

TABLE OF CONTENTS

2 - Clamp Arms

3 - Risers

4 - Rough Locators

5 - L Blocks

6 - NC Blank Blocks

7 - Locating Pins

8 - Locating Pin Retainers

9 - Dump Unit Components

10 - Shims & Spacers

11/12 - English & Standard Units Conversion Chart

TECHRIM STANDARDS is a global supplier of NAAMS and standardized components.

NAAMS are a globally approved system for industrial automation tooling.

Their use in the following markets, allow customers to substantially reduce their time and cost to design and build tools:

- Assembly (BIW)
- Stamping
- Fixturing
- Robotic / End Effector systems
- General Assembly

CLAMP ARMS



Techrim Standards manufactures all makes of power clamp arms, along with each companies' own specific arm attachment.

NAAMS CODE	SPEC.	CLAMP SERIES	OFFSET	HOLE PATTERNS	ARM WIDTH
ACA007-012	U.S.	63MM CLAMP	STRAIGHT	8MM DOWEL, 11 MM CLEARANCE	25MM
ACA019-024	U.S.	63MM CLAMP	25MM	8MM DOWEL, 11 MM CLEARANCE	25MM
ACA031-036	U.S.	63MM CLAMP	70MM	8MM DOWEL, 11 MM CLEARANCE	25MM
ACA043-048	U.S.	63MM CLAMP	120MM	8MM DOWEL, 11 MM CLEARANCE	25MM
ACA507-512	E, U.S.	63MM CLAMP	STRAIGHT	6MM DOWEL, 9 MM CLEARANCE	20MM
ACA519-524	E, U.S.	63MM CLAMP	25MM	6MM DOWEL, 9 MM CLEARANCE	20MM
ACA531-536	E, U.S.	63MM CLAMP	70MM	6MM DOWEL, 9 MM CLEARANCE	20MM
ACA543-548	E, U.S.	63MM CLAMP	120MM	6MM DOWEL, 9 MM CLEARANCE	20MM
ACA513-518	GM	63MM CLAMP	STRAIGHT	8MM DOWEL, 9 MM CLEARANCE	20MM
ACA525-530	GM	63MM CLAMP	25MM	8MM DOWEL, 9 MM CLEARANCE	20MM
ACA537-542	GM	63MM CLAMP	70MM	8MM DOWEL, 9 MM CLEARANCE	20MM
ACA553-554	GM	63MM CLAMP	120MM	8MM DOWEL, 9 MM CLEARANCE	20MM
ACA206-208	U.S.	50MM CLAMP	STRAIGHT	8MM DOWEL, 11 MM CLEARANCE	20MM
ACA216-218	U.S.	50MM CLAMP	25MM	8MM DOWEL, 11 MM CLEARANCE	20MM
ACA226-228	U.S.	50MM CLAMP	50MM	8MM DOWEL, 11 MM CLEARANCE	20MM
ACA236-238	E, U.S.	50MM CLAMP	STRAIGHT	6MM DOWEL, 9 MM CLEARANCE	20MM
ACA246-248	E, U.S.	50MM CLAMP	25MM	6MM DOWEL, 9 MM CLEARANCE	20MM
ACA256-258	E, U.S.	50MM CLAMP	50MM	6MM DOWEL, 9 MM CLEARANCE	20MM
ACA401-403	GM	50MM	STRAIGHT	8MM DOWEL, 9 MM CLEARANCE	20MM
ACA411-413	GM	50MM	25MM	8MM DOWEL, 9 MM CLEARANCE	20MM
ACA421-423	GM	50MM	50MM	8MM DOWEL, 9 MM CLEARANCE	20MM
ACA110-118	U.S.	80MM CLAMP	STRAIGHT	8MM DOWEL, 11 MM CLEARANCE	32MM*(T)
ACA130-138	U.S.	80MM CLAMP	25MM	8MM DOWEL, 11 MM CLEARANCE	32MM*(T)
ACA150-158	U.S.	80MM CLAMP	70MM	8MM DOWEL, 11 MM CLEARANCE	32MM*(T)
ACA170-178	U.S.	80MM CLAMP	120MM	8MM DOWEL, 11 MM CLEARANCE	32MM*(T)
ACA100-108	U.S.	80MM CLAMP	STRAIGHT	NONE	32MM*(T)
ACA120-128	U.S.	80MM CLAMP	20MM	NONE	32MM*(T)
ACA140-148	U.S.	80MM CLAMP	65MM	NONE	32MM*(T)
ACA160-168	U.S.	80MM CLAMP	115MM	NONE	32MM*(T)

RISERS



SHOP NAAMS RISERS



AAB



ARA



ASR



AHB

NAAMS CODE	"A" HEIGHT	NAAMS CODE	"A" HEIGHT	NAAMS CODE	"A" HEIGHT
AAB100M AAB101M	100 (M10 x 1.5) 100 (thru hole)	ARA150M ARA151M	150 (M10 x 1.5) 150 (thru hole)	ASR115	150
AAB150M AAB151M	150 (M10 x 1.5) 150 (thru hole)	ARA200M ARA201M	200 (M10 x 1.5) 200 (thru hole)	ASR120	200
AAB200M AAB251M	200 (M10 x 1.5) 200 (thru hole)	ARA250M ARA251M	250 (M10 x 1.5) 251 (thru hole)	ASR125	250
AAB250M AAB251M	250 (M10 x 1.5) 251 (thru hole)	ARA300M ARA301M	300 (M10 x 1.5) 300 (thru hole)	ASR130	300
AAB300M AAB301M	300 (M10 x 1.5) 301 (thru hole)	ARA350M ARA351M	350 (M10 x 1.5) 350 (thru hole)	ASR135	350
AAB350M AAB351M	350 (M10 x 1.5) 351 (thru hole)	ARA400M ARA401M	400 (M10 x 1.5) 400 (thru hole)	ASR140	400
AAB400M AAB451M	400 (M10 x 1.5) 400 (thru hole)	ARA450M ARA451M	450 (M10 x 1.5) 450 (thru hole)	ASR145	450
ALUMINUM RISER	"A" HEIGHT	ARA500M ARA501M	500 (M10 x 1.5) 500 (thru hole)	ASR150	500
AAB101A	100 (thru hole)	ARA550M ARA551M	550 (M10 x 1.5) 550 (thru hole)		
AAB151A	150 (thru hole)	ARA600M ARA601M	600 (M10 x 1.5) 600 (thru hole)	AHB001M	
AAB201A	100 (thru hole)	ARA650M ARA651M	650 (M10 x 1.5) 651 (thru hole)	AHB002M	
AAB251A	150 (thru hole)	ARA700M ARA701M	700 (M10 x 1.5) 700 (thru hole)	AHB011	
AAB301A	300 (thru hole)	ARA750M ARA751M	750 (M10 x 1.5) 750 (thru hole)		
AAB351A	350 (thru hole)	ARA800M ARA801M	800 (M10 x 1.5) 800 (thru hole)		
AAB401A	400 (thru hole)				

ROUGH LOCATORS



SHOP ROUGH LOCATORS



ARL100R



ARL100L

























ARL100

NAAMS CODE	DM "A" MM	WIDTH MM	THICKNESS MM
ARL075L/075R	75	32	10
ARL100L/100R	100	32	10
ARL125L/125R	125	32	10
ARL150L/150R	150	32	10
ARL175L/175R	175	32	10
ARL200L/200R	200	32	10
ARL225L/250R	225	32	10
ARL250L/250R	250	32	10
ARL145	145	32	10
ARL170	170	32	10
ARL190	190	32	10
ARL220	220	32	10
ARL245	245	32	10
ARL270	270	32	10
ARL295	295	32	10
ARL320	320	32	10
ARL145P	145	32	10
ARL170P	170	32	10
ARL190P	190	32	10
ARL220P	220	32	10
ARL245P	245	32	10
ARL270P	270	32	10
ARL295P	295	32	10
ARL320P	320	32	10
with plastic pad			
ARL145LP145RP	145	32	10
ARL170LP/170RP	170	32	10
ARL190LP/190RP	190	32	10
ARL220LP/220RP	220	32	10
ARL245LP/245RP	245	32	10
ARL270LP/270RP	270	32	10
ARL298LP/298RP	298	32	10
ARL320LP/320RP	320	32	10
with plastic pad			

L BLOCKS











SHOP L BLOCKS

PICTURE	FAMILY	PART NUMBER	PICTURE	FAMILY	PART NUMBER
	ALB320M	ALB320M ALB321M NMSS ALB322M ALB323M NMSS		ALB330M	ALB330M ALB331M ALB340M ALB341M
	ALB350M	ALB350M ALB351M NMSS ALB360M ALB361M NMSS		ALB370M	ALB370M ALB371M NMSS ALB380M ALB381M NMSS
	ALB400M	ALB400M ALB401M ALB402M ALB403M		ALB410M	ALB410M ALB411M ALB412M ALB413M
	ALB415M	ALB415M ALB416M		ALB430M	ALB430M ALB431M ALB432M ALB433M
	ALB010M	ALB010M ALB011M NMSS ALB012M ALB013M NMSS		ALB020M	ALB020M ALB021M NMSS ALB022M ALB023M NMSS
	ALB040M	ALB040M ALB041M NMSS ALB042M ALB043M NMSS		ALB050M	ALB050M ALB051M NMSS ALB060M ALB061M NMSS
	ALB070M	ALB070M ALB071M NMSS ALB080M ALB081M NMSS		ALB090M	ALB090M ALB091M ALB092M ALB093M
	ALB100M	ALB100M ALB101M NMSS ALB102M ALB103M NMSS		ALB110M	ALB110M ALB111M ALB112M ALB113M
	ALB115M	ALB115M ALB116M		ALB140M	ALB140M ALB141M ALB150M ALB151M
	ALB130M	ALB130M ALB131M NMSS ALB132M ALB133M		ALB210M	ALB210ML ALB211ML ALB210MR ALB211MR
	ALB220M	ALB220M ALB221M		ALB230M	ALB230M ALB231M

NC BLANK BLOCKS



SHOP NC BLOCK BLANKS

PICTURE	FAMILY	NAAMS CODE
	NC BLANK BLOCK ANI 3-HOLE	ANI 080/081/082/083 ANI120/121/122/123 ANI 380/381/382/383/391/392 20MM SERIES ANI 420/421/422/423/424/425 20MM SERIES
	NC BLANK BLOCK ANI 4-HOLE	ANI 084/085/086/087 ANI 126/127/128/129 ANI384/385/386/387 20MM SERIES ANI 426/427/428/429 20MM SERIES
	NC BLANK BLOCK ANL 3-HOLE	ANL 060/061/062/063 ANL 100/101/102/103 ANL 215/216/217/218/225/226/227/228 ANL361/368/363/369 20MM ANL401/408/403/409
	NC BLANK BLOCK ANL 4-HOLE	ANL 064/065/067/068 ANL 104/105/106/107/211/212/222/223 ANL 311/312/314/364/365/366/367 ANL404/405/406/407/411/412
	NC BLANK BLOCK ANR TOP MOUNT 3-HOLE	ANR 130/131/132/133/134/135/136/137 ANR 430/431/432/433/448/449/434/435/450/436/437/451 --20MM SERIES
	NC BLANK BLOCK ANR TOP MOUNT 4-HOLE	ANR 140/141/142/143/144/145/146/147 ANR 440/441/442/443/444/445/446/447 --20MM SERIES
	NC BLANK BLOCK ANR SIDE MOUNT 3-HOLE	ANR 230/231/232/233 ANR 530/531/532/533/534/535 20MM SERIES
	NC BLANK BLOCK ANR SIDE MOUNT 4-HOLE	ANR 240/241/242/243 ANR 540/541/542/543 20MM SERIES

LOCATING PINS



SHOP LOCATING PINS

PICTURE	DESCRIPTION	PICTURE	DESCRIPTION
	25 MM DIAMETER APS 250M TO 259M		25X31MM SLOTTED HOLES APE 250M TO 259M
	6MM THRU 16MM DIAMETER APS 061M TO 169M		6X12 THRU 19X25 SLOTTED HOLES APE 061M TO 199M
	RETRACTABLE 19MM THRU 25MM DIAMETER APS 190R TO 259R		6X12 THRU 13X19 SLOTTED HOLES APE 061R TO 139R
	RETRACTABLE 6MM THRU 16MM DIAMETER APS 061R TO 169R		RETRACTABLE 6X12 THRU 13X19 SLOTTED HOLES APE 061S TO 139S
	RESPOT 25MM DIAMETER ARP 250M TO 259M		RETRACTABLE 16X22 THRU 25X31 SLOTTED HOLES APE 160R TO 259R
	RETRACTABLE 19 TO 25 DIAMETER ARP 190R TO 250R		RETRACTABLE 16X22 THRU 25X31 SLOTTED HOLES APE 160S TO 259S
	RESPOT 6MM THRU 19MM DIAMETER ARP 061M TO 199M		RESPOT 6X12 THRU 19X25 SLOTTED HOLES ARE 061M TO 199M
	RETRACTABLE RESPOT 6MM THRU 16MM DIAMETER ARP 061R TO 199R		RETRACTABLE RESPOT 6X12 THRU 12X19 SLOTTED HOLES ARE 061S TO 139S ARE 061R TO 139R
			RETRACTABLE RESPOT 16X22 THRU 25X31 SLOTTED HOLES ARE 160S TO 259S ARE 160R TO 259R

LOCATING PIN RETAINERS









SHOP PIN RETAINERS

PICTURE	FAMILY	PART NUMBER	PICTURE	FAMILY	PART NUMBER
	APR045M	APR045M APR046M NMSS		APR055M	APR055M APR056M NMSS
	APR065M	APR065M APR066M NMSS APR067M APR068M NMSS		APR075M	APR075M APR076M NMSS
	APR310M	APR310M APR312M NMSS APR313M APR314M NMSS		APR320M	APR320M APR321M NMSS
	APR330M	APR330M APR331M NMSS APR332M APR332M NMSS		APR010M	APR010M APR011M NMSS APR012M APR013M NMSS
	APR020M	APR020M APR021M NMSS		APR030M	APR030M APR031M NMSS APR032M APR033M NMSS
	APR040M	APR040M APR041M NMSS		APR050M	APR050M APR051M NMSS
	APR060M	APR060M APR061M NMSS APR062M APR063M NMSS		APR070M	APR070M APR071M NMSS
	APR010M	APR010M APR011M NMSS APR012M APR013M NMSS		APR020M	APR020M APR021M NMSS
	APR030M	APR030M APR031M NMSS APR032M APR033M NMSS		APR040M	APR040M APR041M NMSS
	APR050M	APR050M APR051M NMSS		APR060M	APR060M APR061M NMSS APR062M APR063M NMSS
	APR070M	APR070M APR071M NMSS			











DUMP UNIT COMPONENTS



SHOP DUMP UNITS

PICTURE	FAMILY	DESCRIPTION
	ADP XXI SERIES	DUMP UNIT STUB SHAFT ADP201, ADP301, ADP401, ADP501
	ADP XX2 SERIES	DUMP UNIT SPACER ADP202, ADP302, ADP402, ADP502
	ADP 400C SERIES	DUMP UNIT 40MM THRU SHAFT ADP416C THRU ADP490C DIAMETER 40MM LENGTH FROM 160MM TO 90MM
	ADP 500C SERIES	DUMP UNIT 50MM THRU SHAFT ADP530 THRU ADP590C DIAMETER 50MM LENGTH FROM 300MM TO 900MM
	ADP 600C SERIES	DUMP UNIT 60MM THRU SHAFT ADP630C THRU ADP690C DIAMETER 60MM LENGTH FROM 300MM TO 900MM
	ADP SC SERIES	DUMP UNIT STIB SHAFT ADP413SC, ADP515SC, ADP619SC
	ADP B SERIES	DUMP UNIT PIVOT BRONZE THRUST WASHER ADP4082B, ADP5095B, ADP6010B
	ADP XXXC SERIES	DUMP UNIT PIVOT COMPOSITE BEARING ADP4050C, ADP5060C, ADP6070C
	ADP 999 SERIES	DUMP UNIT METRIC KEEPER ADP999 FOR 40MM, 50MM, 66MM DIAMETER SHAFT

SHIMS & SPACERS










PICTURE	DESCRIPTION
	METRIC FITTING SHIMS 1 SLOT ASH 102 TO 120
	METRIC FITTING SHIMS 20MM 1 SLOT ASH 102N TO 120N
	METRIC FITTING SHIMS 4 SLOTS ASH 402 TO 420
	METRIC FITTING SHIMS 20MM 4 SLOTS ASH 402N TO 420N
	METRIC FITTING SHIMS 2 SLOTS ASH 602 TO 620
	METRIC FITTING SHIMS 3 SLOTS ASH 302 TO 320
	METRIC FITTING SHIMS 20MM 3 SLOTS ASH 302N TO 320N
	METRIC FITTING SHIMS 5 SLOTS ASH 502 TO 520
	CONSTRUCTION SPACER 3 SLOTS ACS3305 TO ACS3705
	CONSTRUCTION SHIM 2 SLOTS ACH602 TO ACH620



SHOP SHIMS



SHOP SPACERS

PICTURE	DESCRIPTION
	METRIC FITTING SPACER 2 SLOTS ASP 630S TO 670S
	METRIC FITTING SPACER 20 MM 6 HOLES ASP 630N TO 670N
	METRIC FITTING SPACER 3 HOLES ASP 330 TO 370
	METRIC FITTING SPACER 5 HOLES ASP 530 TO 570
	METRIC FITTING SPACER SHORT SLOT ASP 330S TO 370S
	METRIC FITTING SPACER 20MM 4 HOLES ASP 430 TO 470
	METRIC FITTING SPACER 6 HOLES ASP 630 TO 670
	METRIC FITTING SPACER 20MM 3 HOLES ASP430S TO 470S
	SPACER FOR 60X60 AND 70X70 MOUNTING ACS630 TO ACS670

ENGLISH & STANDARD UNITS OF MEASURE

QUANTITY	SI UNIT FOR FLUID POWER
Length	millimeter (mm)
Pressure*	bar (bar g, or bar a)
Pressure**	mm of mercury (mm Hg)
Flow***	liters per minute (l/min)
Flow†	cubic decimeters/sec (dm ³ /sec)
Force	Newton (N)
Mass	kilogram (Kg)
Time	second (sec)
Volume***	liter (l)
Temperature	degrees Celsius (°C)
Torque	Newton-meter (Nm)
Power	kilowatt (kw)
Shaft speed	revolutions per minute (rpm)
Frequency	Hertz (Hz)
Displacement	millimeters/revolution (ml/rev)
Kinetic viscosity	centistokes (cSt)
Velocity	meter per second (m/s)

NOTES: *Pressure above atmospheric **Pressure below atmospheric

PSI GAUGE PRESSURE CONVERTED FROM ENGLISH TO METRIC UNITS

This table is calculated on the basis of 1 PSI = 0.07 kilograms per square

PSI	10	50	100	250	500	750
KG/SQ.CM.	0.70	3.50	7.00	17.5	35.0	52.5

This table is calculated on the basis of 1 U.S. GPM = 3.79 liters per minute

GPM	5	8	12	15	20	25
LITERS/MIN.	18.95	30.32	45.48	56.85	75.80	94.75

This table is calculated on the basis of 1 SCFM = 0.4716 cubic decimeters

SCFM	5	10	15	25	50	75
DM³/SEC.	2.358	4.716	7.074	11.79	23.58	35.37

CUSTOMARY U.S. UNIT	CONVERSION FACTOR
inch (in.)	1 inch = 25.4 mm.
pounds/sq. in (psig or psia)	1 bar = 14.5 psi
inches of mercury (in. Hg.)	1 in. HG = 25.4 mm Hg.
U.S. gallons per minute (U.S. GPM)	1 U.S. GPM = 3.79 l/min
cubic feet per minute (U.S. cfm)	1 dm ³ /sec = 2.12 cfm
pound(f) or lb(f) (force)	1lb(f) = 4.44 N
pound(m) of lb(m) (mass)	1 Kg = 2.2lb
second (sec)	-
gallon (U.S. gal)	1 U.S. gal. = 3.79 l.
degrees Farenheit (°F)	°C = 5/9 (°F - 32)
pounds(f) - inches [(lbs(f))-in.]	1 Nm = 8.88lb (f)-in
horsepower (HP)	1 kw = 1.34 HP
revolutions per minute (rpm)	-
cycles per second (cps)	1 Hz = 1 cps
cubic inches per revolution (cipr) or (cir)	1 ml/rev = 0.061 cipr
Saybolt Universal Seconds (SUS or SSU)	cSt = (4.635)(SSU)††
feet per second (fps)	1 m/s = 3.28 fps

***Liquid. †Gas. †† @ 38°C; Factor is 4.667 @ 99°C

centimeter, or, 1 Kg/sq.cm = 14.28 PSI

1000	1500	2000	2500	3000	5000
70.0	105.0	140.0	175.0	210.0	350.0

(liquid) or, 1 liter per minute. = 0.2638 GPM

30	35	40	50	75	100
113.7	132.7	151.6	189.5	284.3	379.0

per second, or 1 dm³/sec. = 2.12 SCFM

100	150	200	250	300	350
47.16	70.74	94.32	117.9	141.5	165.1

DECIMAL & METRIC CONVERSIONS

Equivalents of Common Fractions of an Inch

	INCHES	MILLIMETERS		INCHES	MILLIMETERS
1/64	.015625	0.39688	33/64	.5156	13.09688
1/32	.031250	0.97375	17/32	.5312	13.49375
3/64	.046875	1.19063	35/64	.5469	13.89063
1/16	.062500	1.58750	9/16	.5625	14.28750
5/64	.078125	1.98438	37/64	.5781	14.68438
3/32	.093750	2.38175	19/32	.5937	15.08125
7/64	.109375	2.77813	39/64	.6093	15.47813
1/8	.125000	3.17500	5/8	.6750	15.87500
9/64	.140625	3.57188	41/64	.6406	16.27188
5/32	.156250	3.96870	21/32	.6562	16.66875
11/64	.171875	4.36563	43/64	.6718	17.06563
3/16	.187500	4.76250	11/16	.6875	17.46250
13/64	.203125	5.15938	45/64	.7031	17.85938
7/32	.218750	5.55625	23/32	.7187	18.25625
15/64	.234375	5.95313	47/64	.7343	18.65313
1/4	.250000	6.35000	3/4	.7500	19.05000
17/64	.265600	6.74688	49/64	.7656	19.44688
9/32	.281200	7.14375	25/32	.7812	19.84375
19/64	.296800	7.54063	51/64	.7968	20.24063
5/16	.312500	7.93750	13/16	.8125	20.63750
21/64	.328100	8.33438	53/64	.8281	21.03438
11/32	.343700	8.73125	27/32	.8437	21.43125
23/64	.359200	9.12813	55/64	.8593	21.82810
3/8	.375000	9.52500	7/8	.8750	22.22500
25/64	.390600	9.92188	57/64	.8906	22.62188
13/32	.406200	10.31875	29/32	.9062	23.01875
27/64	.421800	10.71563	59/64	.9218	23.41563
7/16	.437500	11.11250	15/16	.9375	23.81250
29/64	.453100	11.50938	61/64	.9531	24.20930
15/32	.468700	11.90625	31/32	.9687	24.60625
31/64	.484300	13.30313	63/64	.9843	25.00313
1/2	.500000	12.70000	1.0	1.000	25.40000

CONVERSIONS

From English to Metric Units

PRESSURE:

1 PSI = .07 Kg/sq. cm.

1 Kg/sq. cm. = 14.28 PSI

MEASUREMENTS:

1 inch = 2.54 cm.

1 cm. = .3937 in.

VOLUME:

1 CFM = 28.03 liter/min

1 liter/min. = .0356 CFM

NOTES



NAAMS/STANDARD COMPONENTS

- Worlds largest inventory of NAAMS Standard components
- Standardized parts for many diverse industries / markets
- Euro Standards

CLAMPS AND GRIPPERS

- EC series Clamps have a 'before center' locking mechanism
- EC Clamps have 100s of options for factory automation solutions
- Strong – yet compact, GL/GH Grippers have 5 cylinder options
- Our Grippers have over 50 head combinations

PIVOT UNITS

- Very popular 'Off the Shelf' pneumatic units
- Industry leading – Fully adjustable!
- Multiple cylinder and mounting options
- Unique and compact design

NC / CUSTOM COMPONENTS

- We design and construct thousands of custom components annually
- High quality – Low cost!
- Hundreds of material capabilities
- Small batch to high production

AUTOMATION COMPONENTS

- Shuttles, slides and lift units
- Conveyor Rollers – in 3 industrial options
- 'Universal' mounted Robot Spacers
- Open architecture clamping systems

