

## 6. Eddy-Current Probes for Sub-Surface Flaws Detection

### 6.1. Straight Shaft Probe for sub-surface flaws detection in the second layer, through the first layer with up to 1.5 mm thickness (e.g., testing of load-bearing elements under aircraft skin) (Reflection type)



Designation	Outer diameter, mm/inch	Length, mm/inch	Frequency kHz	Connector	Material	Detected flaws
SSP3K11DASh	11/.43	39/1.5	1-25	Lemo 04	NFe	in aluminum through skin with up to 1.5 mm thickness in titanium at 5 mm depth
SSP25K7DA	7/.28	50/2	12-40	Lemo 04	NFe	in aluminum through skin with up to 1.5 mm thickness
SSP25K10DA1	10/.39	50/2	12-40	Lemo 04	NFe	in aluminum through skin with up to 1.5 mm thickness
SSP25K10DA0	10/.39	50/2	12-40	Triax Lemo/Fischer	NFe	in aluminum through skin with up to 1.5 mm thickness

SSP 3K 11D A (Sh)  
1 2 3 4 5

1. SSP – sub-surface probe for subsurface flaws detection.
2. Probe frequency: "HZ" designates the Hz range; "K" designates the kHz range; "M" designates the MHz range.
3. Probe tip diameter, mm.
4. Probe type designation: "A". A – Absolute.
5. Sh – shielded sensing element.  
Absence of such designation mark means that the sensing element is made unshielded.

### 6.2. L-Shaped Probe for sub-surface flaws detection in the second layer, through the first layer with up to 1.5 mm thickness (e.g., testing of load-bearing elements under aircraft skin) (Reflection type)



Designation	Outer diameter, mm/inch	Drop length, mm/inch	Length, mm/inch	Frequency kHz	Connector	Material	Detected flaws
SSP3K5A.5Dx3-37ASh	7.5/.3	3/.12	37/1.5	1-25	Triax Lemo/Fischer	NFe	in aluminum through skin with up to 1.5 mm thickness
SSP3K5A7.5Dx6.4-37ASh	7.5/.3	6.4/.25	37/1.5	1-25		NFe	
SSP3K5A7.5Dx12.5-37ASh	7.5/.3	12.5/.5	37/1.5	1-25		NFe	

SSP 3K 5A 7.5D x 3 - 37 A (Sh)  
1 2 3 4 5 6 7 8

1. SSP – sub-surface probe for subsurface flaws detection.
2. Probe frequency: "HZ" designates the Hz range; "K" designates the kHz range; "M" designates the MHz range.
3. Drop angle of a sensing element to the probe axis "5A" is 90°.
4. Probe tip diameter, mm
5. Drop length, mm
6. Total probe length, mm.
7. Probe type designation: "A". A – Absolute.
8. Sh – shielded sensing element.

### 3. Surface MDF-Type Probes (Multi-Differential)

The probe sensing element is located form the butt-end relative to the probe X-axis.



Designation mm	Tip $\varnothing$ 'D', mm	Length, mm	Centre frequency	Connector	Material	Defects under paint coating	Subsurface defects	Protective housing
SS1.5M05DA0	5	35	1,5 MHz	Lemo 04	Fe/NFe	up to 0.3 mm	-	-
SS650K06DA0	6	35	650 kHz	Lemo 04	Fe/NFe	up to 0.5 mm	-	-
SS400K07DA0	7	35	400 kHz	Lemo 04	Fe/NFe	up to 0.5 mm	-	-
SS400K08DA0	8	35	400 kHz	Lemo 04	Fe/NFe	up 0.5 mm	-	-
SS340K09DA0	9	35	340 kHz	Lemo 04	Fe/NFe	up to 1 mm	-	+
SS170K13DA0	13	35	170 kHz	Lemo 04	Fe/NFe	up to 7 mm	+	+
SS50K15DA0	15	50	50 kHz	Lemo 04	Fe/NFe	up to 9 mm	+	-
SS25K33DA0	33	50	25 kHz	Lemo 04	Fe/NFe	up to 12 mm	+	-

SS      1.5M      05D      A      X  
1      2      3      4      5

1. SS – subsurface probe for surface and subsurface defects detection.
2. Probe frequency: "HZ" designates the Hz range; "K" designates the kHz range; "M" designates the MHz range
3. Probe tip diameter, mm.
4. Probe type designation "A". "A" – Absolute.
5. Probe modification number.