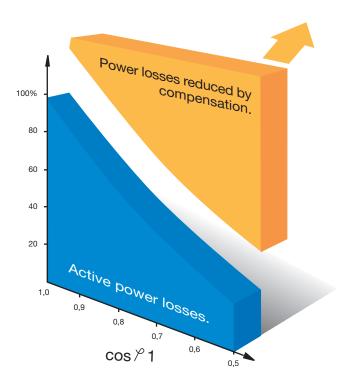


# High voltage capacitor banks

- Pay-back period 1-3 yearsCustom-designed



### Reactive power compensation systems



Power Factor Correction reduces transmission losses.



Enclosed capacitor bank, type 6 TILP 4 Mvar/20kV.

When it comes to high voltage capacitors, Nokian Capacitors is the name to remember. What ever your exact needs are, Nokian Capacitors can supply the right product. The Nokian Capacitors range is both flexible and comprehensive, with a large number of options available:

- Open or enclosed construction
- High or low power
- Fixed power
- Integrated or for use with individual motors

We build the capacitor banks to match your precise requirements, and we can also produce special designs for use in places where space is restricted or climatic conditions are difficult.

Nokian Capacitors also manufactures its own unbalance relays.

#### From the arctic to the tropics

Nokian Capacitors' capacitors units are already giving excellent service in all parts of the world. Nokian Capacitors know-how covers the design of capacitor banks for use in extreme climatic conditions, ranging from the freezing arctic of northern Canada and Scandinavia to the tropical heat of Africa and the Far East. Nokian Capacitors' capacitor banks are built up from high voltage, all-film dielectric capacitor units with separate internal fuses for each element. The impregnation liquid is both non-PCB and non-chlorine, and the individual units are fully sealed in welded weather resistant stainless steel cases (AISI 409). The cases are given a protective coating of paint selected according to conditions at the installation site. The frame is constructed of either weather resistant aluminium or hot dip galvanized steel. This ensures that Nokian Capacitors' capacitor banks will withstand any weather conditions.

#### Installation work minimized

Nokian Capacitors' capacitor banks are designed for maximum possible ease of installation, and allowance is also made for the special requirements imposed by transportation. The capacitor units are mounted in the frame and ready wired up before dispatch from the factory. At the installation site it is only necessary to fix the frames in position and complete the connections.

#### High quality standards

Nokian Capacitors put itself well ahead of its competitors when it was the first manufacturer to connect a 735 kV capacitor bank to the network. This pioneering installation has proved itself over the years, and has subsequently helped to bring Nokian Capacitors number of commissions for other major projects.

With a wealth of know-how and expertise that is second to none, Nokian Capacitors' Research and Development team continues to produce innovative applications to improve the quality of electrical supplies. Nokian Capacitors' capacitor factory is one of the most modern in Europe and provides all the facilities required for the development and production of reliable, high technology equipment.

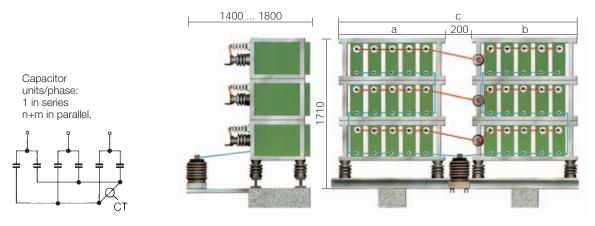
# Nokian Capacitors technical services

The economic benefits of reactive power compensation systems consist of savings in energy and power costs, the reduction of losses, both in the network and in the generation of reactive power, and corresponding improvements in transmission capacity. Customers can call on the expertise of Nokian Capacitors Technical Services and Nokian Capacitors field representatives to find the optimum compensation system for any reactive power problem. Nokian Capacitors can offer a cost-benefit analysis of the various alternatives available and then draw up an individual plan detailing the most economical scheme. Practical experience indicates that the pay-back period for high voltage capacitor banks is 1 - 3 years.



## **Technical data**

For typical 3... 22 kV open type capacitor banks. Other types on request.



Capacitor banks for 3 ... 22 kV 1.2 ... 24 Mvar range.

3 22 kV					
Item	No. of units	In parallel	Dimensions/mm		
		n+m	а	b	С
1	12	2+2	435	435	1070
2	15	2+3	805	435	1440
3	18	3+3	805	805	1810
4	21	3+4	1000	805	2005
5	24	4+4	1000	1000	2200
6	27	4+5	1195	1000	2395
7	30	5+5	1195	1195	2590
8	36	6+6	1390	1390	2980
9	42	7+7	1465	1465	3130

In line with our policy of on-going product development we reserve the right to alter specifications.

