VACUUM PUMP REQUIREMENT FOR 16 AND 64 MBIT PLANT

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WITH THE DEVELOPMENT OF SMALLER GEOMETRY DEVICES AND THE SEARCH FOR IMPROVED CONSISTENCY AND YIELD IN DEVICE PROCESSING, THE INHERENT QUALITY OF VACUUM IMPROVEMENT ATTRIBUTABLE TO THE USE OF DRY PUMPS IS NOW OF TANGIBLE VALUE TO WAFER FAB OPERTORS.

DURING THE LAST 24 MONTHS AND PARTICULARLY WITH LEADING TECHNOLOGY MANUFACTURERS, WE HAVE SEEN THE CRITERIA CHANGE FROM ONE OF COST/PERFORMANCE TO ONE IN WHICH QUALITY OF VACUUM IS THE OVERRIDING FACTOR.

THE IMPORTANCE OF VACUUM EQUIPMENT IS NOW RECOGNISED IN KOREA AS A KEY FACTOR IF HIGH YIELDS ARE TO BE ACHIEVED WHEN PRODUCING ADVANCED MICROCHIPS.

WHEREAS DRY PUMP SYSTEMS AND PUMPS WERE VIABLE AND ECONOMICAL FOR PLASMA ETCHERS, CVD EQUIPMENT AND ASHERS AS AN ALTERNATIVE TO ROTARY PUMPS WITH PFPE FLUIDS, THEY ARE NOW FAVOURED FOR ALL PROCESS OR LOADLOCK PUNPING BECAUSE OF THEIR INHERENT CLEALINESS. USED IN COMBINATION WITH MAGNETIC BEARING TURBOMOLECULAR PUMPS, THEY OFFER A DEGREE OF VACUUM CLEANLINESS WHICH, WHEN COUPLED TO THE DEMAND FOR A HIGH LEVEL OF RELIABILITY, WAS PREVIOUSLY DIFFICULT TO ACHIEVE.

IN THE LASR SIX YEARS THE DRY PUMP HAS BECOME A MAJOR FORCE IN PROCESSES REQUIRING PRESSURES BELOW 10 MBAR. IT IS BEING USED IN A WIDE RANGE OF APPLICATIONS, BUT HAS

FOUND PARTICULAR USEFULNESS IN THE SEMICONDUCTOR FIELD WHERE CLEANLINESS AND THE ABILITY TO HANDLE AGGRESSIVE AND DUSTY MATERIALS IS IMPORTANT.
EDWARDS WILL CONTINUE TO DEDICATE ITSELF TO A TOTAL QUALITY APPROACH AND TO THE DEVELOPMENT OF IMPROVED AND NEW PRODUCTS TO MEET THE NEEDS OF THE SEMICONDUCTOR INDUSTRY.

A THIRD GENERATION OF DRY PUMPS HAS JUST BEEN LAUNCHED, BASED ON SEVEN YEARS EXPERIENCE WITH THE EARLIER VERSIONS.

THIS RANGE IS THE QDP SERIES AND IS DESIGNED FOR OPERATION IN CLASS 10 CLEAN ROOMS.

THE KEY FEATURES OF THE NEW RANGE ARE:

LOW NOISE

LOW VIBRATION

CLASS 10 COMPATIBLE

THE NEED FOR THE HIGHEST QUALITY OF VACUUM IS NOW REGARDED AS BEING JUST AS IMPORTANT AS THE SUPPLY OF ULTRA PURE GASES FOR THE PROCESSING OF ULSI MICROCHIPS.

EDWARDS HAS PROGRESSIVELY DEVELOPED THE DRYSTAR PUMP AS MANUFACTURERS HAVE MOVED FROM 1 MBIT TO 4 MBIT PRODUCTION FACILITIES. THE MOVE TO 16 AND 64 MBIT PLANT IN THE FUTURE WILL CONTINUE TO INCREASE THE DEMAND FOR THE DRYSTAR PUMP.