

## NEW SOLID PIECE ELBOW FLANGES

Manuli Hydraulics has always offered a world-class range of hydraulic connector solutions, but we don't like to rest on our laurels and are always looking for ways to improve our existing product range and manufacturing processes.

Recent investment in new, top-of-the-range CNC turning and tube bending equipment has meant that we are now able to manufacture certain large-bore elbow-flange fittings from a single billet of steel rather than from several pieces which have been welded together.

**This process improvement allows us to produce an even higher-quality product in a shorter amount of time and, importantly, with a greatly reduced risk of potential manufacturing defects.**

As you can no doubt imagine, taking 3 pieces of steel and welding them into a single piece presents several operational challenges, from the weld clean-up process to leak testing and weld checking. By turning each flange from a single billet of steel, many of these challenges are eliminated.

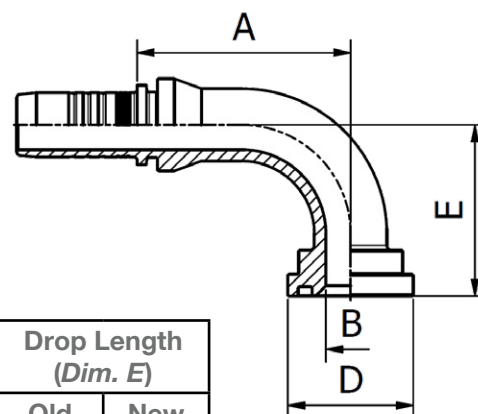
The benefits of this new production method are:

- Fewer production operations resulting in quicker turnaround
- More robust fitting
- Eliminates the possibility of leaks
- Overall better quality of product with more uniform material characteristics throughout
- Elimination of risk of corrosion in welded areas
- Better visual appearance due to improved uniformity of plating
- Perfectly smooth and continuous inner bore

It is important to note that this new manufacturing process has resulted in changes to the cut-off length (*dimension A*) and the drop length (*dimension E*) for the products concerned, but all other dimensions and physical aspects of the fittings remain unchanged.

The products affected and the impact on the dimensions as a result of this change are as follows:

Welded Solution Part No. (Old)	Solid Solution Part No. (New)	Elbow Angle	Cut-Off Length (Dim. A)		Drop Length (Dim. E)	
			Old	New	Old	New
M23321-40-40	M23321-40-40A150	22,5°	80	150	16,5	17,5
M23331-40-40	M23331-40-40A150	30°	87,5	150	24,2	26
M23341-40-40	M23341-40-40A140	45°	95	140	48,5	46
M23361-40-40	M23361-40-40A200	60°	95	200	67	69
M23371-40-40	M23371-40-40A190	67,5°	95	190	78	81
M23391-40-40	M23391-40-40A150	90°	88	150	119	117



90° fitting shown for example purposes

Going forward the old part numbers will be discontinued and the new part numbers used.

Please contact your local Manuli Hydraulics Sales Representative if you have any questions about this change.