



CATALOGUE 10/2017-WW-A.9.4

# SYSTEM GAMMA



## SCOPE OF APPLICATION:

Deliveries and services provided by PASS Stanztechnik AG are effected exclusively according to PASS delivery and payment conditions. These conditions shall be deemed accepted at the latest upon receipt of the goods or services.

## GENERAL REMARKS:

You can find our general terms and conditions on our Homepage under: [www.pass-ag.com](http://www.pass-ag.com)

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# GAMMA I STATION A

DIAMETER UP TO 12,7 MM



		POS.-NO.
PUNCH* (H-PM®)		
	Round	422A21
	Square	422A22
	Rectangular	422A23
	Oblong	422A24
	O.D. Ground Special Shapes	422A2G
	EDM Required Special Shapes	422A2E
STRIPPER		
	Round	461A21
	Square	461A22
	Rectangular	461A23
	Oblong	461A24
	O.D. Ground Special Shapes	461A2G
	EDM Required Special Shapes	461A2E
DIE (HWS)		
	Round	4052A01
	Square	4052A02
	Rectangular	4052A03
	Oblong	4052A04
	O.D. Ground Special Shapes	4052A0G
	EDM Required Special Shapes	4052A0E

ADDITIONAL COSTS FOR PUNCH
TICN coating
T-MAX coating
A-MAX coating
WT-shear
DOWT-shear
2PT-shear
4PT-shear
ADDITIONAL COSTS FOR DIE
Reinforced version
H-PM® Quality

# GAMMA-V2 I STATION A

DIAMETER UP TO 12,7 MM

	POS.-NO.
<b>PUNCH* (H-PM®)</b>	
Round	422A41
Square	422A42
Rectangular	422A43
Oblong	422A44
O.D. Ground Special Shapes	422A4G
EDM Required Special Shapes	422A4E
<b>STRIPPER</b>	
Round	461A41
Square	461A42
Rectangular	461A43
Oblong	461A44
O.D. Ground Special Shapes	461A4G
EDM Required Special Shapes	461A4E
<b>DIE (HWS)</b>	
Round	4052A01
Square	4052A02
Rectangular	4052A03
Oblong	4052A04
O.D. Ground Special Shapes	4052A0G
EDM Required Special Shapes	4052A0E



## ADDITIONAL COSTS FOR PUNCH

TICN coating  
T-MAX coating  
A-MAX coating  
WT-shear  
DOWT-shear  
2PT-shear  
4PT-shear

## ADDITIONAL COSTS FOR DIE

Reinforced version  
H-PM® Quality

# GAMMA I STATION B

DIAMETER UP TO 31,75 MM



		POS.-NO.
PUNCH* (H-PM®)		
	Round	422B21
	Square	422B22
	Rectangular	422B23
	Oblong	422B24
	O.D. Ground Special Shapes	422B2G
	EDM Required Special Shapes	422B2E
STRIPPER		
	Round	461B21
	Square	461B22
	Rectangular	461B23
	Oblong	461B24
	O.D. Ground Special Shapes	461B2G
	EDM Required Special Shapes	461B2E
DIE (HWS)		
	Round	4052B01
	Square	4052B02
	Rectangular	4052B03
	Oblong	4052B04
	O.D. Ground Special Shapes	4052B0G
	EDM Required Special Shapes	4052B0E

## ADDITIONAL COSTS FOR PUNCH

- TICN coating
- T-MAX coating
- A-MAX coating
- WT-shear
- DOWT-shear
- 2PT-shear
- 4PT-shear

## ADDITIONAL COSTS FOR DIE

- Reinforced version
- H-PM® Quality

# GAMMA-V2 | STATION B

DIAMETER UP TO 31,75 MM

		POS.-NO.
<b>PUNCH* (H-PM®)</b>		
	Round	422B41
	Square	422B42
	Rectangular	422B43
	Oblong	422B44
	O.D. Ground Special Shapes	422B4G
	EDM Required Special Shapes	422B4E
<b>STRIPPER</b>		
	Round	461B41
	Square	461B42
	Rectangular	461B43
	Oblong	461B44
	O.D. Ground Special Shapes	461B4G
	EDM Required Special Shapes	461B4E
<b>DIE (HWS)</b>		
	Round	4052B01
	Square	4052B02
	Rectangular	4052B03
	Oblong	4052B04
	O.D. Ground Special Shapes	4052B0G
	EDM Required Special Shapes	4052B0E



## ADDITIONAL COSTS FOR PUNCH

TICN coating  
T-MAX coating  
A-MAX coating  
WT-shear  
DOWT-shear  
2PT-shear  
4PT-shear

## ADDITIONAL COSTS FOR DIE

Reinforced version  
H-PM® Quality

# GAMMA AND GAMMA-V2 | STATION C

DIAMETER UP TO 50,8 MM



		POS.-NO.
PUNCH* (H-PM®)		
	Round	422C21
	Square	422C22
	Rectangular	422C23
	Oblong	422C24
	O.D. Ground Special Shapes	422C2G
	EDM Required Special Shapes	422C2E
STRIPPER		
	Round	461C21
	Square	461C22
	Rectangular	461C23
	Oblong	461C24
	O.D. Ground Special Shapes	461C2G
	EDM Required Special Shapes	461C2E
DIE (HWS)		
	Round	4052C01
	Square	4052C02
	Rectangular	4052C03
	Oblong	4052C04
	O.D. Ground Special Shapes	4052C0G
	EDM Required Special Shapes	4052C0E

ADDITIONAL COSTS FOR PUNCH	
TICN coating	
T-MAX coating	
A-MAX coating	
WT-shear	
DOWT-shear	
2PT-shear	
4PT-shear	

ADDITIONAL COSTS FOR DIE	
H-PM® Quality	



# GAMMA AND GAMMA-V2 | STATION D

DIAMETER UP TO 88,9 MM

		POS.-NO.
<b>PUNCH* (H-PM®)</b>		
	Round	422D21
	Square	422D22
	Rectangular	422D23
	Oblong	422D24
	O.D. Ground Special Shapes	422D2G
	EDM Required Special Shapes	422D2E
<b>STRIPPER</b>		
	Round	461D21
	Square	461D22
	Rectangular	461D23
	Oblong	461D24
	O.D. Ground Special Shapes	461D2G
	EDM Required Special Shapes	461D2E
<b>DIE (HWS)</b>		
	Round	4052D01
	Square	4052D02
	Rectangular	4052D03
	Oblong	4052D04
	O.D. Ground Special Shapes	4052D0G
	EDM Required Special Shapes	4052D0E



## ADDITIONAL COSTS FOR PUNCH

TICN coating  
T-MAX coating  
A-MAX coating  
WT-shear  
DOWT-shear  
2PT-shear  
4PT-shear

## ADDITIONAL COSTS FOR DIE

H-PM® Quality

# GAMMA AND GAMMA-V2 | STATION E

DIAMETER UP TO 114,3 MM



POS.-NO.

## PUNCH\* (H-PM®)

Round	422E21
Square	422E22
Rectangular	422E23
Oblong	422E24
O.D. Ground Special Shapes	422E2G
EDM Required Special Shapes	422E2E

## STRIPPER

Round	461E21
Square	461E22
Rectangular	461E23
Oblong	461E24
O.D. Ground Special Shapes	461E2G
EDM Required Special Shapes	461E2E

## DIE (HWS)

Round	4052E01
Square	4052E02
Rectangular	4052E03
Oblong	4052E04
O.D. Ground Special Shapes	4052E0G
EDM Required Special Shapes	4052E0E

## ADDITIONAL COSTS FOR PUNCH

TICN coating  
T-MAX coating  
A-MAX coating  
WT-shear  
DOWT-shear  
2PT-shear  
4PT-shear

## ADDITIONAL COSTS FOR DIE

H-PM® Quality

# PASS TOOL VARIETY | COATING VERSIONS

## HWS

HWS tools are made of a secondary hardened cold work steel with superior toughness. This type of steel is especially suitable for dies.

Advantage for customer:

- excellent cost in accordance to performance

## H-PM®

H-PM® tools are produced with steel made on powder-metallurgical base with a high degree of purity.

This guarantees a segregational uniformed microstructure in the complete cross-section of the tool.

Advantage for customer:

- excellent cost in accordance to performance
- good stability for edges by increased toughness
- high tool life time due to the uniformed microstructure
- increased current hit-flex-capability; suitable as an excellent base for dies

**H-PM®** tools are produced with steel made on powder-metallurgical base with a high degree of purity to fulfil the highest punching demands.

Furthermore we attach great importance to a high quality hardening process by repeated temporing and deep-freeze subsequently.

This process guarantees an extremely high hardness with an outstanding wear resistance of our punching tools.

Associated with modern production methods (grinding of the cutting edges with special grinding wheels) we can ensure that the wide range of different sheet qualities can be punched up to 1.600 N/mm<sup>2</sup> - no matter if it concerns mild alloyed aluminium, mild steel, stainless steel or spring band steel.

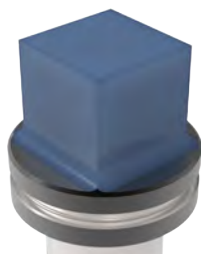
A high punch hardness as well as an excellent grinding surface are important in order to counteract the problem with edge build-up.

Tests show us that the well-known TiCN coating is a good coating to increase the lifetime (especially working with stainless steel). However, the problem of material buildup on the edges have not really been counteracted.

Built-up edges are known especially when working with

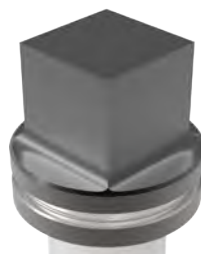
- zincd steel
- aluminium sheets

After specialized tests at PASS Stanztechnik AG the below mentioned coatings turned out to be the most successful coatings:



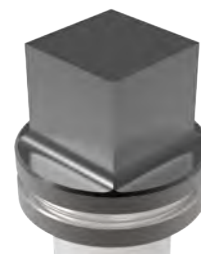
TiCN

for working with stainless steel



A-MAX

for dry processing with aluminium sheet



T-MAX

for working with galvanized sheet

**SALVAGNINI** | **THICK TURRET** | **TRUMPF**



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