

## Huco

Huco Engineering Industries Ltd  
 Merchant Drive, Hertford, SG13 7BL UK  
**Tel:** +44 (0)1992 501900  
**Fax:** +44 (0)1992 509890

440 North Fifth Avenue  
 Chambersburg, PA 17201 - USA  
**Tel:** (800) 829 6637  
**Fax:** (717) 264 6420

**Web:** www.huco.com  
**Email:** sales@huco.com

### Product Overview

Stainless Steel Bellows type	Nickel Bellows type	Membrane type	Multi-Beam type	Single-Beam type
<b>Flex B</b>   <b>Flex K</b> 	<b>Flex Ni</b>  	<b>Flex M</b> Single-stage  Short two-stage  Long two-stage 	<b>Multi-Beam</b> 6-Beam   Material Options: Aluminium Stainless Steel Acetal	<b>Single-Beam</b>  Material Options: Aluminium Stainless Steel

## Contents

**PRODUCT OVERVIEW . . . . . 2 - 3**

**SELECTING FLEXIBLE COUPLINGS. . . . . 4 - 5**

**INSTALLING COUPLINGS . . . . . 6 - 8**

**HIGH PERFORMANCE COUPLINGS . . . . . 9 - 21**  
*Membrane, Stainless Steel Bellows, Ni Bellows*

**GENERAL PURPOSE MOTION CONTROL COUPLINGS. . . . . 22 - 28**  
*Huco-Oldham & Uni-Lat*

**BEAM COUPLINGS. . . . . 29 - 41**  
*Single Beam, Multi-Beam, Step Beam*

**LIGHT POWER DRIVE COUPLINGS. . . . . 43 - 45**  
*Jaw (Spider), Double Loop*

**PLASTIC UNIVERSAL JOINTS & TELESHAFTS . . . . . 47 - 52**  
*Huco-Pol & Huco Teleshafts*

**ADJUSTABLE FRICTION CLUTCHES. . . . . 53 - 56**  
*Huco Vari-Tork, Slip Clutches*

**BORE ADAPTORS . . . . . 57 - 58**  
*Huco-Lok*

**FORMULAE & CONVERSION FACTORS . . . . . 59 - 61**  
*For Motion Transfer*

### General description

Precision couplings with excellent kinematic properties. The 3 types offer differing combinations of stiffness, radial compensation and axial motion.	Precision couplings with excellent kinematic properties. The 3 types offer differing combinations of stiffness, radial compensation and axial motion.	Precision couplings with excellent kinematic properties. Dynamically balanced construction. Single-stage versions make up into 'whirl' free Cardans. The 2-stage versions offer short envelopes and low bearing loads respectively.	General purpose single piece couplings Single stage (3-beam) Two stage (6-beam) Material options for moisture and corrosion resistance.	More flexible than Multi-Beam but less torsional rigidity.
---	---	---	--	--

### Where to use

High-end servo drives, pulse generators, scanners, positioning slides, metering valves, etc.	High-end servo drives, pulse generators, scanners, positioning slides, metering valves, etc.	High-end servo drives, pulse generators, scanners, positioning slides, high speed dynamometers, unsupported drive shafts, etc.	Stepper and servo drives, encoders, general purpose light duty power transmission applications.	Stepper drives, encoders, general purpose light duty power transmission applications.
--	--	--	---	---

### Speeds

Flex B up to 5000 rpm Flex K up to 15000 rpm	Up to 5000 rpm	Up to 5000 rpm	Up to 5000 rpm	Up to 5000 rpm
---	----------------	----------------	----------------	----------------

### Peak torque largest size Nm

500	12.5	100	140	30
-----	------	-----	-----	----

### Standard bores mm

3 to 65	3 to 20	3 to 38	1 to 38	3 to 26
---------	---------	---------	---------	---------

### Temperature range °C

-40° to +120°	-40° to +120°	-40° to +120°	-40° to +140°	-40° to +140°
---------------	---------------	---------------	---------------	---------------

### Electrically isolating

No	No	No	Aluminium } Stainless Steel } Acetal } Yes	Aluminium } Stainless Steel } Acetal } Yes	No Yes
----	----	----	--	--	-----------

### Connection

Clamp, Set Screw	Clamp or Set Screw	Clamp or Set Screw	Clamp or set screw	Clamp or Set Screw
------------------	--------------------	--------------------	--------------------	--------------------














**Page 9 - 15**

**Page 16 - 17**

**Page 18 - 21**

**Page 29 - 38**

**Page 40 - 41**

Step-Beam type	Sliding Disc type	Universal/Lateral type	Double Loop type	Jaw Coupling	Universal Joints & Teleshfts	Friction Clutches
<b>Step-Beam</b>   Material Options: Nylon	<b>Oldham</b> Blind bored  Thru' bored  Thru' bored   Material Options: Aluminium Stainless Steel Brass	<b>Uni-Lat</b>   	<b>Flex-P</b>     	<b>Flex-G</b> 	<b>Huco-Pol</b> Single joints   Double joints   Teleshfts 	<b>Vari-Tork, Polyclutch</b> Basic clutch   Basic clutch + Oldham coupling 
General description						
Unique coupling design gives excellent combination of radial flexibility with torsional stiffness.	General purpose, robust, easy to use 3-part couplings with replaceable wear elements. Generous radial compensation and pull-apart / re-engage facility for blind assemblies.	Unique, general purpose light duty couplings with generous angular and radial misalignment compensation. Resist axial motion, can anchor unrestricted shafts and perform light push/pull duties.	Exceptional flexibility in all three directions, radial, angular and axial.	High torque capacity and high speed are available from this naturally balanced coupling.	Light duty plastic universal joints and extensible drive shafts (teleshfts). Low mass, corrosion resistant, ideal where conventional steel joints would be under-utilised.	Small, user-adjustable torque limiters for concentric or in-line mounting. Operate by friction using interleaved clutch plates.
Where to use						
Encoders, tachogenerators, small pumps, motors and drives.	Stepper drives for most applications including positioning slides, pumps, actuators, etc.	Encoder, resolver, tacho, potentiometer drives. Small positioning slides, dosing pumps, & light drives generally.	Light power drives, pumps and small generators.	Light power drives where misalignment is small.	Intermittent applications in business machines, instrumentation, lab equipment, analytical apparatus, etc., where steel joints would be under-utilised.	Friction clutches interrupt rotation when the load being transmitted reaches a pre-determined threshold. Used in all kinds of small drives to help protect personnel and equipment.
Speeds						
Up to 10000 rpm.	Up to 3000 rpm.	Up to 3000 rpm.	Up to 3000 rpm.	Up to 40,000 rpm.	Up to 1000 rpm.	Up to 1000 rpm slipping speed.
Peak torque largest size Nm						
25	44	12	18	133	10.7	60
Standard bores mm						
3 to 12.7	2 to 30	3 to 22	3 to 16	3 to 16	3 to 20	6 to 32
Temperature range						
-20 to +150°C	-20 to +60°	-20 to +60°	-40 to +100°	-40 to +80°	-20 to +60°	-10 to +80° (when operating)
Electrically isolating						
Yes	Yes	Yes	Yes	Yes	Yes	No
Connection						
Clamp or Set Screw	Clamp or Set Screw	Clamp or Set Screw	Set Screw	Clamp or Set Screw	Set Screw, Bonding, or Cross-Pinning	Clamp or Set Screw
<b>Page 39</b>	<b>Page 22 - 26</b>	<b>Page 27 - 28</b>	<b>Page 46</b>	<b>Page 44 - 45</b>	<b>Page 48 - 52</b>	<b>Page 54 - 56</b>