

## Spare and Consuming Parts



Arms



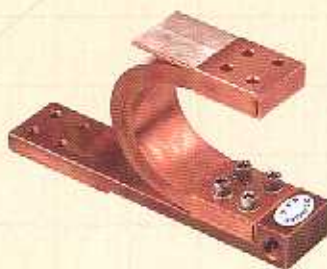
Seam Welding Disks



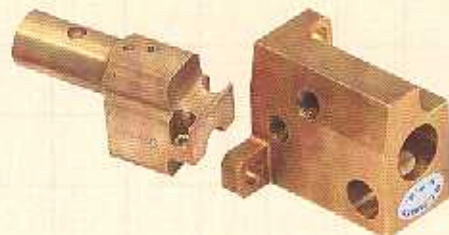
Electrodes



HOLDERS



Flexible Shants

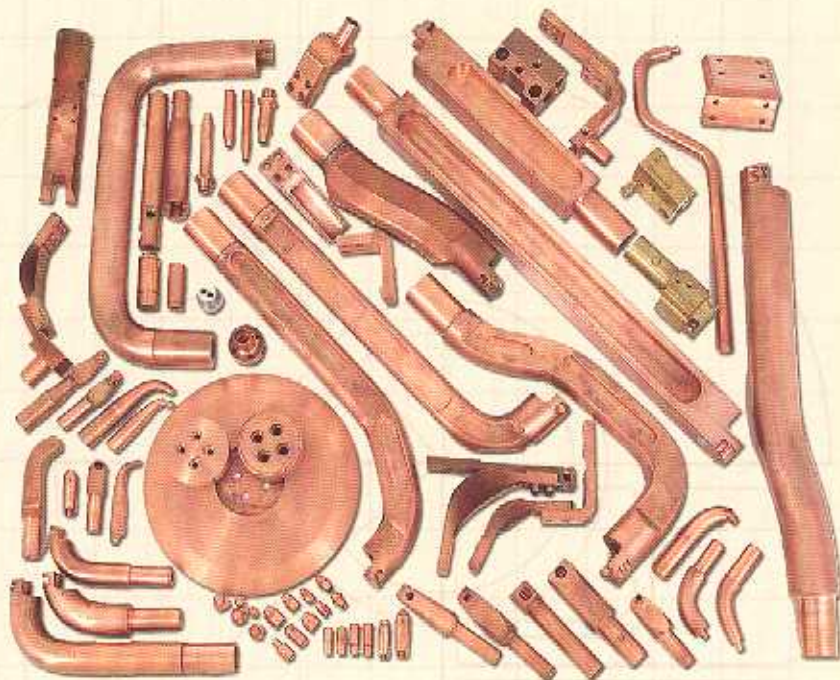


Non-copper parts

A sizeable segment of NovinSazan activities is allotted to the production of depreciating spare parts with the aim of providing decent support for our products used in various production lines and to guaranty their continuity and also to prevent losses arising from their halt.

NovinPardazan-e Ghatè`, a subsidiary of NovinSazan Industrial Group, bears the burden of this important task. Consuming parts include an array of electrodes, shanks, arms and other items such as a selection of manual pedal pneumatic cylinders, power and control cables, and etc. make up the spare parts line.

To manufacture these copper parts, we use an alloy made of CuCrZr material made in KME, Germany and due to our large stock of these materials which come in different sizes, we are prepared to satisfy our clients' needs in a timely manner.



## Copper parts' Raw Material Specifications:

ELBRODUR HF(CuCrZr) is a high-strength age-hardened electrode material for spot welding, in particular high-cycle continuous or roller spot welding. Suitable for all steels – including alloyed and stainless grades – and for coated and galvanized sheets.

### Nominal Composition (Percentages are by weight):

CR 0.65%  
 ZR 0.08%  
 CU REM  
 Perm. other elements 0.15% (Max.)

### Mechanical and Physical Properties:

TENSILE STRENGTH $R_M$ N/mm <sup>2</sup>	≥480
YIELD STRENGTH $R_M$ N/mm <sup>2</sup>	≤430
ELONGATION $A_5$ %	≥15
REDUCTION OF AREA Z %	50-70
HARDNESS HBS 2.5/62.5	150-170
HARDNESS HV30	155-170
HARDNESS HRB	77-85
EI.CONDUCTIVITY m/Ω mm <sup>2</sup>	44-50
EI.CONDUCTIVITY % IACS	76-86

- These are special grades for cold bending (all sizes) and extrusion (12-16 mm Dia.)
- Further sizes and special grades on inquiry.