98.23	6890.84	15.66	0.122
20% ± 5%	9513.06	21.62	-42516.83	-96.63	11081.54	25.18	0.218
30% ± 5%	14478.33	32.91	-41760.59	-94.91	16105.39	36.60	0.328
40% ± 5%	18396.93	41.81	-39555.91	-89.90	19968.40	45.38	0.422
50% ± 5%	22396.24	50.90	-37523.54	-85.28	23981.55	54.50	0.513
60% ± 5%	26785.14	60.87	-34602.93	-78.64	28311.51	64.34	0.612
70% ± 5%	30906.56	70.24	-30927.37	-70.29	32382.91	73.60	0.707
80% ± 5%	35104.55	79.78	-25720.11	-58.45	36558.53	83.09	0.807
90% ± 5%	39772.18	90.39	-19385.41	-44.06	41201.42	93.64	0.899
100% ± 5%	39576.77	89.95	4906.69	-11.15	40608.48	92.29	0.989

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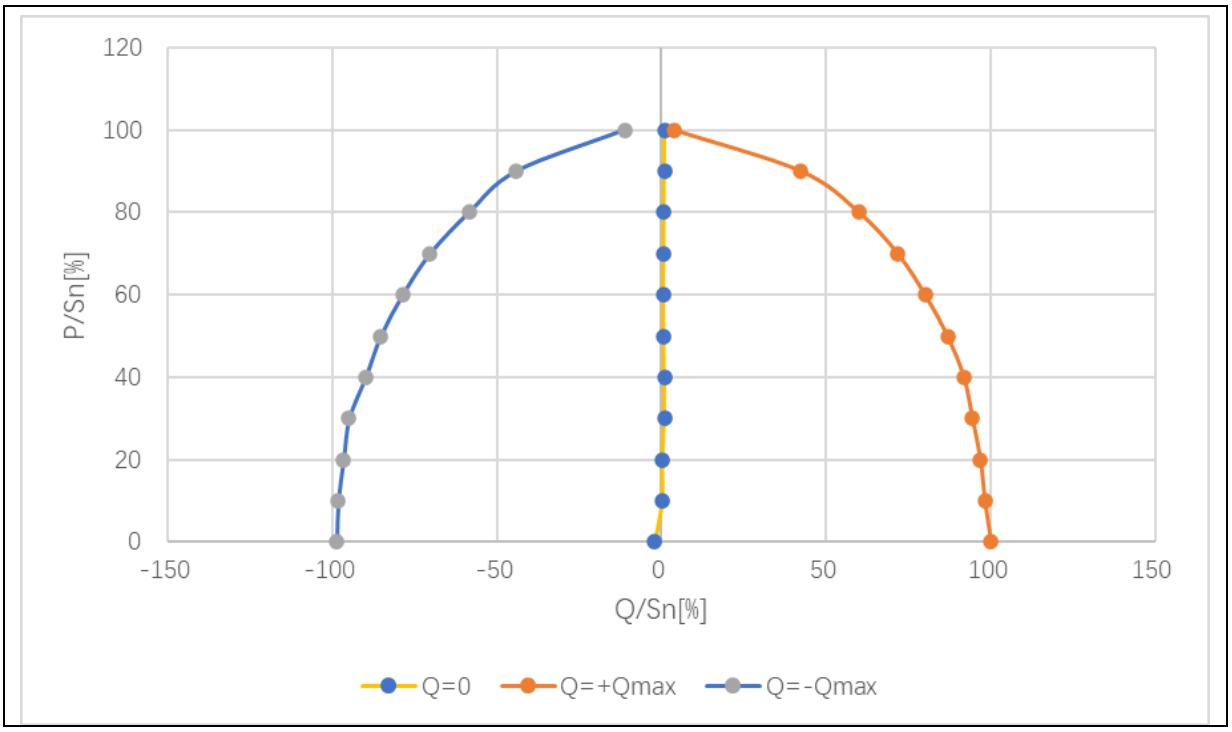
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