

## ASSEMBLY INSTRUCTION DS AND S CUTTING RING

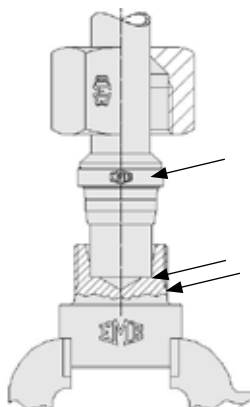
### Series assembly with pre-assembly in VM and subsequent final assembly in tube fitting.

For series assemblies and assemblies with high-grade steel pipes the pre-assembly is to be carried out exclusively using pre-assembly connecting pieces "VM" or using pre-assembly devices. Our final assembly machine OPTICAM also offers optimum possibilities.

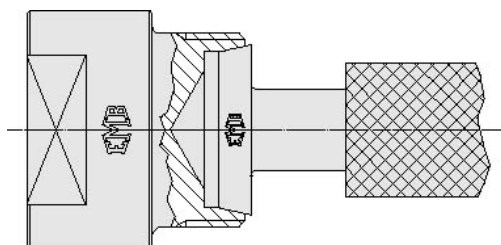
#### 1. Minimum dim. H+L


Series	LL				L										S								
	4	5	6	8	6	8	10	12	15	18	22	28	35	42	6	8	10	12	16	20	25	30	38
Tube OD	4	5	6	8	6	8	10	12	15	18	22	28	35	42	6	8	10	12	16	20	25	30	38
H min.	24	25	25	26	31	31	33	33	36	38	42	42	48	48	35	35	37	37	43	50	54	58	65
L min.	30	32	32	33	39	39	42	42	45	48	53	53	60	60	44	44	47	47	54	63	68	73	82

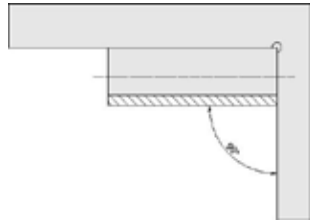
2. In order to guarantee a functional assembly quality, EMB screw connections must generally be installed in an oiled state. For this, the cone of the connecting piece [screw connection or VM], the thread and the 45° shoulder of the cutting ring must be oiled.



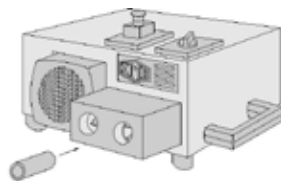
3. The size accuracy of the cones of the VM is monitored via regular examinations using a cone gauge.



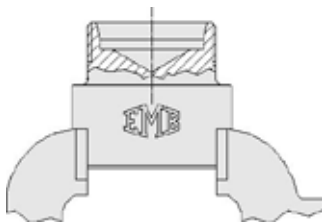
4. Saw off tube to be laid at a right angle.  Do not use a tube cutter!



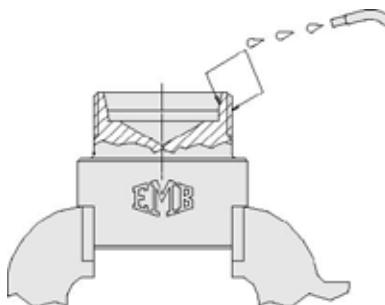
5. Deburr tube on inside and outside, for example using the EMB OPTIGRAT 642.



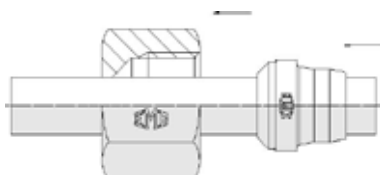
6. Tension the pre-assembly connecting pieces of the respective series and tube dimensions in a vice.



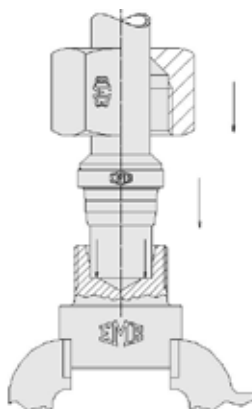
7. Oil the pre-assembly connecting pieces – do not grease. Use EMB lubricant paste with rustproof materials



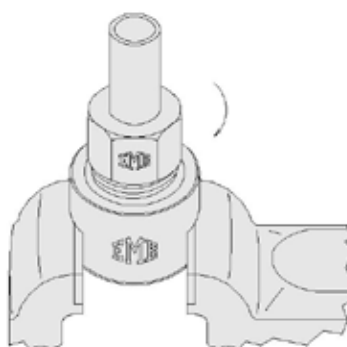
8. Push screw connection parts over the pipe end as illustrated.



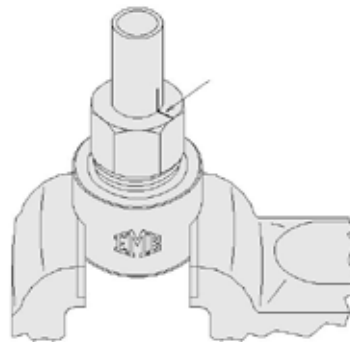
9. Insert the tube in pre-assembly connecting pieces and press firmly into position at the interior cone.



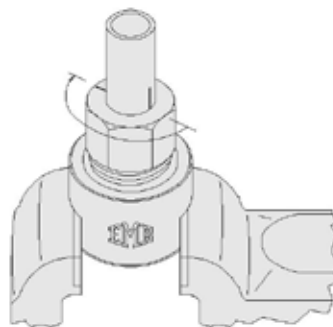
10. Then tighten the union nut until the tube is no longer moveable in the screw connection - the cutting ring has begun to cut into the tube.



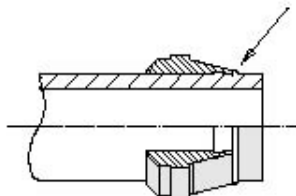
11. A marking applied with a pen on the union nut makes it easier to determine whether the prescribed turn has been carried out.



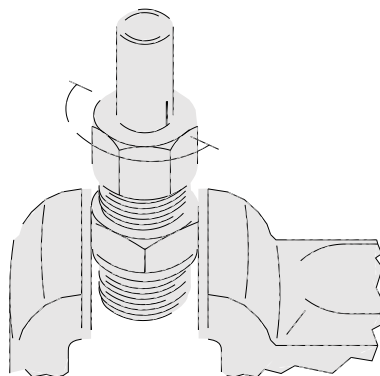
12. Now tighten the union nut 1/2 turn, the EMB cutting ring hereby cuts evenly into the tube.



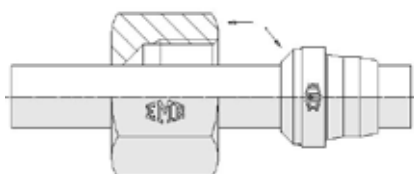
13. After pre-assembly it must be examined whether there is a visible shoulder throw-up before the first edge.



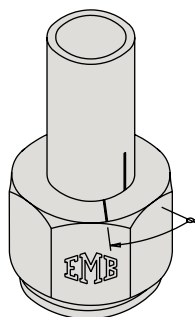
14. Insert the thus pre-mounted pipe into the screw socket and tighten approx. 1/2 turn past the point of the perceptible increase in force.



15. Remove connection again after it has been tightened; check whether the shoulder throw-up fills the space in front of the edge. The ring may turn; it may not however be movable axially.



16. After loosening the connection the union nut is to be tightened again until there is a noticeable increase in force [pressure point]. Afterwards, screw in 30° - 60° using a suitable wrench.



#### Pipe quality

We recommend the use of seamless precision steel piping with dimensions in accordance with DIN EN ISO 10305 Part 4, Material: E235, NBK.

Pipes made from rust and acid-proof material must be seamlessly cold-drawn, scale-free and heat-treated in accordance with DIN EN 10216-5 - X6 CrNiMoTi17-12-2-CFD and exhibit tolerances in accordance with DIN EN ISO 10305-1.