Service Manual
OA-5 type 2
Loudspeaker

Sonab

CONTENTS

Technical data

Operating principle	Bass reflex type Onmidirectional Patented
Power handling capacity	40W measured according to DIN 45500 and 45573
Power requirencent	5W for an acoustic output of 0.025W operating effect according to DIN 45500
Frequency range	37-18,000 Hz (DIN 45500)
Frequency response	42-15,000 ± 4 dB
Impedance	About 7 ohms
Filter crossover frequency	2700 Hz, with a roll-off characteristic of 6 dB/octave for the bass and mid-range speaker and 12 dB/ octave for the tweeters.
Speaker elements	Bass and midrange: 1 dynamic 216 m.m Treble: 4 dynamic 51 m.m
Internal volume of cabinet	47 liters
Connection	The loudspeaker is fitted with a male socket (according to DIN 41 529) and is supplied with 5 m of twin lead, one end of which is fitted with a female plug (DIN 41 529) for connection to the speaker and the other end with a male plug (DIN 41 529) for connection to an amplifier.
Dimensions	Width 24 cm, depth 43 cm, height 61 cm. Weight 10 kg.

The frequency response curve of the speaker is flat during normal listening conditions in a living-room with the speaker standing on the floor with the back close to a wall.

Adjustment of woofer damping of the OA-5, OA-4 and V-1 speaker systems

Equipment needed:

1 pcs Tone generator:	35-500 Hz of good amplitude stability and capable of delivering about 8 V into 600 Ohms.
1 pcs Power amplifier:	if power output of tone generator insufficient.
1 pcs AC-voltmeter:	range 100 mV full scale deflection and min. input resistance 1 kohm.
Measuring set-up:	see figure "Impedance measuring set-up" 1-100-020.

Calibration

Replace loudspeaker with a 10 ohm resistor and connect the mV-meter. across the resistor.

Raise output level until 70 mV is measured across the 10 ohm resistor.

Now vary the frequency between 35 and 100 Hz. The 70 mV level must not vary more than ± 0,5 mV.

Adjustment

Connect the speaker system according to "Impedance measuring set-up" The speaker system shall be placed in standard listening position i e on the floor with its back close to the wall.

The top metal mesh shall be taken away to give access to the three adjustment screws for the acoustic damping device.

Connect the mV-meter (100 mV-range) across the speaker system Raise output level to read about 70 mV at 250 Hz. Now lower the frequency slowly down to about 40 Hz. By doing this first a maximum and then a minimun deflection can be seen on the mV-meter. The minimum and the maximum will occur at the following frequencies:

	min Hz	max Hz
OA-5 type 2	41-43	about 80
OA-4 type 2	44-46	about 80
V-1	49-51	about 90

When clearly tuned to the minimum adjust the level to exactly 70 mV.

Thereafter raise the frequency to get the maximum where by fasten or loosen the adjustment screws the level shall read 89 ± 1 mV.

Fastening the screws will lower the voltage and increase the acoustical damping.

Try to fasten the three screws equally tight.

A convenient connection box for the measurement is described i fig. 1-100-021.

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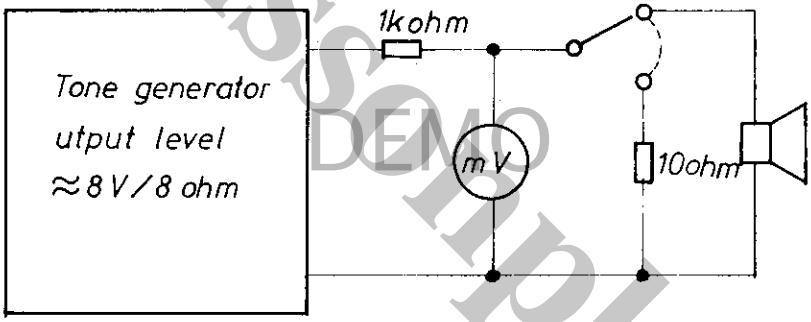
Godkänd - Approved	Scale	File	No. 1-100-020
Benämning			Title
IMPEDANCE MEASURING SET UP			
Konstr.			
Uppgj.			
Granskad			
1 st angle projection			
Uppgjord för - Made for	Ritningsregler och symboler	Toleranser	Drawing rules and symbols / Tolerancer
Ersatter - Replaces			



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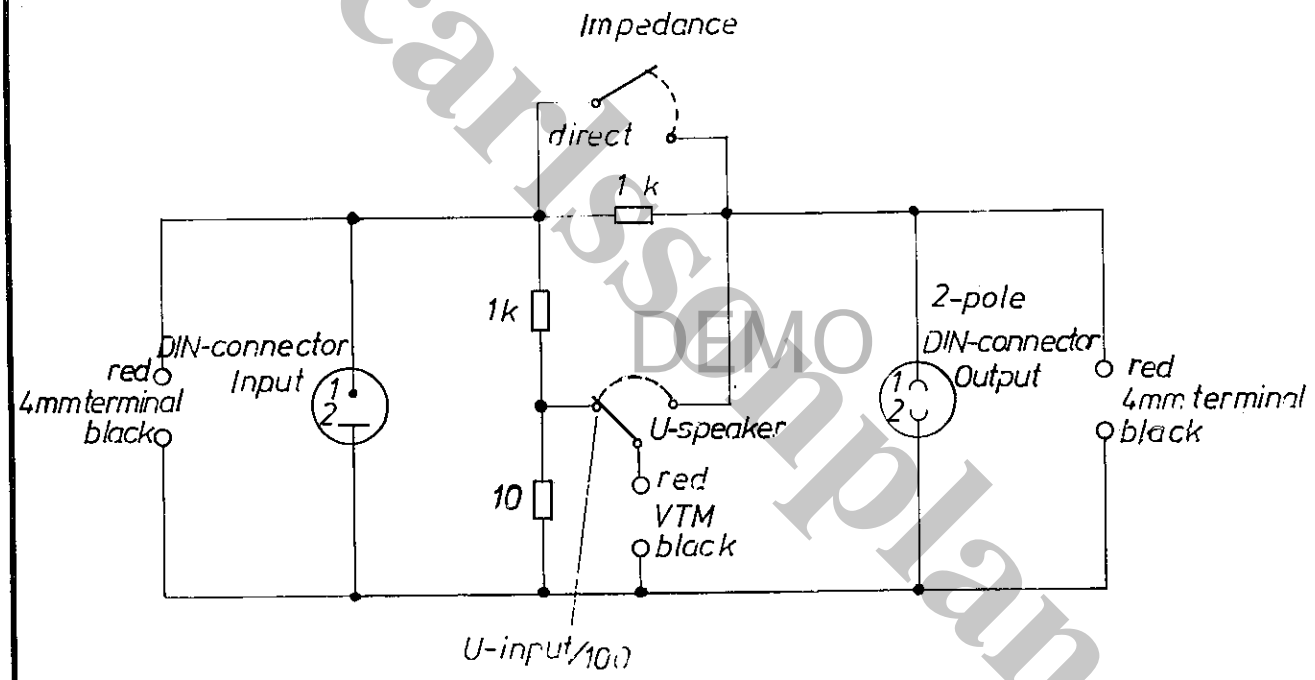
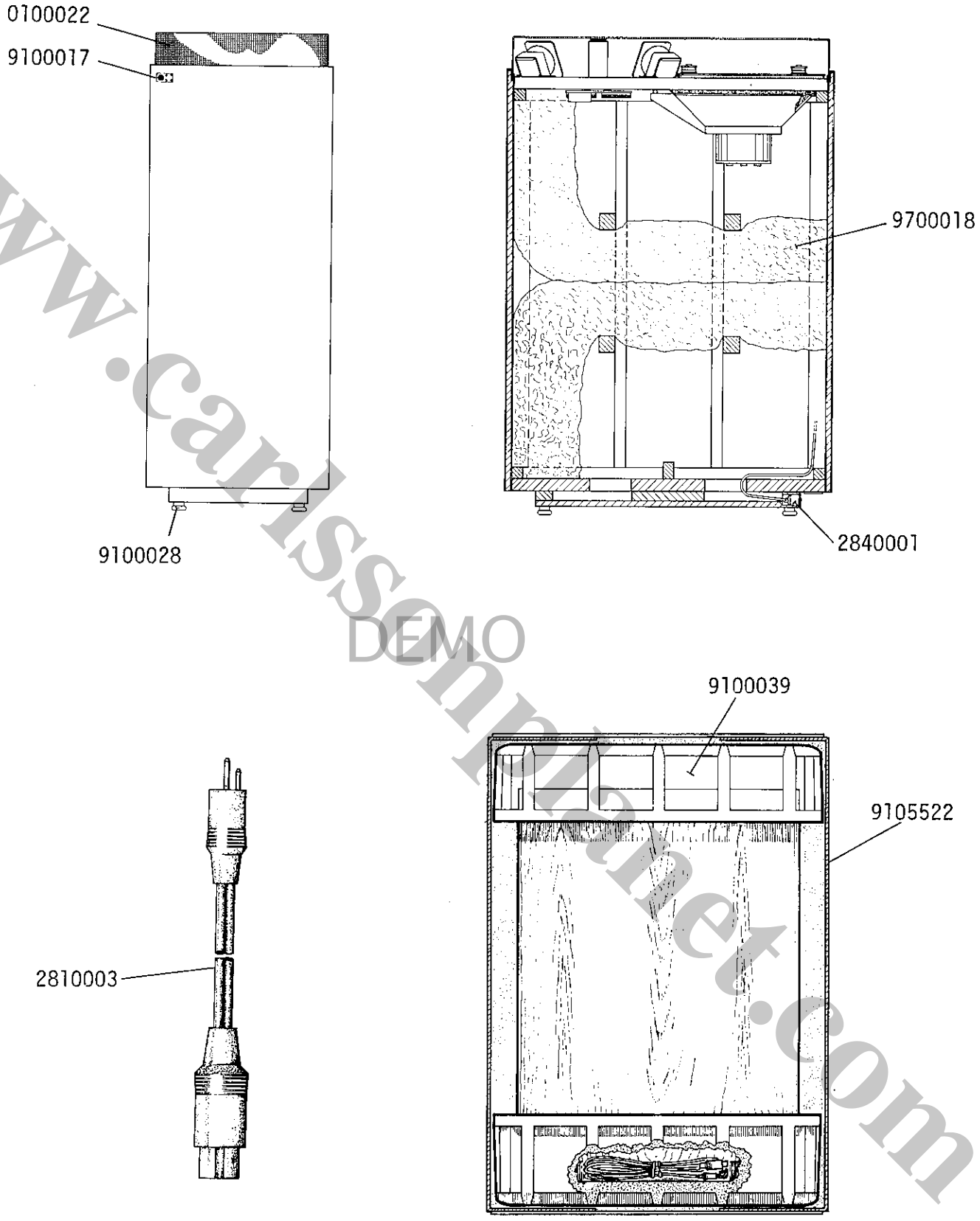
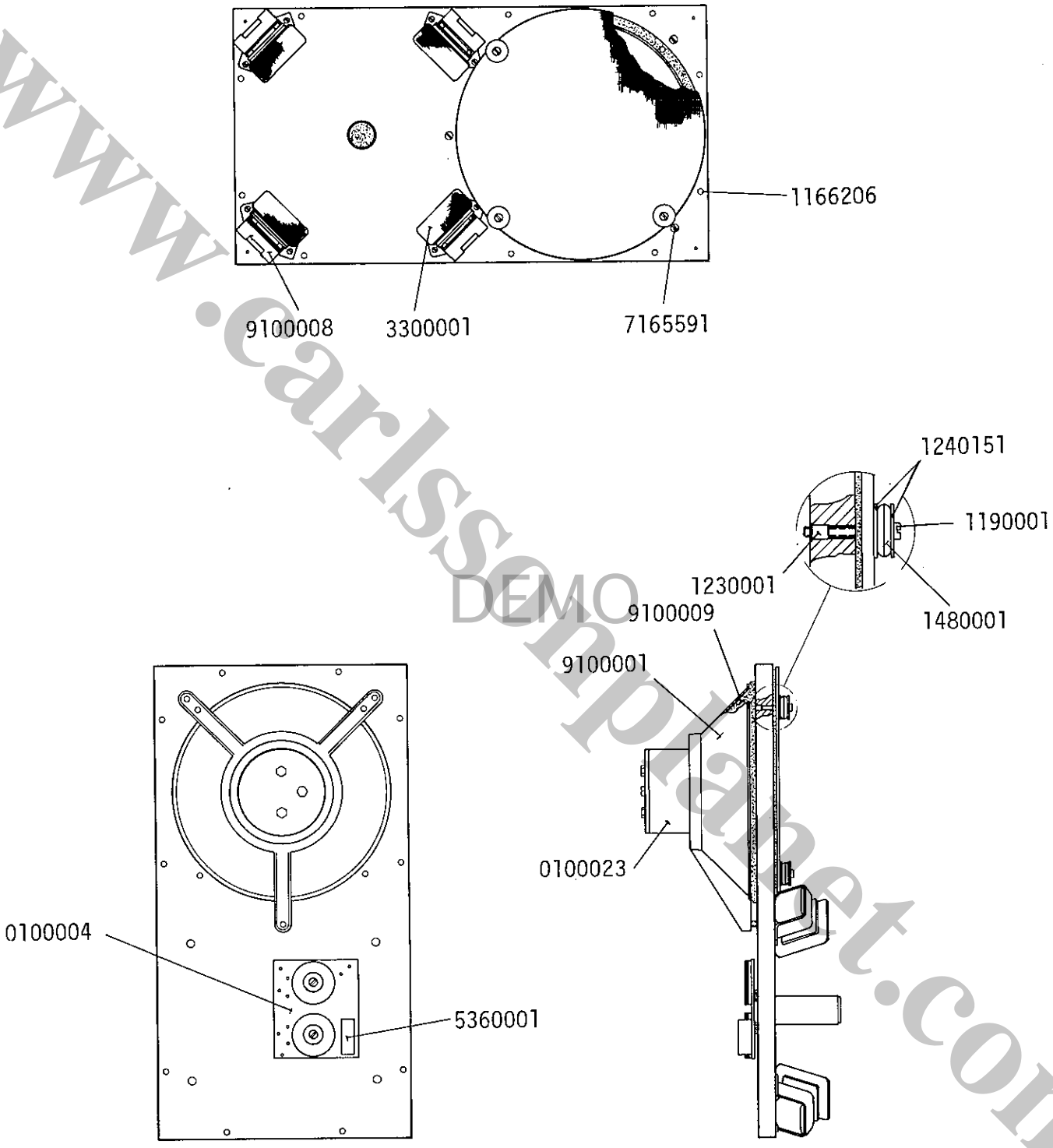
DEVELOPMENT AB

Godkänd - Approved	Scale	File	No. 1-100-021
Benämning: Impedance measuring box			Title
Konstr.			
Uppgj			
Granskad			
1 st angle projection			
Uppgjord för - Made for	Ritningsregler och symboler	Toleranser	Drawing rules and symbols / Toleranser
Ersatter - Replaces			

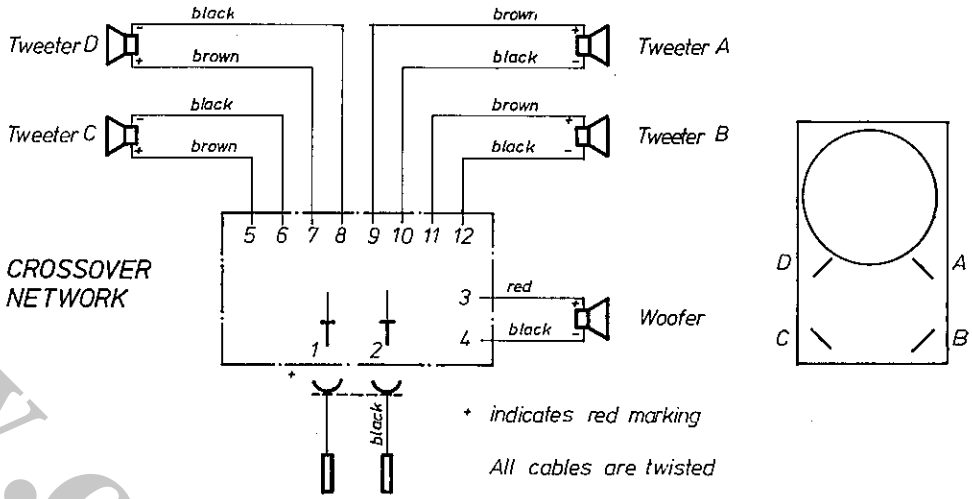


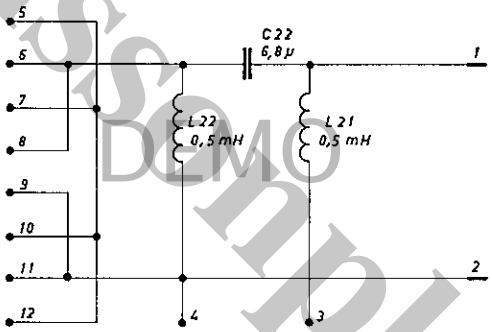


Assembly drawing OA-5 type 2

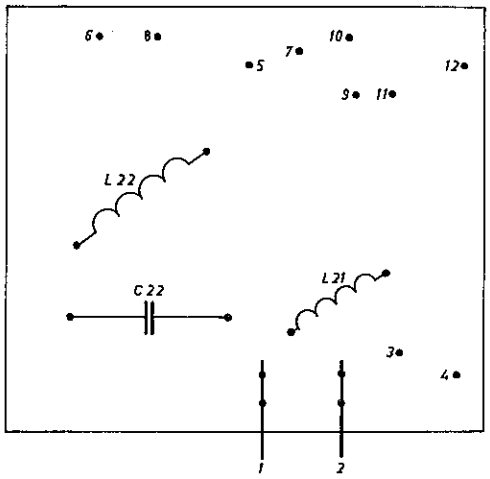


Assembly drawing OA-5 type 2





The PC-board as seen from the component side



Crossover network OA-5

RECOMMENDED SPARE PARTS LIST

0A5 - T2

Store no.	Article	Drawing no.	No. 100	No. 101-500	No. 501-1000	Purch ase price per pc.	Selling price per pc.
0100004	Crossover network	1-100-004	1	1	2		
0100022	Protection net	2-100-022	2	5	10		
0100023	Woofer - tested	1-100-023	1	2	5		
1166206	Screw TFX-5x1 Black oxidized		10	10	10		
1190001	Screw MCS 3,5x35 Bl. ox.		10	20	50		Min order 25
1230001	Banc - loc 3.5		5	10	25		Min order 25
1240151	Plate MB 5x16mm Bl. ox.		10	10	10		Min order 25
2840001	Socket connector LSE 1 Hirschmann		1	2	5		
2810003	Connection Cable		-	-	1		
3300001	Tweeter 8 ohm	1-100-024	1	2	2		
3710003	Handbook						On request from SPA
5360001	Capacitor 6,8 uF		2	4	10		
7165591	Wood screws TCS 8x50 Bl. ox.		10	10	10		
9100001	Damping Device	5-100-001	2	4	6		
9100008	Clamp	1-100-008	1	1	1		
9100009	Damping wool	1-100-009	2	4	6		
9100017	Trade mark		1	2	4		
9100028	Foot	1-100-028	4	8	12		
9100039	Packing inserts	5-100-039	5	10	25		
9105522	Carton	5-105-522	5	10	25		
9700018	Damping wool	1-100-018	-	-	1		
1480001	Rubber bushing		5	10	25		