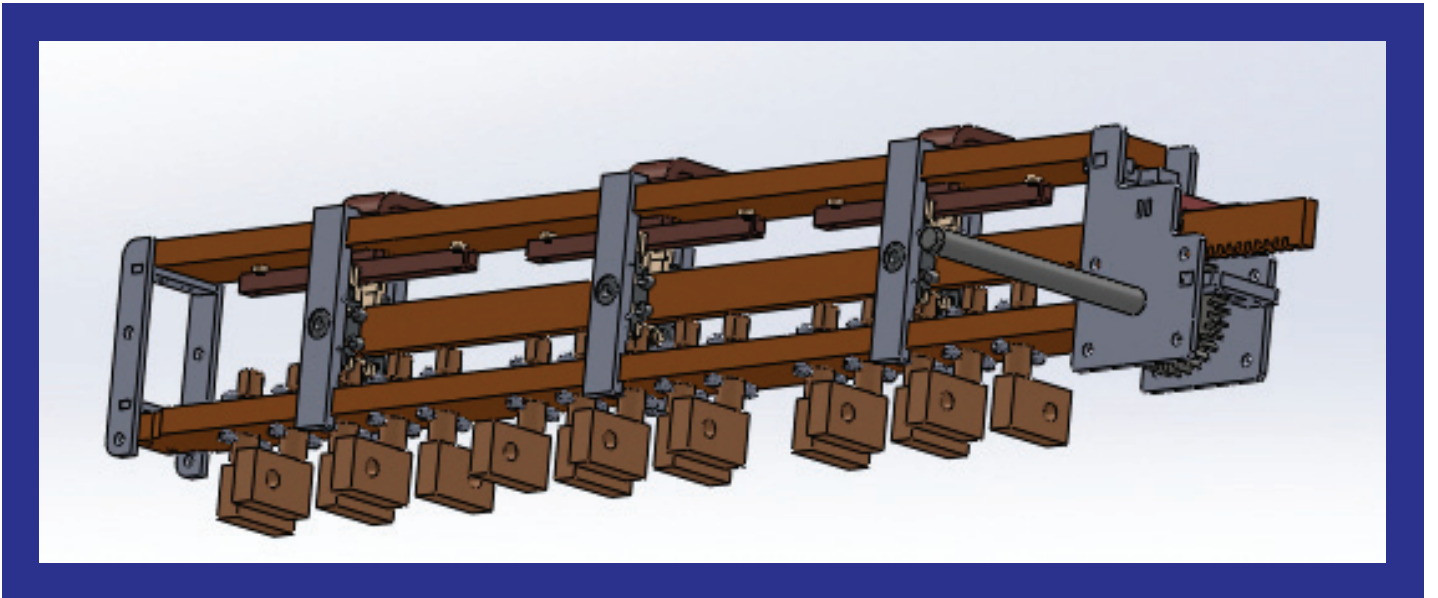


ER KAR

Transformer
Accessories and Equipments



EKF IV

GENERAL SPECIFICATION

These tap changers are available in one two or three phase applications.

The shaft length is variable.

Connection diagrams in page EK FIV 2 can be applied in any variation to all types.

These tap changers are bolted on to the supports, welded under transformer cover and allow strong construction.

ASSEMBLY

A fraction of turn on the control head is necessary to switch from one position to another. A notch is provided to mark each position precisely. For each operation, the notch must first be released by pulling the padlockable pul rod. After being turned to the desired position, the device locks into the respective notch under the action of a spring. Refer to page EK FIV 7 for the choice of an operating device matching the tap changer fitting.

The numbering of the positions is engraved on the repeater disc of the control head.

See page EK FIV 8 for the various directions of numbering.

MATERIALS

Steel Parts: These parts can be stainless or mild steel. Mild steel parts are cadmium or zinc plated. Upon request galvanizing is also available.

Aluminum Parts : GAISI12Cu

BrassParts : Cu ZN40Pb2 Ms 60 F34 DIN 17 673

Copper Parts : E - Cu F25 DIN 40 500

Insulator Parts : Paper phenol - plastic resin based laminates, HP 2061.5 class of DIN 7735.

ON REQUEST

The aluminum parts can be protected by anodic oxidation.

The mild steel parts can be supplied in stainless steel.

The brass and copper parts can be tin, silver or cadmium plated.

CURRENT

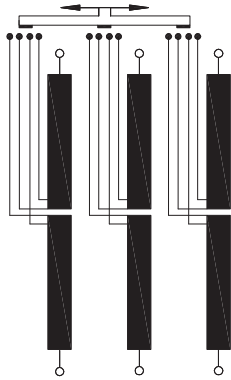
Up to 1250A.

See page EK FIV 6 for the types and dimensions of the contacts.

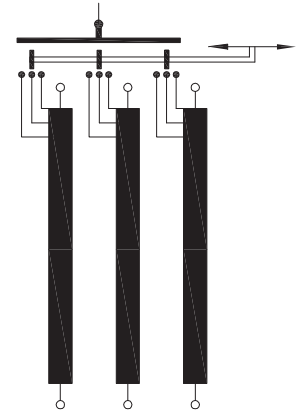
VOLTAGE CLASS

VOLTAGE CLASS	B. I. L.
20 kV	125 kV
30 kV	170 kV

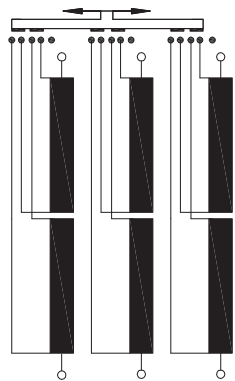
Other B. I. L. values are also available upon customer request.



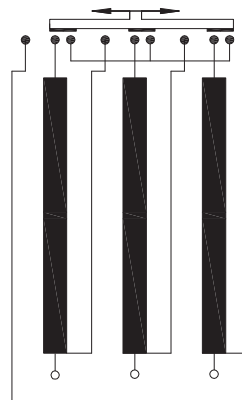
setting for delta transformer



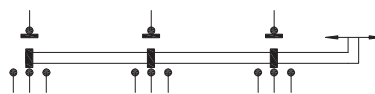
setting for star with outer - earthed conductor transformer



series - parallel coupling

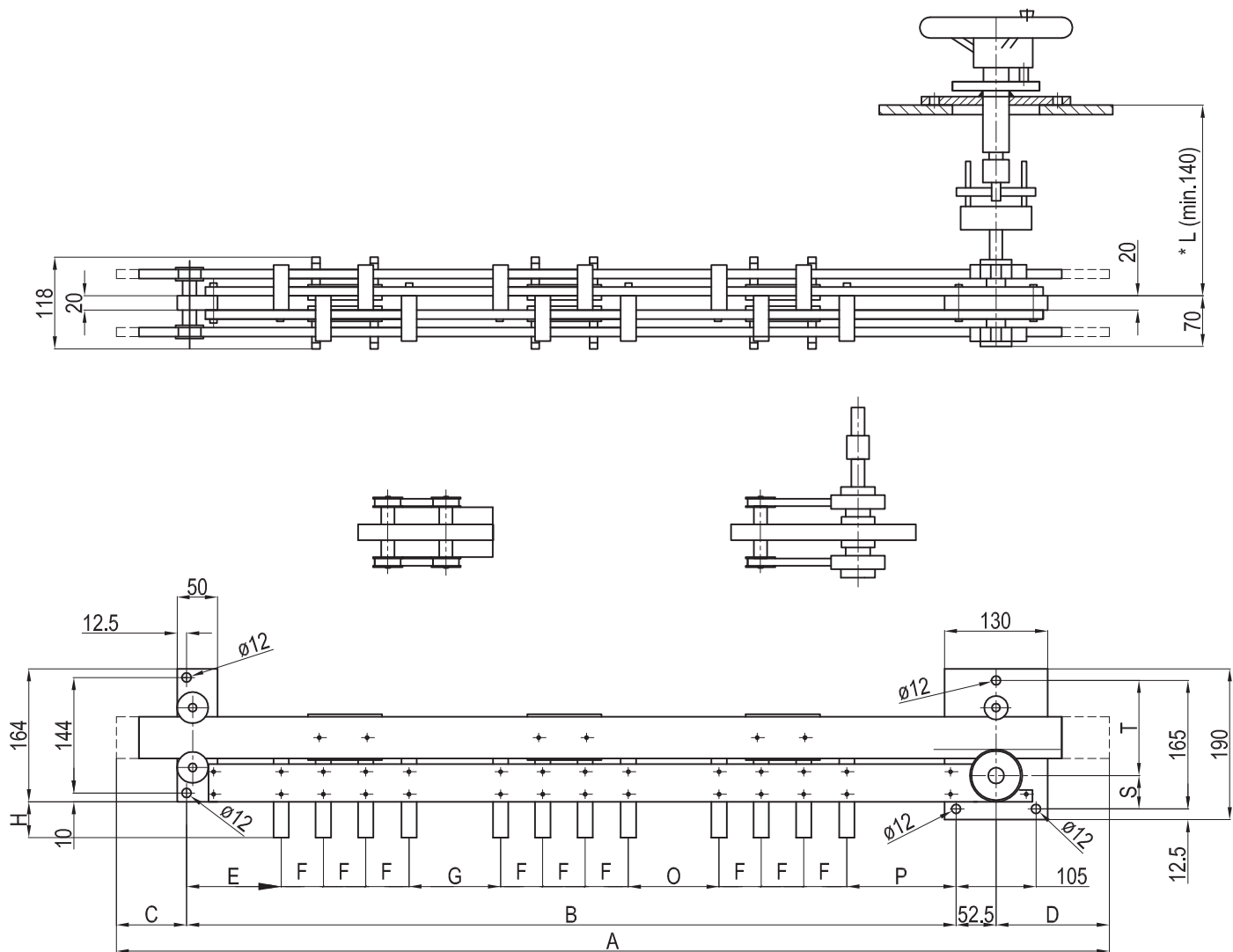


star - delta coupling



common output per phase

Off-circuit operation can be used in oil Delta diagram 20-30kV
800-1250A 2-5 positions Setting 2.5 % per position

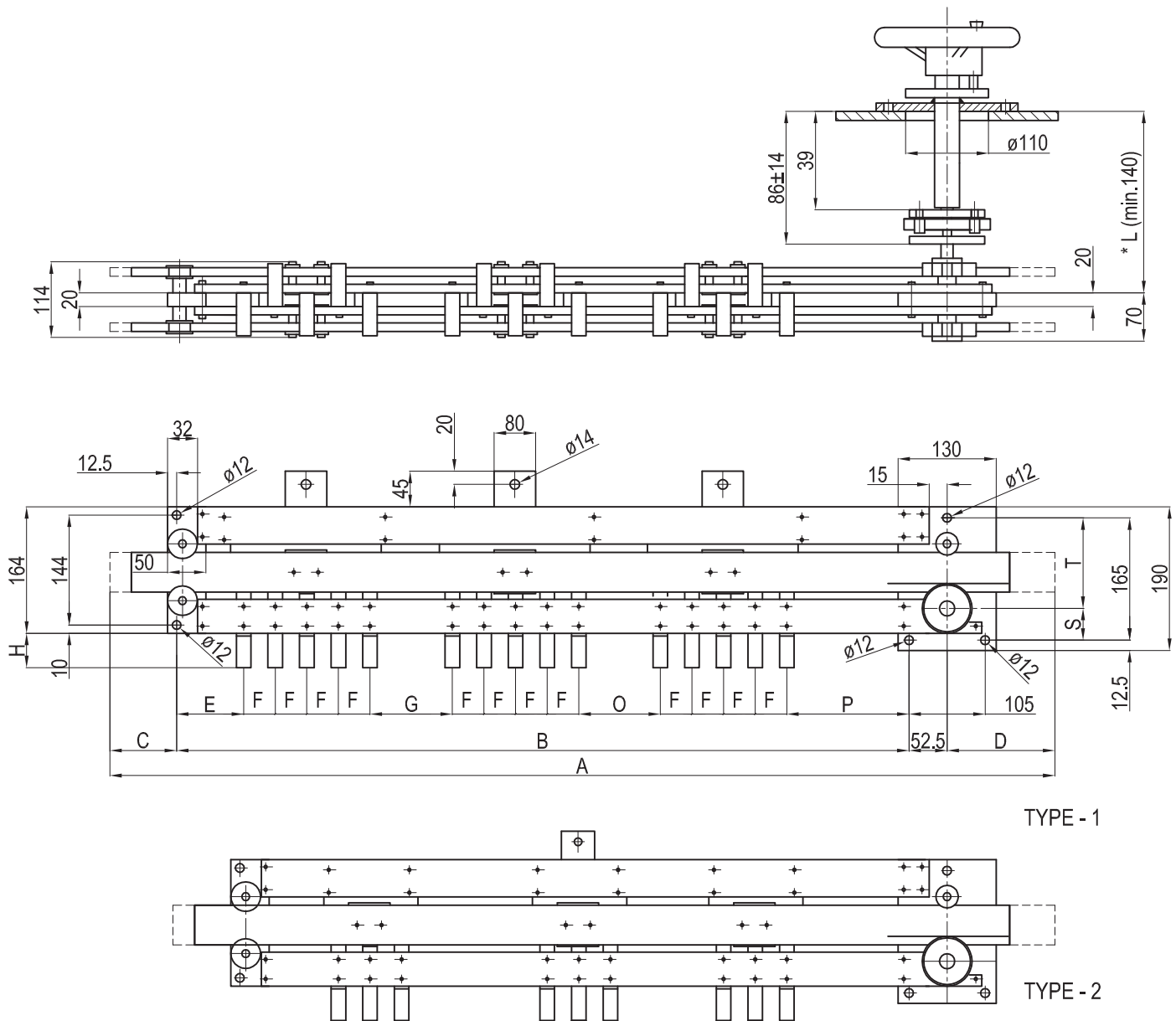


Voltage class kV	Number of Positions	A	B	C	D	E	F	G	H	O	P	S	T	L	Unit No
20	2	876	681	58	85	108	55	80	Depending on fixed contacts	80	83	43	122	Please quote when ordering	E 43148D2
	3	1151	846	113	140	108	55	80		80	83	43	122		E 43148D3
	4	1426	1011	168	195	108	55	80		80	83	43	122		E 43148D4
	5	1701	1176	223	250	108	55	80		80	83	29	136		E 43148D5
30	2	1010	815	58	85	140	55	115	Depending on fixed contacts	115	115	43	122	Please quote when ordering	E 43158D2
	3	1285	980	113	140	140	55	115		115	115	43	122		E 43158D3
	4	1560	1145	168	195	140	55	115		115	115	43	122		E 43158D4
	5	1835	1310	223	250	140	55	115		115	115	29	136		E 43158D5

* L min 95 for E50320 control device

* L min 170 for E50330 control device

Off-circuit operation can be used in oil Star diagram 20-30kV
800-1250A 2-5 positions Setting 2.5 % per position



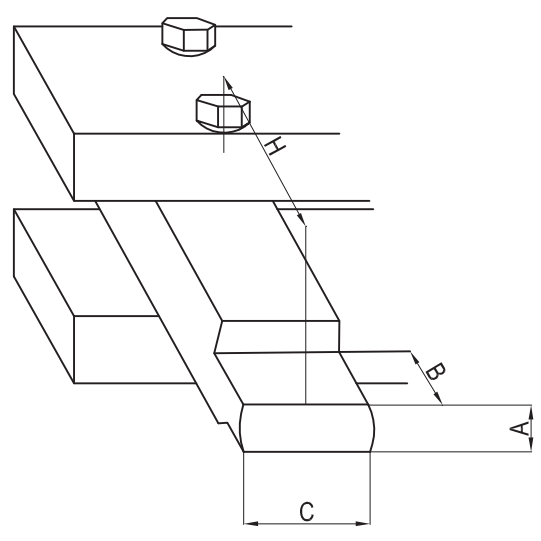
TYPE - 1

TYPE - 2

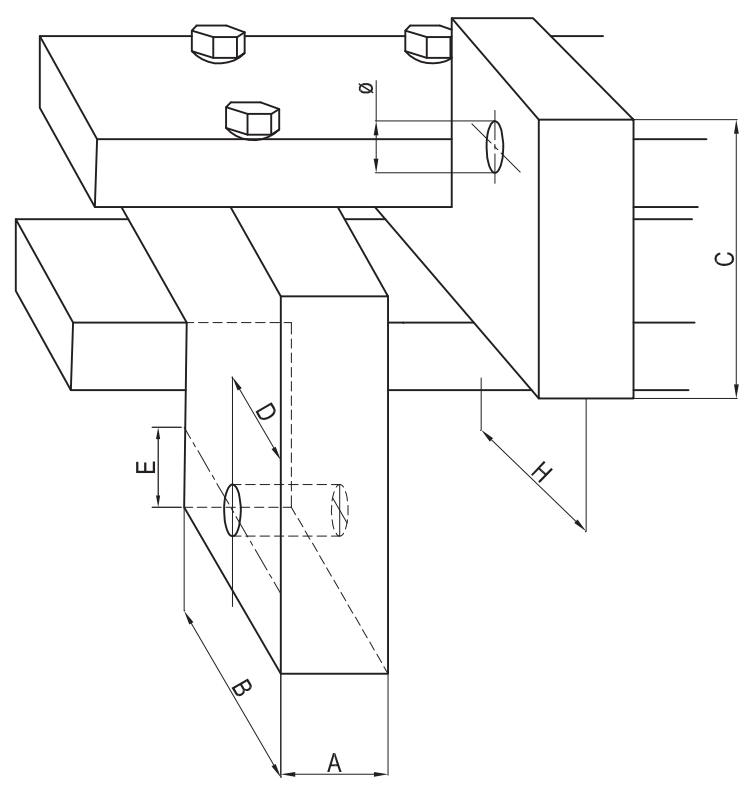
Voltage class kV	Number of Positions	A	B	C	D	E	F	G	H	O	P	S	T	L	Unit No TYPE - 1	Unit No TYPE - 2
20	2	815	620	58	85	125	55	115	Depending on fixed contacts	115	100	43	122	Please quote when ordering	E 43148C2	E 43148F2
	3	1090	785	113	140	125	55	115		115	100	43	122		E 43148C3	E 43148F3
	4	1365	950	168	195	125	55	115		115	100	43	122		E 43148C4	E 43148F4
	5	1640	1115	223	250	125	55	115		115	100	29	136		E 43148C5	E 43148F5
	30	2	935	740	58	85	155	55		145	145	130	43		122	E 43158C2
30	3	1210	905	113	140	155	55	145	145	130	43	122	E 43158C3	E 43158F3		
	4	1485	1070	168	195	155	55	145	145	130	43	122	E 43158C4	E 43158F4		
	5	1760	1235	223	250	155	55	145	145	130	29	136	E 43158C5	E 43158F5		
									145	130	29	136	E 43158C5	E 43158F5		

* L min 95 for E50320 control device

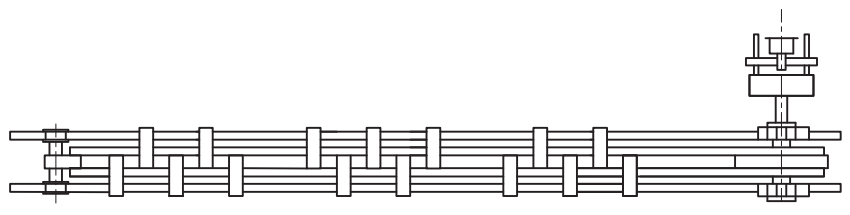
* L min 170 for E50330 control device



FLAT HORIZONTAL CONTACT



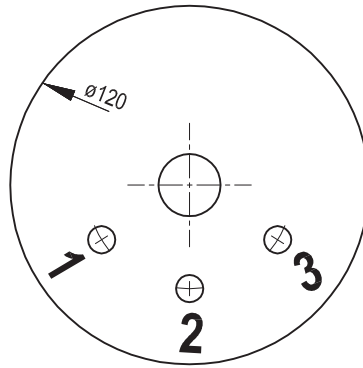
FLAG TYPE CONTACTS



UNLESS OTHERWISE SPECIFIED BY THE CUSTOMER, FLAG TYPE CONTACTS ARE POSITIONED AS IN THE DIAGRAM ABOVE

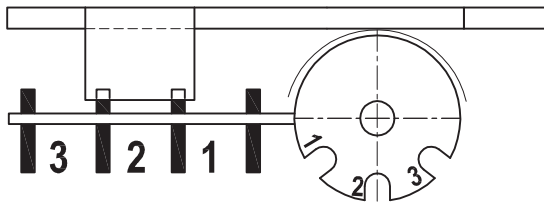
DESCRIPTION	CONTACT NUMBERS	CURRENT A	A	B	C	D	E	H
FLAT HORIZONTAL CONTACT	E55360	< 1000	10	30	27	--	--	100
	E55361	< 1200	13	35	37	--	--	100
FLAG TYPE CONTACT	E55364	800	20	37.5	60	15	15	37.5
	E55365	1000	20	42.5	60	17.5	17.5	42.5
	E55366	1200	25	47.5	80	20	20	47.5

Repeaters for rack and pinion drive

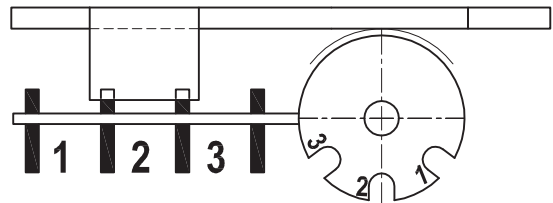


Numbering of the repeaters for rack and pinion drive

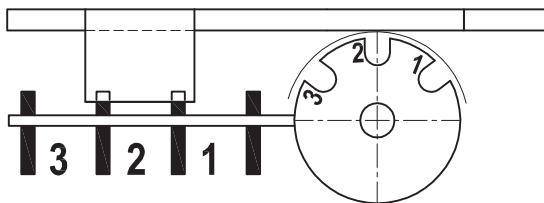
A1



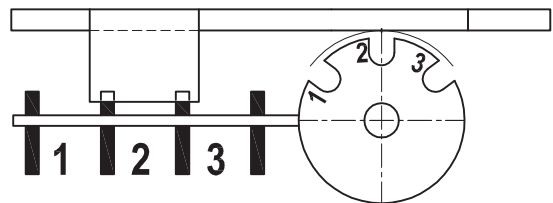
B1



D1



C1



WHEN ORDERING PLEASE QUOTE:

- 1 - The tap changer unit no.
- 2 - The voltage class current and type of setting or coupling.
- 3 - Control device no.
- 4 - The language on the control device.
- 5 - Number of positions.
- 6 - The indication of the repeater disc (A1, B1, C1, D1)
- 7 - Dimensions of the fixed contacts

For special setups not shown in the catalogue please consult us.