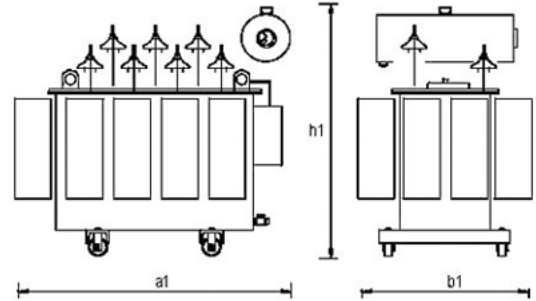




## TRANSFORMADORES INMERSOS EN ACEITE CON CONMUTADOR DE CARGA OIL IMMERSED TRANSFORMER WITH ON LOAD TAP CHANGER

DATOS ELECTRICOS, DIMENSIONES, MASAS / ELECTRICAL DATA, DIMENSIONS, MASES

**RATED VOLTAGE** 36 - 52 - 72 kV  
**COOLING METHOD** ONAN/ONAF  
**TAPPING RANGE**  $\pm 10$  in  $\pm 8$  steps  
**RATED FREQUENCY** 50Hz  
**VECTOR GROUP** Dyn11



| SERIE | Potenza       | Potenza       | Po<br>(kW) | Pcc<br>ONAN<br>(kV) | Pcc<br>ONAF<br>(kW) | ZI<br>ONAN<br>% | ZI<br>ONAF<br>% | $\eta$ 4/4   |     | $\eta$ 3/4     |     | $\eta$ 4/4   |     | $\eta$ 3/4     |     | Dimensioni e masse  |      |      |       |      |
|-------|---------------|---------------|------------|---------------------|---------------------|-----------------|-----------------|--------------|-----|----------------|-----|--------------|-----|----------------|-----|---------------------|------|------|-------|------|
|       | Power         | Power         |            |                     |                     |                 |                 | $\cos\phi$ 1 |     | $\cos\phi$ 0.9 |     | $\cos\phi$ 1 |     | $\cos\phi$ 0.9 |     | Dimensions & masses |      |      |       |      |
|       | ONAN<br>(MVA) | ONAF<br>(MVA) |            |                     |                     |                 |                 | ONAN         |     | ONAF           |     | ONAN         |     | ONAF           |     | a1                  | b1   | h1   | total | oil  |
|       | (MVA)         | (MVA)         |            |                     |                     |                 |                 | (%)          | (%) | (%)            | (%) | (%)          | (%) | (%)            | (%) | (mm)                | (mm) | (mm) | (kg)  | (kg) |

| 36 kV | 3,15 | 4,5 | 3,5  | 28  | 57    | 6,25 | 8,9   | 99,00 | 98,90 | 99,19 | 99,10 | 98,67 | 98,52 | 98,95 | 98,84 | 2450 | 2000 | 2500  | 7500  | 1500 |
|-------|------|-----|------|-----|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|-------|------|
|       | 4    | 6   | 4    | 32  | 72    | 7,2  | 10,8  | 99,10 | 99,00 | 99,27 | 99,19 | 98,74 | 98,61 | 99,02 | 98,91 | 2500 | 2000 | 2550  | 8500  | 1550 |
|       | 5    | 7,5 | 4,6  | 38  | 86    | 7,2  | 10,8  | 99,15 | 99,06 | 99,31 | 99,23 | 98,81 | 98,68 | 99,07 | 98,96 | 2550 | 2100 | 2700  | 9800  | 1800 |
|       | 6,3  | 9,5 | 5,5  | 45  | 102   | 7,2  | 10,9  | 99,20 | 99,11 | 99,35 | 99,28 | 98,87 | 98,75 | 99,12 | 99,02 | 2600 | 2200 | 2800  | 11000 | 2200 |
|       | 8    | 12  | 6,3  | 54  | 121,5 | 8,5  | 12,8  | 99,25 | 99,16 | 99,39 | 99,32 | 98,94 | 98,83 | 99,17 | 99,08 | 2800 | 2300 | 3000  | 13000 | 2600 |
|       | 10   | 15  | 7,1  | 63  | 142   | 8,5  | 12,8  | 99,30 | 99,22 | 99,43 | 99,37 | 99,01 | 98,90 | 99,23 | 99,14 | 3000 | 2400 | 3100  | 16000 | 3000 |
|       | 12,5 | 20  | 8,5  | 74  | 189,4 | 8,5  | 13,6  | 99,34 | 99,27 | 99,46 | 99,40 | 99,01 | 98,91 | 99,23 | 99,15 | 3300 | 2600 | 3200  | 19000 | 3400 |
|       | 16   | 25  | 10,5 | 86  | 210   | 10   | 15,6  | 99,40 | 99,33 | 99,51 | 99,45 | 99,12 | 99,02 | 99,31 | 99,24 | 3500 | 2800 | 3400  | 24000 | 4000 |
|       | 20   | 30  | 12,5 | 100 | 225   | 10   | 15,0  | 99,44 | 99,37 | 99,54 | 99,49 | 99,21 | 99,12 | 99,38 | 99,31 | 3800 | 3000 | 3800  | 29000 | 5000 |
|       | 25   | 38  | 15   | 115 | 266   | 10   | 15,2  | 99,48 | 99,42 | 99,57 | 99,52 | 99,26 | 99,18 | 99,42 | 99,36 | 4000 | 3200 | 4000  | 36000 | 6000 |
| 31,5  | 48   | 18  | 138  | 320 | 12    | 18,3 | 99,50 | 99,45 | 99,59 | 99,55 | 99,29 | 99,22 | 99,45 | 99,39 | 4200  | 3400 | 4200 | 43000 | 7000  |      |

| 52 kV | 3,15 | 4,5 | 3,8  | 27  | 55  | 6,25 | 8,9   | 99,03 | 98,92 | 99,20 | 99,11 | 98,70 | 98,56 | 98,97 | 98,86 | 2600 | 2100 | 2780  | 8300  | 1750 |
|-------|------|-----|------|-----|-----|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|-------|------|
|       | 4    | 6   | 4,5  | 32  | 72  | 7,2  | 10,8  | 99,09 | 98,99 | 99,25 | 99,17 | 98,74 | 98,60 | 99,00 | 98,90 | 2650 | 2100 | 2800  | 9500  | 1800 |
|       | 5    | 7,5 | 5,5  | 38  | 86  | 7,2  | 10,8  | 99,13 | 99,04 | 99,28 | 99,20 | 98,80 | 98,66 | 99,05 | 98,95 | 2700 | 2200 | 2900  | 11000 | 2100 |
|       | 6,3  | 9,5 | 6,5  | 46  | 105 | 7,2  | 10,9  | 99,17 | 99,08 | 99,31 | 99,24 | 98,84 | 98,71 | 99,09 | 98,99 | 2800 | 2300 | 3000  | 12000 | 2500 |
|       | 8    | 12  | 7    | 55  | 124 | 8,5  | 12,8  | 99,23 | 99,14 | 99,37 | 99,30 | 98,92 | 98,80 | 99,15 | 99,06 | 2950 | 2400 | 3200  | 14500 | 2900 |
|       | 10   | 15  | 8    | 65  | 146 | 8,5  | 12,8  | 99,27 | 99,19 | 99,40 | 99,34 | 98,98 | 98,87 | 99,20 | 99,11 | 3150 | 2500 | 3300  | 17600 | 3400 |
|       | 12,5 | 20  | 8,8  | 73  | 187 | 8,5  | 13,6  | 99,34 | 99,27 | 99,47 | 99,41 | 99,03 | 98,92 | 99,24 | 99,16 | 3450 | 2750 | 3400  | 21000 | 3900 |
|       | 16   | 25  | 11   | 90  | 220 | 10   | 15,6  | 99,37 | 99,30 | 99,48 | 99,43 | 99,08 | 98,98 | 99,28 | 99,20 | 3650 | 2950 | 3600  | 26500 | 4600 |
|       | 20   | 30  | 13,5 | 104 | 234 | 10   | 15,0  | 99,41 | 99,35 | 99,52 | 99,46 | 99,18 | 99,09 | 99,35 | 99,28 | 3950 | 3150 | 4000  | 32000 | 5800 |
|       | 25   | 38  | 16,5 | 117 | 270 | 10   | 15,2  | 99,46 | 99,41 | 99,56 | 99,51 | 99,25 | 99,16 | 99,41 | 99,34 | 4150 | 3400 | 4200  | 39000 | 6900 |
| 31,5  | 48   | 22  | 140  | 325 | 12  | 18,3 | 99,48 | 99,43 | 99,57 | 99,52 | 99,28 | 99,20 | 99,43 | 99,37 | 4350  | 3600 | 4400 | 47000 | 8100  |      |

| 72 kV | 3,15 | 4,5 | 4,5 | 27  | 55  | 6,25 | 8,9   | 99,00 | 98,90 | 99,17 | 99,08 | 98,69 | 98,54 | 98,95 | 98,84 | 2700 | 2200 | 3050  | 9500  | 2350 |
|-------|------|-----|-----|-----|-----|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|-------|------|
|       | 4    | 6   | 5   | 32  | 72  | 7,2  | 10,8  | 99,08 | 98,98 | 99,23 | 99,15 | 98,73 | 98,59 | 98,99 | 98,88 | 2800 | 2250 | 3050  | 11000 | 2400 |
|       | 5    | 7,5 | 6   | 39  | 88  | 7,2  | 10,8  | 99,10 | 99,00 | 99,26 | 99,17 | 98,76 | 98,63 | 99,02 | 98,91 | 2900 | 2300 | 3100  | 12000 | 2800 |
|       | 6,3  | 9,5 | 7   | 48  | 109 | 7,2  | 10,9  | 99,13 | 99,03 | 99,28 | 99,20 | 98,79 | 98,65 | 99,04 | 98,94 | 2950 | 2400 | 3200  | 14000 | 3400 |
|       | 8    | 12  | 7,5 | 60  | 135 | 8,5  | 12,8  | 99,16 | 99,07 | 99,31 | 99,24 | 98,82 | 98,69 | 99,08 | 98,98 | 3100 | 2500 | 3400  | 16000 | 4000 |
|       | 10   | 15  | 8,5 | 72  | 162 | 8,5  | 12,8  | 99,20 | 99,11 | 99,35 | 99,27 | 98,87 | 98,75 | 99,12 | 99,02 | 3300 | 2650 | 3500  | 19000 | 4700 |
|       | 12,5 | 20  | 10  | 80  | 205 | 8,5  | 13,6  | 99,28 | 99,20 | 99,41 | 99,35 | 98,93 | 98,82 | 99,17 | 99,08 | 3600 | 2900 | 3600  | 23000 | 5300 |
|       | 16   | 25  | 12  | 95  | 232 | 10   | 15,6  | 99,33 | 99,26 | 99,45 | 99,39 | 99,03 | 98,92 | 99,24 | 99,16 | 3800 | 3100 | 3800  | 29000 | 6200 |
|       | 20   | 30  | 15  | 110 | 248 | 10   | 15,0  | 99,37 | 99,31 | 99,49 | 99,43 | 99,13 | 99,03 | 99,31 | 99,24 | 4100 | 3300 | 4200  | 36000 | 7800 |
|       | 25   | 38  | 18  | 125 | 289 | 10   | 15,2  | 99,43 | 99,36 | 99,53 | 99,47 | 99,19 | 99,11 | 99,37 | 99,30 | 4300 | 3600 | 4400  | 43000 | 9300 |
| 31,5  | 48   | 24  | 145 | 337 | 12  | 18,3 | 99,46 | 99,40 | 99,55 | 99,50 | 99,25 | 99,17 | 99,41 | 99,34 | 4500  | 3750 | 4600 | 53000 | 10900 |      |

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Las características indicadas en oferta, prevalecen sobre las de esta tabla.