

For Piercing and Flanging

# Nitro-Cam<sup>®</sup> System



## Nitro-Cam<sup>™</sup> Features:

- Available in five forces: 15,000 N (1.69 ton); 40,000 N (4.50 ton); 60,000 N (6.74 ton); 90,000 N (10.12 ton), and 150,000 N (16.86 ton).
- Three standard stroke lengths: 24mm (.94"), 49 mm (1.93"), 99 mm (3.90").
- Sensor kits available for positioning.
- Can be mounted at any angle in die.
- Power unit containing power cylinder and accumulator, can be positioned remotely from cam (up to a distance of 2m/6.5 ft.).
- Power cylinder driven by actuator on ram.
- No bulky mechanical drivers.
- Constant force through stroke.
- Built in mechanical stop for exact cam stroke.
- No fluid pressure at die open.
- Reduce side load in tool.
- Retrofittable to existing dies.
- For piercing applications, one power unit can drive three cam units.

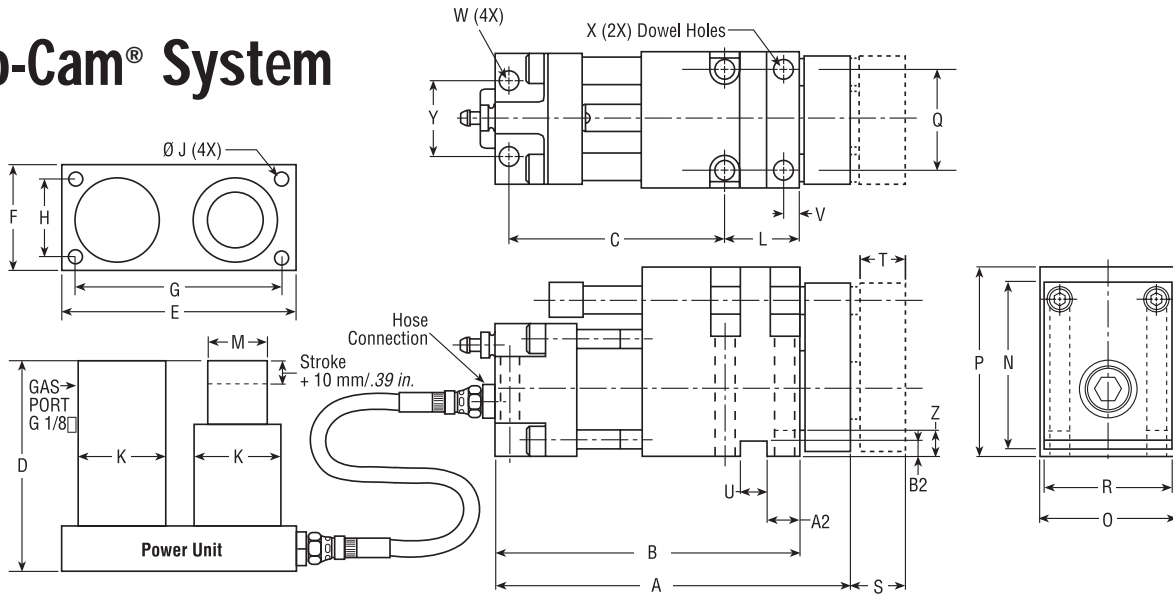
- Controllable return force (up to 20% of piercing force).
- Accumulator prevents over pressurization of system if blockage occurs in cam.

## Selection and Installation Guidelines:

- Power cylinder stroke is 10 mm (.39") longer than the cam stroke. The complete power cylinder stroke must be designed into application.
- When connecting three cams to one power unit, the power unit must be sized to handle the combined piercing forces.
- When piercing forces are close to maximum catalog ratings, choose next larger size cam.
- Secured into position with key or two dowel pins, and bolted to the tool.
- Retainer mounting surface allows easy machining of mounting and dowel holes.
- For complete filling and draining instructions contact Hyson Products, 10367 Brecksville Road, Brecksville, OH 44141, 1-800-876-4976.




# Nitro-Cam® System



### Power Unit Fixed Dimensions

Model x Stroke	Force	E	F	G	H	J	K	M
HCPU-15 x Stroke	15,000 N	mm	160	80	130	50	11	50.1
	1.69 Tons	in.	6.30	3.15	5.12	1.97	.43	1.97
HCPU-40 x Stroke	40,000 N	mm	200	100	175	75	11	75.1
	4.50 Tons	in.	7.87	3.94	6.89	2.95	.43	2.96
HCPU-60 x Stroke	60,000 N	mm	250	125	220	95	13	95.1
	6.74 Tons	in.	9.84	4.92	8.66	3.74	.51	3.74
HCPU-90 x Stroke	90,000 N	mm	300	150	270	120	13	120.1
	10.12 Tons	in.	11.81	5.91	10.63	4.72	.51	4.73
HCPU-150 x Stroke	150,000 N	mm	400	200	350	150	17	150.1
	16.86 Tons	in.	15.75	7.87	13.78	5.91	.67	5.91

### Cam Unit Fixed Dimensions

Model x Stroke	Force	N	O	P	Q	R	L	T	U	V	W	X	Y	Oil Port	Z	A2	B2	
HCCU-15 x Stroke	15,000 N	mm	73	59	82	44	56	33	20	12	6.5	8.5 mm (4x)	8 mm (2x)	44	G-1/2	12	14	7
	1.69 Tons	in.	2.87	2.32	3.23	1.732	2.20	1.30	.79	.472	.256	1.73	1.73	.47		.55	.28	
HCCU-40 x Stroke	40,000 N	mm	97.5	95	105	74	92	44	25	20	8	10.5 mm (4x)	10 mm (2x)	41	G-3/4	12	16	7
	4.50 Tons	in.	3.84	3.74	4.13	2.913	3.62	1.73	.98	.787	.315	1.61	1.61	.47		.63	.28	
HCCU-60 x Stroke	60,000 N	mm	124	120	133	100	117	44	30	20	8	12.5 mm (4x)	10 mm (2x)	45	G-3/4	12	16	7
	6.74 Tons	in.	4.88	4.72	5.24	3.937	4.61	1.73	1.18	.787	.315	1.77	1.77	.47		.63	.28	
HCCU-90 x Stroke	90,000 N	mm	154.5	148	170	120	144	65	30	30	10	16.5 mm (4x)	12 mm (2x)	70	G-3/4	15	20	11
	10.12 Tons	in.	6.08	5.83	6.69	4.724	5.67	2.56	1.18	1.181	.394	2.76	2.76	.59		.79	.43	
HCCU-150 x Stroke	150,000 N	mm	193	160	205	134	156	65	30	30	10	16.5 mm (4x)	12 mm (2x)	70	G-1-1/4	15	20	11
	16.86 Tons	in.	7.60	6.30	8.07	5.276	6.14	2.56	1.18	1.181	.394	2.76	2.76	.59		.79	.43	

### Variable Dimensions With Stroke

Cam Stroke Model	Power Cylinder Stroke		HCCU-15 & HCPU-15				HCCU-40 & HCPU-40				HCCU-60 & HCPU-60				HCCU-90 & HCPU-90				HCCU-150 & HCPU-150			
			A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
24 mm	35	mm	155.5	133.5	94	220	214	187	135	242	223	191	137	258	268	236	159	276	268	236	159	307
0.94 in.	1.38	in.	6.12	5.26	3.70	8.66	8.43	7.36	5.31	9.53	8.78	7.52	5.39	10.16	10.55	9.29	6.26	10.87	10.55	9.29	6.26	12.09
49 mm	60	mm	180.5	158.5	119	270	239	212	160	292	248	216	162	308	293	261	184	326	293	261	184	357
1.93 in.	2.36	in.	7.11	6.24	4.69	10.63	9.41	8.35	6.30	11.50	9.76	8.50	6.38	12.13	11.54	10.28	7.24	12.83	11.54	10.28	7.24	14.06
99 mm	110	mm	—	—	—	370	289	262	210	392	298	266	212	408	343	311	234	426	343	311	234	457
3.90 in.	4.33	in.	—	—	—	14.57	11.38	10.31	8.27	15.43	11.73	10.47	8.35	16.06	13.50	12.24	9.21	16.77	13.50	12.24	9.21	17.99

Note: Dimensions are subject to change without notice. All dimensions are nominal unless tolerance is stated.



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