system E

electronic gauging

# PART 1 introduction to the range

QCS

# why?

Q.C.S. are often asked why they developed the System E range of gauging equipment. The facts listed below were the result of extensive market research ; it was these facts which formed the basis of the new System E range.

1 **For manual visual gauging requirements, a column gauge is the most satisfactory display medium. It gives longer scale length and reduces, (a) parallax errors, (b) the amount of space required, (c) operator fatigue. The relationships of dimensions can be easily analysed by unskilled labour.**

2 **A column gauge is also ideal for automatic gauging as it allows simple setting and analysing of rejects.**

3 **The need existed for a fast response, simple-to-maintain gauging system.**

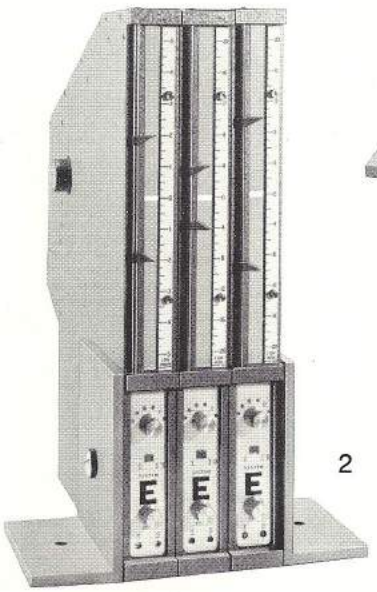
4 **The need existed for a system of common spares for manual visual, semi-automatic and automatic gauging, enabling running cost and down-time to be reduced.**

5 **The need existed for some form of miniature measuring probe for use on close proximity gauging where space is limited.**

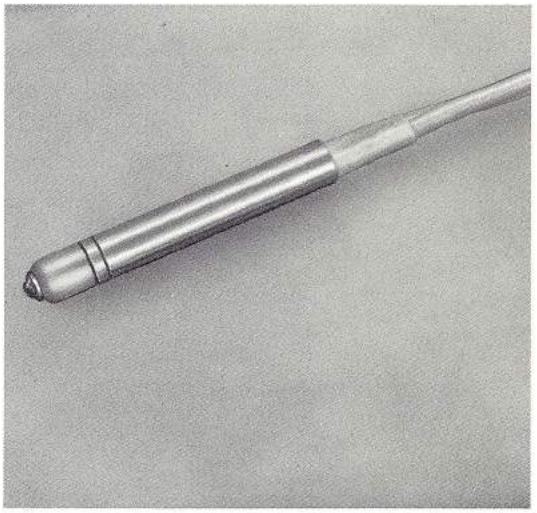
# how?

Q.C.S. put theory into practice by producing a fast response electronic column gauge (1) designed in such a way that single, slim modules could be coupled together to form multi-units for the simultaneous gauging of multiple dimensions (2). The indicating medium is a solid perspex screen which presents a brilliant line image giving an exceptionally high standard of readability. Built into the column gauge is a multi-range electronic chassis which, through simple controls, allows the same chassis to perform most gauging functions. The chassis is strong enough to withstand every-day use and if servicing is ever required, may be easily removed without disturbing the remainder of the column. For automatic gauging applications there is a second chassis of the same slim, modular design incorporating control relays (3). This is designed to couple to the column gauge and by standardising on one combination of switches, satisfies most automatic gauging requirements. The column control module contains six relays.

1



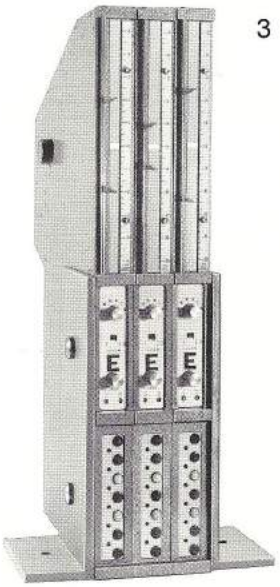

2




4

A need which now had to be met was for a miniature measuring probe for close proximity gauging. Q.C.S. Development Engineers succeeded in producing a miniature probe (4) so small, yet so accurate, that even in pairs discrimination to two hundred and fifty millionths of a millimetre (ten millionths of an inch) could be achieved.

3




The new range of gauging equipment, produced as a result of Q.C.S. initial research, is now almost complete. In certain inspection functions, however, e.g. single dimensions, surface plate inspection or in-process control, a column display is not always essential, a conventional dial gauge can be quite satisfactory and less expensive. To retain the advantages of interchangeable electronics, the multi-range chassis and control chassis are incorporated into two cabinets featuring conventional dial displays (5) thus satisfying these requirements.


5

# system E

The range is complete, a new comprehensive gauging system. Every System E item is checked, double checked and soak tested to prove the high quality. Maintaining high quality with economic prices is achieved by utilising flow production techniques (6) with strict quality control at each stage of manufacture (7).

6

# service

Q.C.S. offer you the services of their local Engineers and Project Engineering Department without obligation. Please take advantage of this service.

7

# applications

This brochure is designed to give you background information on System E, confidence in Q.C.S. equipment and approach to your gauging problem. Detailed information on applications are shown in —

**part 2** Manual, visual, single and multi-dimensional gauging.

**part 3** Automatic. In-process and post process gauging.

system E

# Quality Control Systems

1 New Street, Leamington Spa, Warwickshire, England.
Telephone Leamington Spa 29258 Telex 311469

U.S.A.
Kelco Automation North America Inc.,
1743 Maplelawn, Troy, Michigan 48084

QCS

A Division of Newall Group Sales Ltd., Peterborough, England