

# UNIFORM COMPRESSION MATTERS

## GRQ Engineered Clamp for Pharma, Biotech, Food, and Beverage Service

Jacoby-Tarbox offers a full line of GRQ Engineered Hygienic Clamps for uniform gasket compression to seal with minimized gasket intrusion, maximizing process integrity.

### OPTIMIZED DESIGN

GRQ engineers used Finite Element Analysis (FEA) software to create the clamps and optimize both gasket load and clamp geometry, ensuring...

- Uniform gasket loading (compression)
- Flexibility for challenging alignments
- Extending joint life

### UNIFORM GASKET LOADING

(compression)

- Discreet contact point, isolating energy on ID
- Seal the gasket with less torque
- Decrease chance of gasket intrusion
- Maximize gasket life

### INSTALLATION FLEXIBILITY

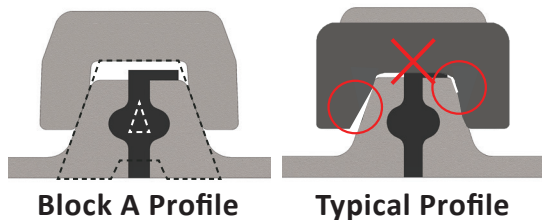
(less than perfect alignments)

- Large clamp channel Profile, nicknamed the “Block A Profile” and double-pin hinge seal out of tolerance joints
- Block A Profile clearance accepts “flanged”, or “lipped” gaskets without interfering with seal

### MAXIMIZE JOINT LIFE

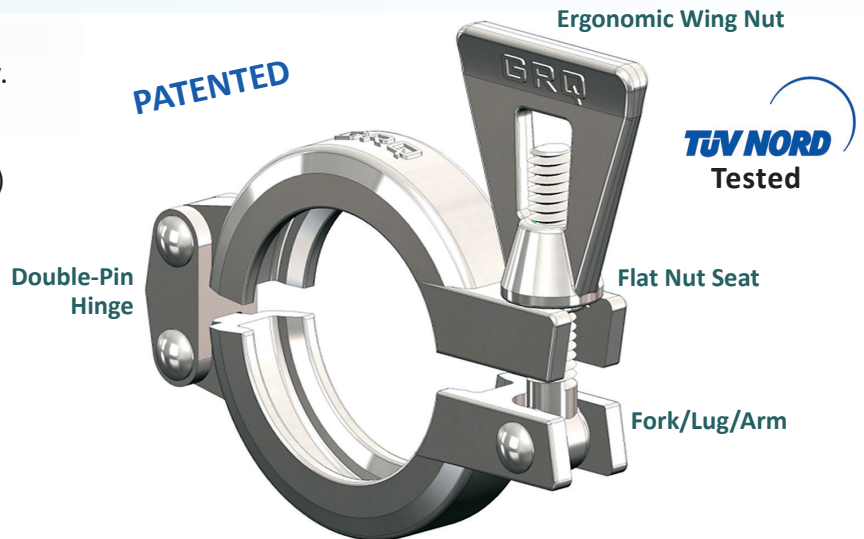
- Less torque = less clamp stress (deflection)
- Uniform radial load = **No** point loads creating bending forces, decreasing potential for gasket intrusion or gapping
- Flat nut seat/pocket = load clamp without deforming clamp fork/lug/arm

#### Clamp Cross-Sections:



Block A Profile

Typical Profile



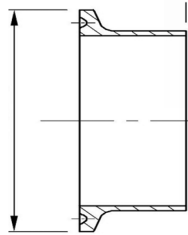
JACOBY-TARBOX®  
GRQ ENGINEERED CLAMP

Problem	Root Cause	Solution	Feature
Leaking joint	Uneven load	Even load	Block A Clamp Profile
Leaking joint	Poor alignment	Open tolerance	Block A Clamp Profile Double-Pin Hinge
Leaking joint	Ferrule galling	Open tolerance	Block A Clamp Profile Flat nut seat/pocket
Leaking joint	Flanged gasket pinched in clamp	Open profile	Block A Clamp Profile and Flat nut seat/pocket
Process hold up	Extruded gasket	Less torque	Block A Clamp Profile
Bent clamp arm	Over-tightening	Less torque	Flat nut seat/pocket
Slip off nut at install	Poor nut shape	Ergonomic nut	Tapered easy grip nut

# Specify Your Engineered Clamp



Ferrule  
Flange  
OD



#### MATERIALS:

Standard **304SS (= O)**  
(special order) **316SS (= S)**

Note: Part number suffix in ( )'s

SIZES* Tube OD / Schedule / DN	FERRULE FLANGE OD		PART NUMBER	WEIGHT		MAX PRESSURE	
	IN	mm		Lb	Kg	psig	Bar
1/2" & 3/4" OD	0.984	25.00	TGRQ-34-O	0.33	0.15	725	50
ASME BPE 1" OD (DN 10/15/20)	1.339	34.00	TGRQ-1A-O	0.43	0.20	725	50
1" & 1-1/2" OD (1/2-3/4-1 SchV) / (DN 25/32/40)	1.984	50.39	TGRQ-15-O	0.51	0.23	725	50
2" OD (1-1/4&1-1/2 SchV) / (DN 50)	2.516	63.91	TGRQ-2-O	0.58	0.26	725	50
2.5" OD (2" Sch V)	3.047	77.39	TGRQ-25-O	0.65	0.29	725	50
3" OD (2-1/2" Sch V) / (DN 65)	3.579	90.91	TGRQ-3-O	0.72	0.33	580	40
3" Sch V (DN 80)	4.173	106.00	TGRQ-3V-O	0.79	0.36	435	30
4" OD (DN 100)	4.682	118.92	TGRQ-4-O	0.86	0.39	363	25
4" Sch V	5.118	130.00	TGRQ-4V-O	0.99	0.45	363	25
5" OD	5.685	144.39	TGRQ-5-O	1.11	0.50	363	25
5" Sch V (DN 125)	6.102	155.00	TGRQ-5V-O	1.40	0.63	363	25
6" OD	6.570	166.88	TGRQ-6-O	1.69	0.77	290	20
6" Sch V (DN 150)	7.205	183.00	TGRQ-6V-O	2.05	0.93	290	20
8" OD	8.563	217.50	TGRQ-8-O	2.41	1.09	218	15
8" Sch V (DN 200)	9.193	233.50	TGRQ-8V-O	2.83	1.28	218	15
10" OD	10.551	268.00	TGRQ-10-O	3.24	1.47	174	12
10 Sch V	11.264	286.10	TGRQ-10V-O	3.52	1.60	174	12
12" OD (DN 300)	12.571	319.30	TGRQ-12-O	3.80	1.72	145	10
12" Sch V	13.307	338.00	TGRQ-12V-O	4.10	1.86	131	9

(1) Use with: BPE, BS4825-3, BS6362  
Sch 5, ISO 1127 S1 / 2037 / 2852  
DIN32676-A/B/C, SMS 3017 and 3008 systems

CLA843 Bulletin: T100.70 (02/20)