

# DIAMOND & CBN PRODUCTS





Harlequin International Ltd is a technology based leading manufacturer of superabrasive products. A perpetual commitment to Research & Development has enabled the company to lead in the drive for higher standards and performance within the industry.

A worldwide presence demonstrates Harlequin International's ability to pass onto customers the very latest technology and efficiencies within a highly competitive pricing system.

Harlequin believes in constant reinvestment in the very latest machinery and technology in order to deliver to customers the very best products available on a global scale.

Within the ISO9001 quality system is the ability of Harlequin to deliver to all customers a consistently high quality product, along with an unparalleled level of service.

Customers can trust with confidence in a Harlequin product.

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## STANDARD WHEEL SHAPES

For Diamond, prefix shape code with STD

For CBN, prefix shape code with STB

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## STANDARD WHEEL SHAPES

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|         | 4BT9    |
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## DIAMOND & CBN WHEELS FOR CNC MACHINES, INCLUDING:

|            |              |
|------------|--------------|
| Anca       | Saacke Gebr  |
| Cincinnati | Safag        |
| M Deckel   | Schneeberger |
| EWAG       | Schutte      |
| Griffo     | Sorencro     |
| Haas       | Straussak    |
| HaRo       | Stream       |
| Hawema     | Tacchella    |
| Huffmann   | Viking       |
| Jungner    | Walter       |
| PoTeWe     | Watkins      |
| Tempo      | Loroch       |

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# INTERNATIONAL STANDARDISATION

## OF GRIT SIZES FOR DIAMOND & CUBIC BORON NITRIDE

| NARROW RANGE GRADE    |                 |                      |                |          |
|-----------------------|-----------------|----------------------|----------------|----------|
| FEPA Grit designation | British BS 1987 | US Standard ASTM E11 | German DIN 848 |          |
|                       |                 |                      | Series 1       | Series 2 |
| D1181                 | 14/16           | 16/18                | -              | D1100    |
| D1001                 | 16/18           | 18/20                | -              | D900     |
| D851                  | 18/22           | 20/25                | -              | D700     |
| D711                  | 22/25           | 25/30                | -              | D700     |
| D601                  | 25/30           | 30/35                | D550           | D500     |
| D501                  | 30/36           | 35/40                | D450           | D500     |
| D426                  | 36/44           | 40/45                | -              | D350     |
| D356                  | 44/52           | 45/50                | -              | D350     |
| D301                  | 52/60           | 50/60                | D280           | D250     |
| D251                  | 60/72           | 60/70                | D220           | D250     |
| D213                  | 72/85           | 70/80                | D180           | D150     |
| D181                  | 85/100          | 80/100               | D180           | D150     |
| D151                  | 100/120         | 100/120              | D140           | D150     |
| D126                  | 120/140         | 120/140              | D110           | D100     |
| D107                  | 150/170         | 140/170              | D90            | D100     |
| D91                   | 170/200         | 170/200              | D90            | D70      |
| D76                   | 200/240         | 200/230              | D65            | D70      |
| D64                   | 240/300         | 230/270              | D55            | D50      |
| D54                   | 300/350         | 270/325              | D45            | D50      |
| D46                   | 350/400         | 325/400              | D45            | D50      |
| WIDE RANGE GRADE      |                 |                      |                |          |
| D1182                 | 14/18           | 16/20                | -              | -        |
| D852                  | 18/25           | 20/30                | -              | D700     |
| D602                  | 25/36           | 30/40                | -              | D500     |
| D427                  | 36/52           | 40/50                | -              | D350     |
| D252                  | 60/85           | 60/80                | -              | -        |

TO ORDER A PARTICULAR WHEEL, PLEASE QUOTE OUR FULL  
CATALOGUE CODE TOGETHER WITH GRIT SIZE, BORE AND  
CONCENTRATION REQUIRED

ZUR BESTELLUNG EINER EINZELNEN SCHLEIFSCHEIBE, NENNEN  
SIE UNS BITTE DIE GENAUE KATALOGBEZEICHNUNG MIT  
KÖRNUNG, KONZENTRATION UND BOHRUNGSDURCHMESSER






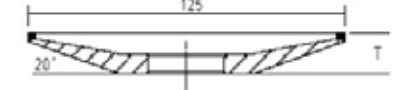


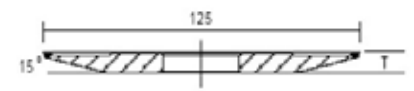


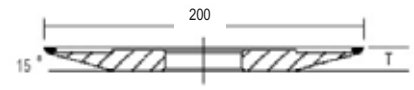


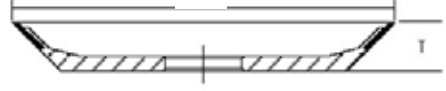





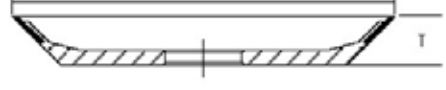


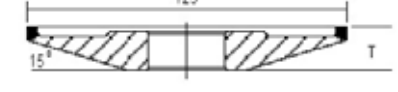


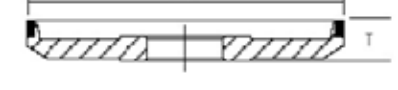


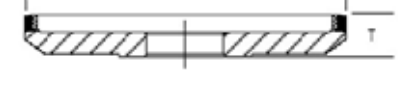


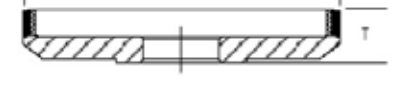


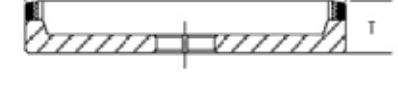
POUR TOUTE COMMANDE DE MEULE, PRIERE DE RAPPELER LE  
NUMERO DE CODE COMPLET DU CATALOGUE AINSI QUE LE  
CALIBRE DE L'ABRASIF, L'ALESAGE ET LA CONCANTATION DESIRES

**QUALITY ABRASIVE PRODUCTS FOR THE  
WOODWORKING, LAMINATE AND  
METALWORKING INDUSTRIES**






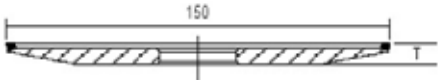



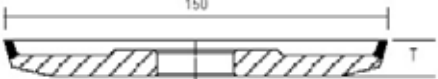

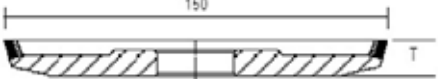



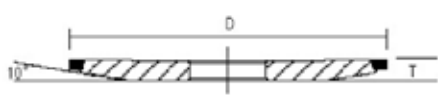


**QUALITÄTS-SCHLEIF-ERZEUGNISSE FÜR DIE  
HOLBEARBEITUNGS UND LAMINAT INDUSTRIEN**

**MATERIEL ABRASIF DE QUALITE  
POUR LES INDUSTRIES DES BOIS  
ET LAMINES**


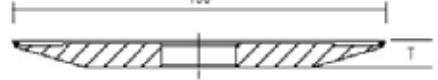

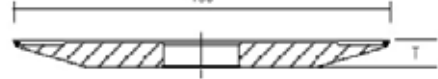
# VOLLMER-BIBERACH

| MACHINE                                | OPERATION   |  |  |
|--|---|--|--|
| CANA DIAMANT AND<br>CHA                |    | <b>VBTF A1 150-4-2-32</b><br><b>VBTF A2 150-5-2-32</b>                           |       |
| CHH CHHT                               |    | <b>VPF B1 125-3-2-32</b><br><b>VPF B2 125-3-3-32</b><br><b>VPF B3 125-5-3-32</b> |       |
| CNHB CHC<br>CHT-CHTS CHHT<br>CX100 CHP |    | <b>VPF C1 125-2.5-1.2-32</b><br><b>VPF C2 125-3-1.8-32</b>                       |       |
| CNHB CHC<br>CHT-CHTS CHHT<br>CX100 CHP |    | <b>VPF C3 125-4-2-32</b>   |       |
| CHD                                    |    | <b>VPF C30 200-1.5-10-32</b>   |       |
| CHD                                    |  | <b>VPF C35 200-2-2-32</b><br><b>VPF C36 200-4-2-32</b>                           |   |
| CHD                                    |  | <b>VPF C40 200-2-10-32</b>   |   |
| CNHB CHC<br>CHT-CHTS CHHT<br>CX100 CHP |  | <b>VPF D1 125-3-4-32</b>   |   |
| CHC CHT CHTS<br>CHHT<br>CX100 CHP      |  | <b>VPF E1 125-3-6-32</b>   |   |
| CHC CHT CHTS<br>CHHT<br>CX100 CHP      |  | <b>VPF F1 125-3/2-6-32</b><br><b>VPF F15 125-2.5/2.5-6-32</b>                    |   |
| CHC CHT CHTS<br>CHHT<br>CX100 CHP      |  | <b>VPF G1 125-3/2-10-32</b><br><b>VPF G15 125-2.5/2.5-10-32</b>                  |   |
| CHC CHP<br>CX100 CHD                   |  | <b>VPF G31 125-2.5/2.5/1.5-10-32</b><br><b>VPF G35 125-1.5/1.5/1.5-10-32</b>     |   |

## VOLLMER-BIBERACH






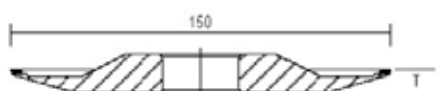


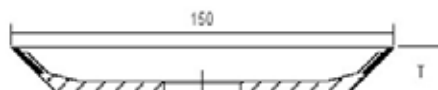





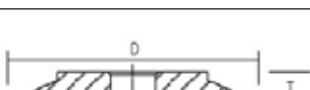



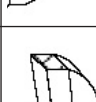

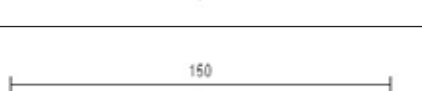
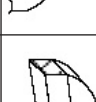


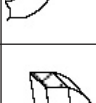


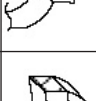

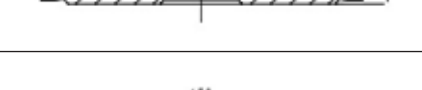
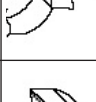




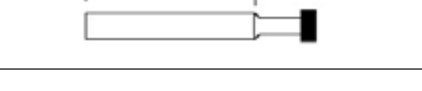
| MACHINE | OPERATION   |  |  |
|---------|---|--|--|
| CC CHTF |    | VBS H1 100-4-5-32<br>VBS H15 100-4-6.5-32      |    |
| CC CHTF |    | VBS H2 100-2/2-5-32<br>VBS H25 100-2/2-6.5-32  |    |
| CHAT    |    | VBF J1 150-3-1.5-32                            |    |
| CHAT    |    | VBF F1 150-4-2-32                              |    |
| CHAT    |    | VBF K1 150-3-6-32                              |    |
| CHAT    |  | VBT L1 150-3/2-6-32                            |  |
| CHAT    |  | VBF L2 150-3/2-10-32                           |  |
| CHTF    |  | VBS H30 125-4-5-32<br>VBS S1 80-4-5-32         |  |
| CHD     |  | VP P1 6-45-3<br>VP P1 6.5-45-3<br>VP P1 7-45-3 |  |

## AKE


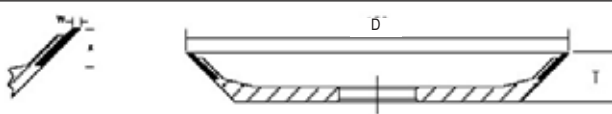

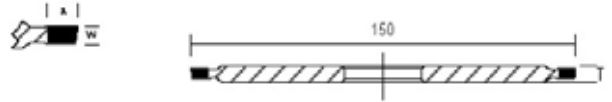
| MACHINE      | OPERATION   |  |  |
|--------------|---|--|--|
| AKEMAT BU AW |  | AKE F1 150-1.5-1.5-32<br>AKE F1 150-3-1.5-32 |  |
| AKEMAT BU AW |  | AKE F1 150-3-2-32<br>AKE F1 150-3-3-32       |  |



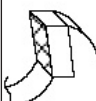
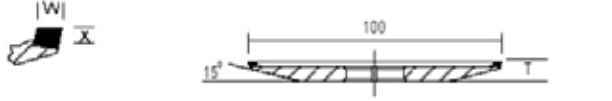



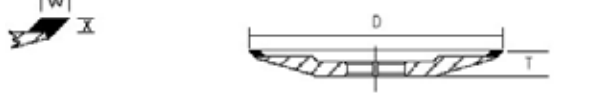
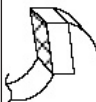
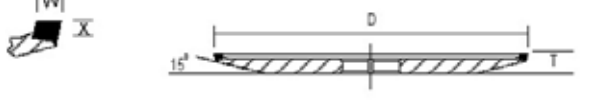

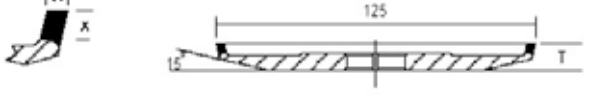

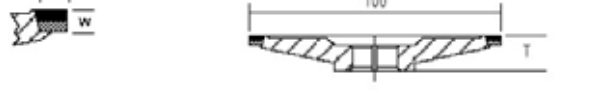

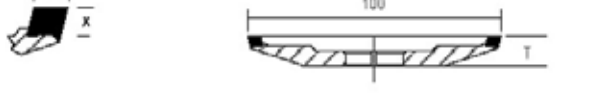



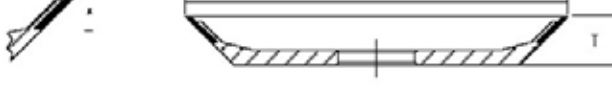
# AKE

| MACHINE      | OPERATION   |  |   |
|--------------|---|--|---|
| AKEMAT BU AW |    | <b>AKE F1 150-4-2-32</b><br><b>AKE F1 175-4-2-32</b><br><b>AKE F1 200-4-2-32</b>   |        |
| AKEMAT UB    |    | <b>AKE F2 150-4-2-32</b>   |        |
| AKEMAT BU AW |    | <b>AKE F4 150-1.5-10-32</b>  |        |
| AKEMAT DUO F |    | <b>AKE S1 76-4-5-20</b><br><b>AKE S2 100-4-5-20</b><br><b>AKE S3 100-4-6.5-20</b>  |       |
| AKEMAT DUO F |    | <b>AKE S15 76-2/2-5-20</b><br><b>AKE S25 100-2/2-5-20</b><br><b>AKE S35 100-2/2-6.5-20</b>                                   |       |
| AKEMAT U     |   | <b>AKE T1 127-2/2-7-32</b><br><b>AKE T1 127-3/2-7-32</b>   |     |
| AKEMAT U     |  | <b>AKE T2 150-2/2-6.5-32</b><br><b>AKE T2 150-3/2-6.5-32</b>   |    |
| AKEMAT U     |  | <b>AKE T2 150-2/2-10-32</b><br><b>AKE T2 150-3/2-10-32</b>   |    |
| AKEMAT U     |  | <b>AKE T15 127-4-7-32</b><br><b>AKE T15 127-5-7-32</b>   |   |
| AKEMAT U     |  | <b>AKE T25 150-4-10-32</b><br><b>AKE T25 150-5-10-32</b>   |    |
| AKEMAT U     |  | <b>AKE P1 6-45-3</b><br><b>AKE P1 6.5-45-3</b><br><b>AKE P1 7-45-3</b>   |   |
| U4<br>U6R2   |  | <b>AKE TRIPLE RIM</b><br><b>127MM DIAMETER</b><br><b>AKE TRIPLE RIM</b><br><b>200MM DIAMETER</b><br><b>SUPER FINE FINISH</b> |    |


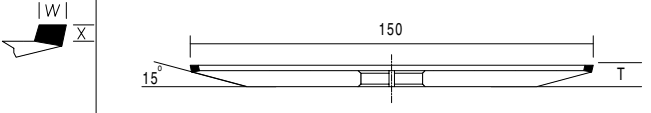

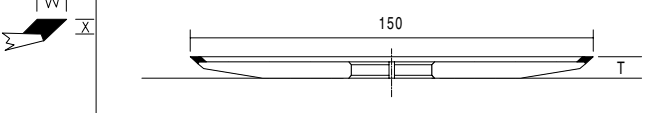

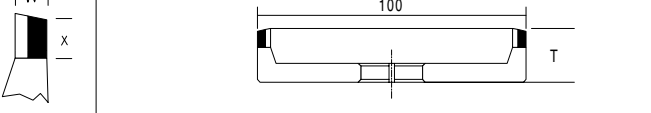

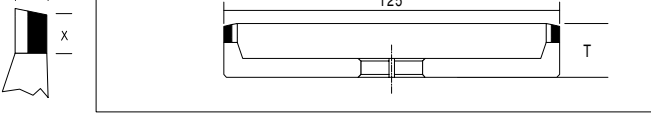

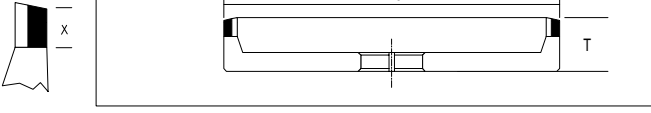

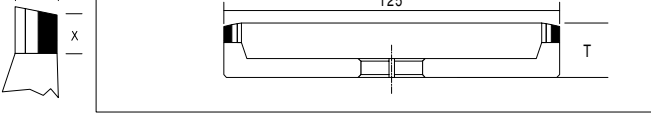
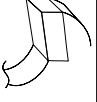




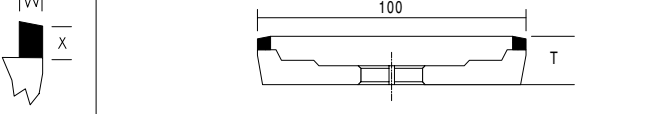

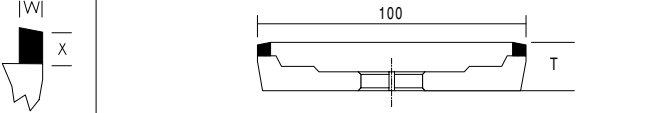

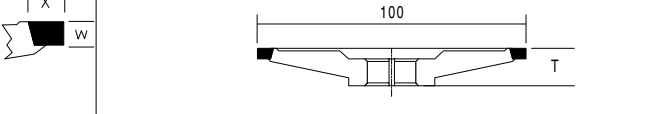

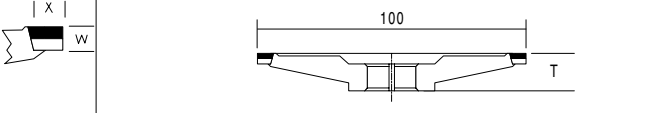
## AKE

| MACHINE     | OPERATION   |  |  |
|-------------|---|--|--|
| B10<br>U6R2 |  | HF 12V9 150-3-10-32<br>HF 12V9 200-3-10-32 |  |
| B10         |  | AKE 150MM DIAMETER<br>TRIPLE RIM           |  |



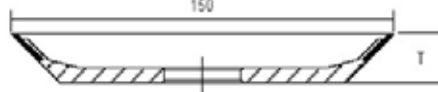


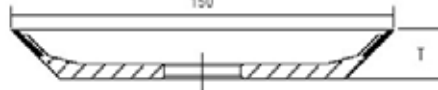


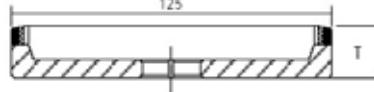


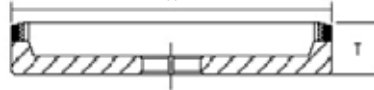


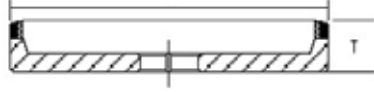


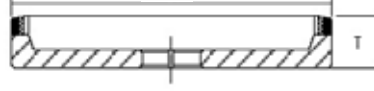
## WIDMA

| MACHINE   | OPERATION   |   |  |
|---|---|---|--|
| BS700 HKS700<br>HKS700-H1 HKS800<br>UNIMAT                |    | WWF A1 100-2-1.5-25<br>WWF B1 100-3-1.5-25                      |    |
| BS700 HKS700<br>HKS700-H1 HKS800<br>UNIMAT                |    | WWF B2 100-3-2-25<br>WWF B3 100-3-3-25                          |    |
| BS700 HKS700<br>HKS700-H1 HKS800<br>UNIMAT                |  | WWF C1 100-4-2-25<br>WWF F1 125-4-2-25                          |  |
| HKS700-H111<br>HKS750<br>WIDMA GRINDING<br>CENTRE OPTIMAT |  | WWF D1 125-2-1.5-25<br>WWF D2 125-3-1.5-25<br>WWF D3 125-3-2-25 |  |
| HKS700-H111 HKS750<br>WIDMA GRINDING<br>CENTRE OPTIMAT    |  | WWF E1 125-3-4-25   |  |
| HKS400 FS600<br>FS100/H FS1001<br>GRINDING CENTRE         |  | WWS M1 100-4-6-20   |  |
| UNIMAT  |  | WWTF N15 100-4-5-25   |  |
| UNIMAT  |  | WWF C40 100-2-10-25   |  |
| SUPERMAT  |  | WWF C41 150-2-10-25   |  |



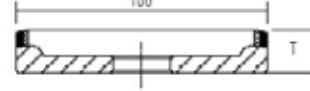


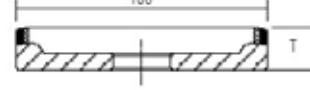





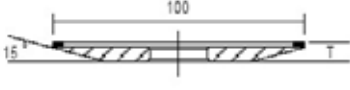


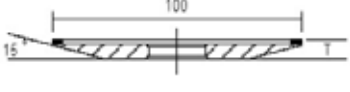
# WIDMA

| MACHINE   | OPERATION   |   |  |
|---|---|---|--|
| SUPERMAT  |    | <b>WWF G1 150-3-1.5-25</b><br><b>WWF G2 150-3-2-25</b>                            |    |
| HKS700 HKS700-H1<br>HKS700-H111 HKS750<br>HKS800 GRINDING<br>CENTRE OPTIMAT             |    | <b>WWF H1 150-4-2-25</b>  |    |
| HKS700 HKS700-H1<br>HKS700-H111 HKS750<br>HKS800 GRINDING<br>CENTRE OPTIMAT             |    | <b>WWT H1 100-3/2-6-25</b><br><b>WWT H15 100-2.5/2.5-6-25</b>                     |    |
| HKS700 HKS700-H1<br>HKS700-H111 HKS750<br>HKS800 GRINDING<br>CENTRE OPTIMAT<br>SUPERMAT |    | <b>WWT J1 125-3/2-6-25</b><br><b>WWT J15 125-2.5/2.5-6-25</b>                     |    |
| HKS700 HKS700-H1<br>HKS700-H111 HKS750<br>HKS800 GRINDING<br>CENTRE OPTIMAT             |    | <b>WWT J2 125-3/2-10-25</b><br><b>WWT J25 125-2.5/2.5-10-25</b>                   |    |
| HKS700 HKS700-H1<br>HKS700-H111 HKS750<br>HKS800 GRINDING<br>CENTRE OPTIMAT             |  | <b>WWT J3 125-3/2/1.6-6-25</b><br><b>WWT J35 125-2.5/2.5/1.6-6-25</b>             |  |
| UNIMAT  |  | <b>WWT K1 100-3-4-25</b><br><b>WWT K2 100-3-6-25</b><br><b>WWT K3 100-3-10-25</b> |  |
| UNIMAT  |  | <b>WWT K4 100-4-4-25</b><br><b>WWT K5 100-4-6-25</b><br><b>WWT K6 100-4-10-25</b> |  |
| UNIMAT  |  | <b>WWT K7 100-5-4-25</b><br><b>WWT K8 100-5-6-25</b><br><b>WWT K9 100-5-10-25</b> |  |
| UNIMAT  |  | <b>WWT K95 100-6.5-6.5-25</b><br><b>WWT K97 100-6.5-10-25</b>                     |  |
| HKS400 FS600<br>FS100/H FS1001<br>GRINDING CENTRE                                       |  | <b>WWS L1 100-4-5-20</b><br><b>WWS L15 100-4-6.5-20</b>                           |  |
| HKS400 FS600<br>FS100/H FS1001<br>GRINDING CENTRE                                       |  | <b>WWS L2 100-2/2-5-20</b><br><b>WWS L25 100-2/2-6.5-20</b>                       |  |



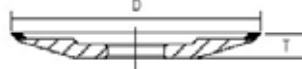


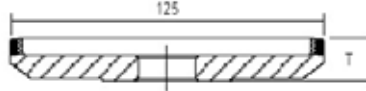


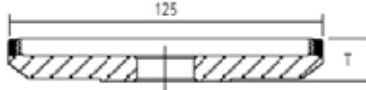





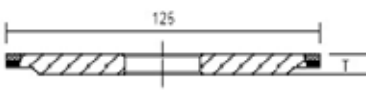


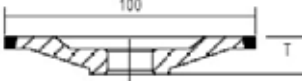


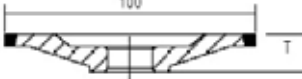


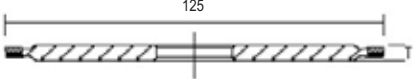


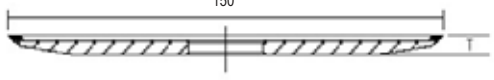


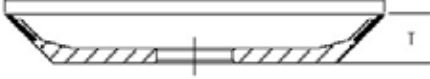


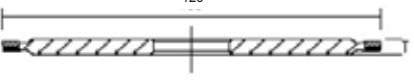


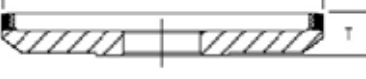
## WIDMA

| MACHINE  | OPERATION   |                          |   |   |
|----------|---|--------------------------|---|---|
| SUPERMAT |    | WWF F16 150-2-10-25      |    |     |
| SUPERMAT |    | WWF F17 150-3-10-25      |    |     |
| SUPERMAT |    | WWT J31 125-2/2/1.5-6-25 |    |    |
| UNIMAT   |    | WWT K45 100-2/2/1.5-6-25 |    |    |
| UNIMAT   |    | WWT K46 100-3/2-6-25     |    |    |
| UNIMAT   |  | WWT K47 100-3/2/1.6-6-25 |  |  |



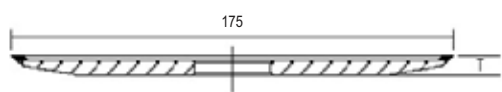



## UT.MA

| MACHINE      | OPERATION   |   |   |   |
|--------------|---|---|---|---|
| AL800 AL800E |  | UTT H1 100-3/2-6-25<br>UTT H15 100-2.5/2.5-6-25   |  |  |
| AL800 AL800E |  | UTT H3 100-3/2-10-25<br>UTT H35 100-2.5/2.5-10-25 |  |  |
| AL800 AL800E |  | UTF B1 100-3-1.6-25                               |  |   |
| AL800 AL800E |  | UTF C1 100-4-1-25<br>UTF C2 100-4-1.6-25          |  |   |
| AL800 AL800E |  | UTF D1 100-5-1-25<br>UTF D2 100-5-1.6-25          |  |   |






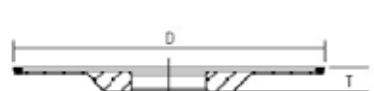


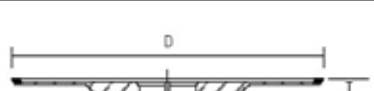


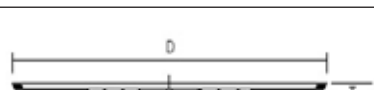
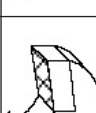

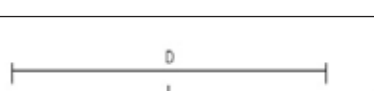
# UT.MA

| MACHINE              | OPERATION   |   |   |   |
|----------------------|---|---|---|---|
| AL800 AL800E         |    | UTF K1 100-4-2-25<br>UTF K2 125-4-2-25                        |    |    |
| AL800 AL800E         |    | UTT F1 125-3/2-6/25<br>UTT F15 125-2.5/2.5-6-25               |    |    |
| AL800A               |    | UTF G1 125-3/2-10-25<br>UTF G15 125-2.5/2.5-10-25             |    |    |
| AL800A               |    | UTF B3 125-3-1.6-25<br>UTF C3 125-4-1-25<br>UTF D3 125-5-1-25 |    |     |
| AL802 AL804          |    | UTT T1 125-3/2-5-32   |    |    |
| AF800 AF600<br>AF801 |  | UTS E1 100-4-5-20   |  |  |
| AF801                |  | UTT E2 125-4-5-20   |  |  |
| AL802                |  | UTT T31 125-2.5/1.5/1.5                                       |  |   |
| AP800                |  | UTT F1 150-4-2-32   |  |   |
| AL804                |  | UTT F4 125-2-10-32  |  |   |
| AL804                |  | UTT T27 125-2/2/1.5-7-32                                      |  |   |
| AL805                |  | UTT F1 125-3/2-6-32   |  |  |









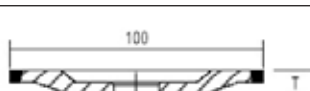
## UT.MA

| MACHINE | OPERATION   |                          |   |   |
|---------|---|--------------------------|---|---|
| AL805   |  | UTT F40 175-4-2-32       |  |   |
| AL805   |  | UTT T25 125-2/2/1.5-6-32 |  |  |

## SPECIAL WHEELS

| MACHINE          | OPERATION   |                     |   |   |
|------------------|---|---------------------|---|---|
| VOLLMER BIBERACH |    | VBF F5 125-3-1.5-32 |    |    |
| AKE              |    | AKE F5 150-3-1.5-32 |    |    |
| VOLLMER DORNHAN  |   | VDF F5 100-3-1.5-25 |   |   |
| WIDMA            |  | WWF F5 100-3-1.5-25 |  |  |
| GENERAL          |  | D4A2P 150-5-2-32    |  |  |






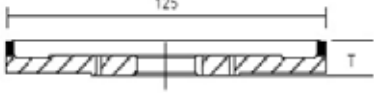





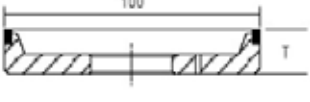


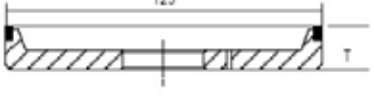


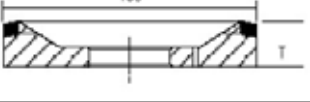


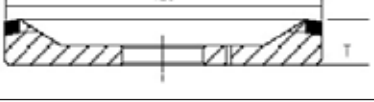


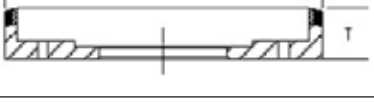


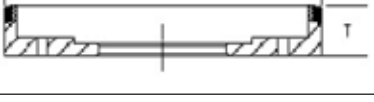


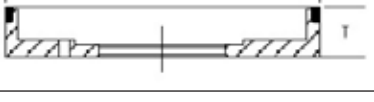


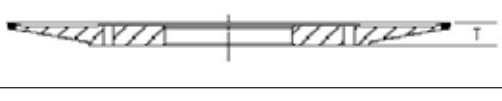



## VOLLMER-DORNHAN

| MACHINE | OPERATION   |  |   |   |
|---------|---|--|---|---|
| FINIMAT |  | VDTF A1 100-4-3-25<br>VDTF B1 100-5-3-25 |  |   |
| FINIMAT |  | VDF C1 100-4-1-25<br>VDF D1 100-5-1-25   |  |   |
| DUO S   |  | VDS E1 100-4-5-20                        |  |  |

# VOLLMER-DORNHAN



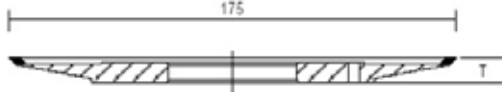


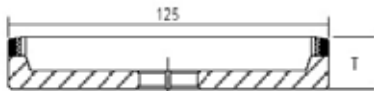


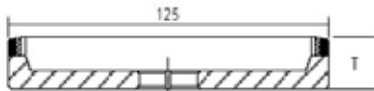


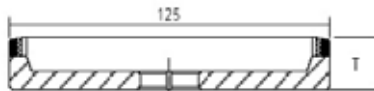


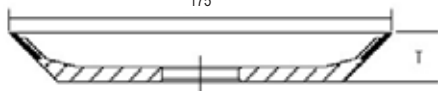
| MACHINE                             | OPERATION |   |  |  |
|-------------------------------------|-----------|---|--|--|
| FINIMAT                             |           | VDT F1 100-3/2-6-25<br>VDT F15 100-2.5/2.5-6-25                   |  |  |
| FINIMAT                             |           | VDT G1 100-3/2-10-25<br>VDT G15 100-2.5/2.5-10-25                 |  |  |
| FINIMAT                             |           | VDT F2 100-3/2-6-25   |  |  |
| W11 240 TS                          |           | VDS H1 125-3-5-36   |  |  |
| W11 240 TS                          |           | VDF J1 100-3-1.8-25<br>VDF N2 100-3-3.2-25<br>VDF J1 125-3-1.6-25 |  |  |
| W11 240 TS                          |           | VDF K1 100-4-2-25   |  |  |
| DUO TS UNILAEPP<br>11-450 TS MF 600 |           | VDS 01 76-4-5-20<br>VDS P1 100-4-5-20                             |  |  |
| UNILAEPP                            |           | VDT Q1 125-3/2-6-25<br>VDT Q15 125-2.5/2.5-6-25                   |  |  |
| UNILAEPP                            |           | VDT R1 125-3-6-25   |  |  |
| UNILAEPP                            |           | VDT S1 125-3-3.3-25<br>VDT T1 125-3-1.8-25                        |  |  |
| MULTI-MATIC                         |           | VDF U1 125-3-3.2-25   |  |  |
| MULTI-MATIC                         |           | VDF V1 125-3-3.2-25   |  |  |

# VOLLMER-DORNHAN



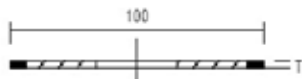


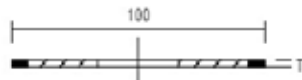


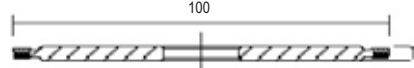

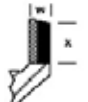
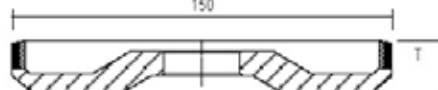


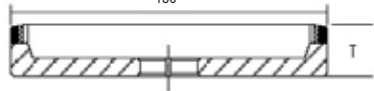
| MACHINE                     | OPERATION   |   |   |   |
|-----------------------------|---|---|---|---|
| MULTI-MATIC                 |    | VDT F1 125-4-5-25                                     |    |    |
| MULTI-MATIC                 |    | VDTF X1 125-3-5-25                                    |    |    |
| MULTI-DUO                   |    | VDS Y1 75-3-6-32                                      |    |    |
| MULTI-DUO                   |    | VDS Y2 100-3-6-32                                     |    |    |
| MULTI-DUO                   |    | VDS Y3 125-3-6-32                                     |    |    |
| MULTI-DUO                   |  | VDS Z1 100-6-5-32                                     |  |  |
| MULTI-DUO                   |  | VDS Z2 125-6-5-32                                     |  |  |
| FINIMAT GAMMA<br>BETA ALPHA |  | VDB F1 125-3/2-6-50.8<br>VDB F15 125-2.5/2.5-6-50.8   |  |  |
| FINIMAT GAMMA<br>BETA ALPHA |  | VDB G1 125-3/2-10-50.8<br>VDB G15 125-2.5/2.5-10-50.8 |  |  |
| FINIMAT GAMMA<br>BETA ALPHA |  | VDB L1 125-3-6-50.8                                   |  |  |
| FINIMAT GAMMA<br>BETA ALPHA |  | VDB C2 175-3-1.8-50.8                                 |  |   |
| FINIMAT GAMMA<br>BETA ALPHA |  | VDB C25 175-3-3.3-50.8                                |  |   |








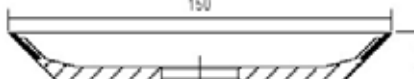


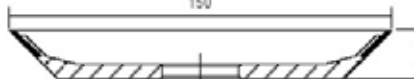
## VOLLMER-DORNHAN

| MACHINE                     | OPERATION   |                                 |   |   |
|-----------------------------|---|---------------------------------|---|---|
| FINIMAT GAMMA<br>BETA ALPHA |  | VDB C3 175-4-2-50.8             |  |   |
| FINIMAT                     |  | VDT J87 100-2.5/1.5/1.5-10-25   |  |  |
| FINIMAT                     |  | VDT J31 125-2.5/1.5/1.5-10-50.8 |  |  |
| FINIMAT GAMMA<br>BETA ALPHA |  | VDT J32 125-3/2/1.5-10-50.8     |  |  |
| BETA GAMMA                  |  | VDB C41 175-2-10-50.8           |  |   |



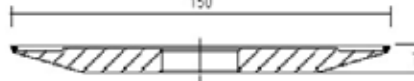








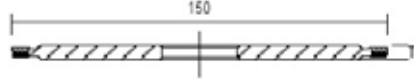





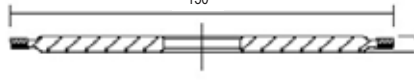



## WRIGHT

| MACHINE      | OPERATION   |                             |   |   |
|--------------|---|-----------------------------|---|---|
| WRIGHT       |  | WRS S1 100-3.2-6.5-31.75    |  |  |
| WRIGHT       |  | WRS S2 100-4-6.5-31.75      |  |  |
| WRIGHT       |  | WRS S25 100-2/2-6.5-31.75   |  |   |
| WRIGHT TALON |  | WRT T1 150-3/6-6-31.75      |  |   |
| WRIGHT TALON |  | WRT T25 150-2/2/1.5-6-31.75 |  |  |


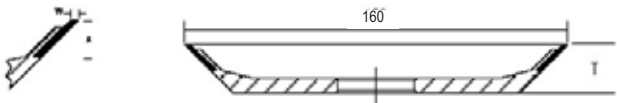

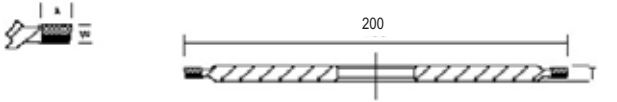



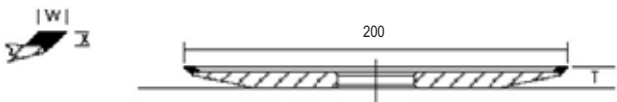
## WRIGHT

| MACHINE | OPERATION   |                                 |   |  |
|---------|---|---------------------------------|---|--|
| WRIGHT  |  | <b>WRT F1 150-3/3-6.5-31.75</b> |  |  |
| WRIGHT  |  | <b>WRF F4 150-3-10-31.75</b>    |  |  |
| WRIGHT  |  | <b>WRF F5 150-1.5-10-31.75</b>  |  |  |

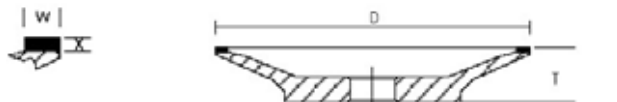
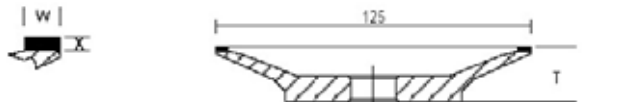
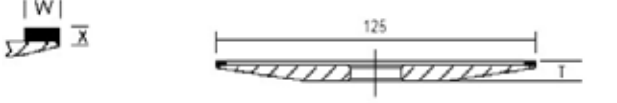
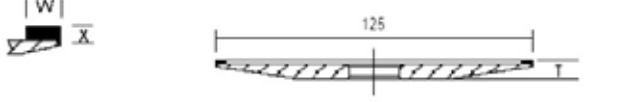

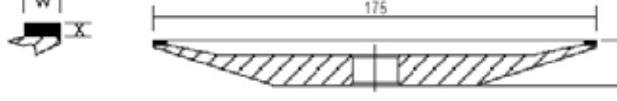
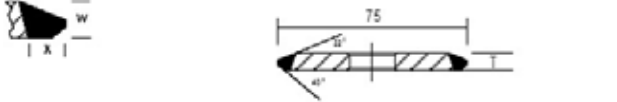
## WALTER

| MACHINE        | OPERATION   |  |   |  |
|----------------|---|--|---|--|
| WOODTRONIC NC  |  | <b>WALT F1 150-3-1.5-32</b><br><b>WALT F1 150-3-2-32</b>                                       |  |  |
| WOODTRONIC NC  |  | <b>WALT F1 150-4-2-32</b>  |  |  |
| WOODTRONIC NC  |  | <b>WALT T2 150-2/2-6.5-32</b><br><b>WALT T2 150-3/2-6.5-32</b><br><b>WALT T2 150-2/2-10-32</b> |  |  |
| WOODTRONIC NC  |  | <b>WALT T2 150-3/2-10-32</b>   |  |  |
| WOODTRONIC NC  |  | <b>WALT T25 150-4-6.5-32</b><br><b>WALT T25 150-5-10-32</b>                                    |  |  |
| WOODTRONIC NC3 |  | <b>WALT T50 150-2.5/1.5/1.5-W-32</b>   |  |  |
| WOODTRONIC NC3 |  | <b>WALT C3 160-4-2-32</b>  |  |  |


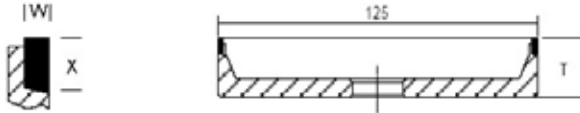
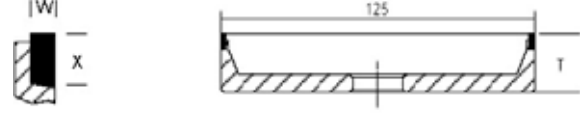
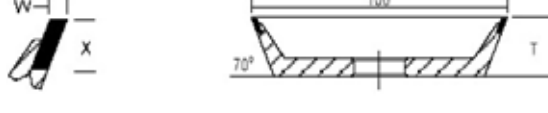
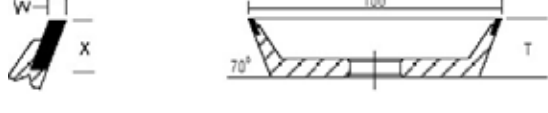
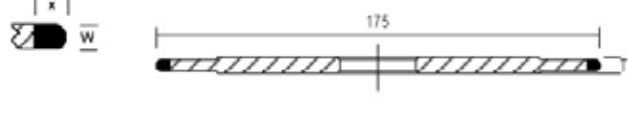
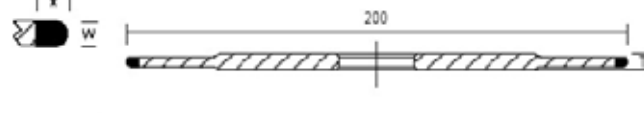
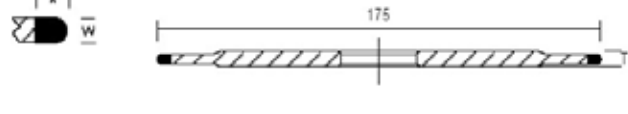
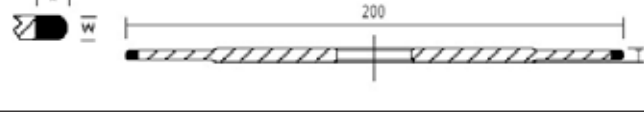
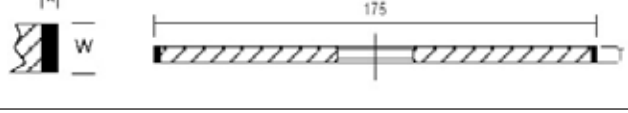
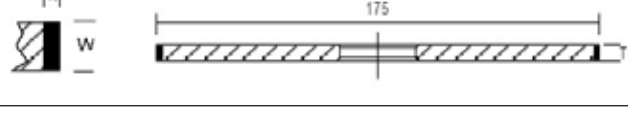

## WALTER

| MACHINE        | OPERATION   |  |  |
|----------------|---|--|--|
| WOODTRONIC NC3 |  | <b>WALT 160-2-10-32</b>  |  |
| WOODTRONIC NC5 |  | <b>WALT T25 200-2.5/1.5/1.5-10-32</b><br><b>WALT T26 200-2.5/2.5/1.5-10-32</b> |  |
| WOODTRONIC NC5 |  | <b>WALT F22 200-2-10-32</b>  |  |
| WOODTRONIC NC5 |  | <b>WALT F4 200-4-2-32</b>  |  |


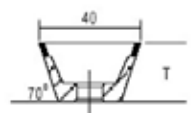
## STEHLE

| MACHINE | OPERATION            |   |  |
|---------|----------------------|---|--|
| S916    | DIAMOND<br>UNIVERSAL | <b>STED 13A2 125-5-2-20</b><br><b>STED 13A2 125-5-4-20</b><br><b>STED 13A2 150-5-3-20</b> |  |
| S916    | CBN<br>UNIVERSAL     | <b>STEB 13A2 125-5-2-20</b><br><b>STEB 13A2 125-5-4-20</b>                                |  |
| S916    | DIAMOND<br>UNIVERSAL | <b>STED 4A2 125-5-2-20</b>  |  |
| S916    | CBN<br>UNIVERSAL     | <b>STEB 4A2 125-5-20</b>  |  |
| S916    | DIAMOND<br>UNIVERSAL | <b>STED 12A2 175-5-2-20</b>   |  |
| S916    | CBN<br>UNIVERSAL     | <b>STEB 12A2 175-5-2-20</b>   |  |
| S916    | DIAMOND<br>UNIVERSAL | <b>STED 1M2 75-5-7.5-20</b><br><b>STED 1M2 75-8-8.5-20</b>                                |  |


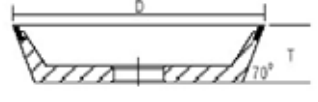

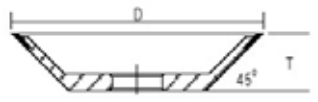

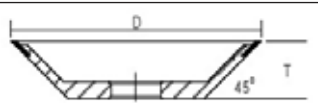


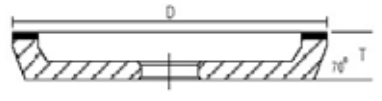





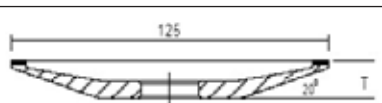
# STEHLE

| MACHINE    | OPERATION            |  |  |
|------------|----------------------|--|--|
| S916       | CBN<br>UNIVERSAL     | <b>STEB 1M2 75-5-7.5-20</b><br><b>STEB 1M2 75-8-8.5-20</b>           |    |
| HK         | DIAMOND<br>UNIVERSAL | <b>STED 6A9 125-2-6-20</b>   |    |
| HK         | CBN<br>UNIVERSAL     | <b>STEB 6A9 125-2-6-20</b>   |    |
| VARIO 92-1 | DIAMOND<br>UNIVERSAL | <b>STED 11V9 100-2-6-20</b>  |    |
| VARIO 92-1 | CBN<br>UNIVERSAL     | <b>STEB 11V9 100-2-6-20</b>  |    |
| VARIO 92-1 | DIAMOND<br>PROFILE   | <b>STED 14F1 175-4/2R-5-32</b><br><b>STED 14F1 175-1.4/0.7R-5-32</b> |  |
| VARIO 92-1 | DIAMOND<br>PROFILE   | <b>STED 14F1 200-1/0.5R-5-32</b><br><b>STED 14F1 200-4/2R-5-32</b>   |  |
| VARIO 92-2 | CBN<br>PROFILE       | <b>STEB 14F1 175-4/2R-5-32</b><br><b>STEB 14F1 175-1.4/0.7R-5-32</b> |  |
| VARIO 92-2 | CBN<br>PROFILE       | <b>STEB 14F1 200-1/0.5R-5-32</b><br><b>STEB 14F1 200-4/2R-5-32</b>   |  |
| VARIO 92-2 | DIAMOND<br>UNIVERSAL | <b>STED 1A1 175-9-2-32</b>   |  |
| VARIO 92-2 | CBN<br>UNIVERSAL     | <b>STEB 1A1 175-9-2-32</b>   |  |
| VARIO 92-1 | DIAMOND<br>UNIVERSAL | <b>STED 11V2 40-2-5-10</b>   |  |

## STEHLE

| MACHINE    | OPERATION        |                            |   |   |
|------------|------------------|----------------------------|---|---|
| VARIO 92-1 | CBN<br>UNIVERSAL | <b>STEB 11V2 40-2-5-10</b> |  |  |

## SATURN

| MACHINE          | OPERATION   |  |   |   |
|------------------|---|--|---|---|
| FKS 450          | DIAMOND/<br>CBN<br>UNIVERSAL  | <b>SAT 11V9 50-2-10-10</b><br><b>SAT 11V9 75-2-10-10</b>                                       |    |    |
| HKS 600          | DIAMOND/<br>CBN<br>UNIVERSAL  | <b>SAT 12V9/45 55-2-6-10</b><br><b>SAT 12V9/45 75-1.5-6-20</b><br><b>SAT 12V9/45 75-3-6-20</b> |    |    |
| HKS 600          | DIAMOND/<br>CBN<br>UNIVERSAL  | <b>SAT 12V9/45 100-2-6-20</b><br><b>SAT 12V9/45 125-2-10-20</b>                                |    |    |
| HKSC 600 HKS 600 |  | <b>SAT 11A2 50-3-1.5-20</b>  |  |  |
| HKSC 600 HKS 600 |  | <b>SAT 4A2 125-3-1.5-20</b><br><b>SAT 4A2 125-5-1-20</b><br><b>SAT 4A2 125-5-2-20</b>          |  |   |
| HKSC 600 HKS 600 |  | <b>SAT 12A2 125-5-1.5-20</b><br><b>SAT 12A2 125-5-3-20</b>                                     |  |  |

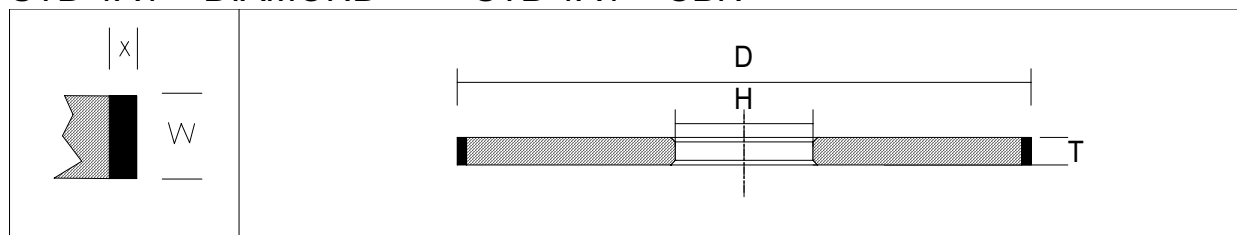
## STANDARD WHEEL SHAPES

## STANDARD- SCHLEIFSCHEIBENFORM

For Diamond, prefix shape code with STD  
For CBN, prefix code with STB

STD 1A1 = DIAMOND

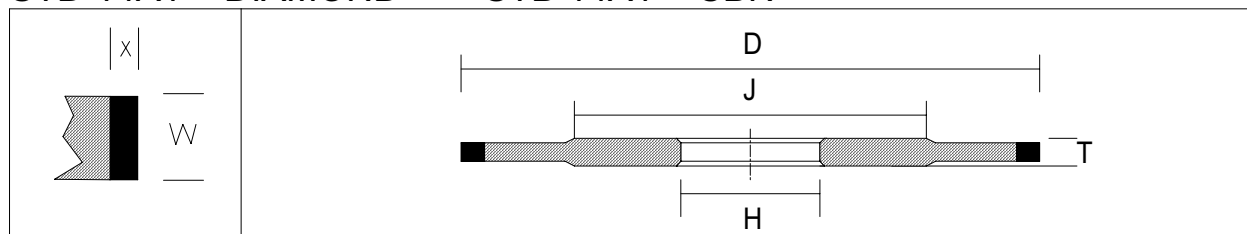
STB 1A1 = CBN



| D   | X |   |   |   | W |   |   |   |   |    |    |    |    |
|-----|---|---|---|---|---|---|---|---|---|----|----|----|----|
|     | 2 | 3 | 4 | 6 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 15 | 20 |
| 50  | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆  | ◆  |    |    |
| 75  | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆  | ◆  |    |    |
| 100 | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆  | ◆  |    |    |
| 125 | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆  | ◆  | ◆  |    |
| 150 |   | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆  | ◆  | ◆  | ◆  |
| 175 |   | ◆ | ◆ | ◆ |   |   | ◆ | ◆ | ◆ | ◆  | ◆  | ◆  | ◆  |
| 200 |   | ◆ | ◆ | ◆ |   |   | ◆ | ◆ | ◆ | ◆  | ◆  | ◆  | ◆  |
| 225 |   | ◆ | ◆ | ◆ |   |   |   | ◆ | ◆ | ◆  | ◆  | ◆  | ◆  |
| 250 |   | ◆ | ◆ | ◆ |   |   |   | ◆ | ◆ | ◆  | ◆  | ◆  | ◆  |
| 300 |   | ◆ | ◆ | ◆ |   |   |   |   |   | ◆  | ◆  | ◆  | ◆  |

STD 14A1 = DIAMOND

STB 14A1 = CBN

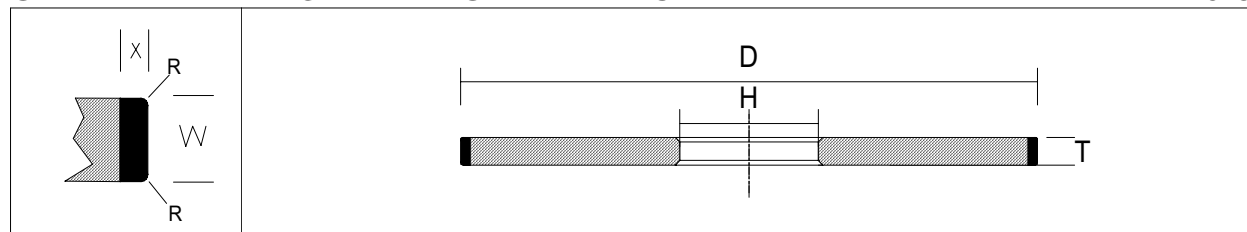


| D   | X |   |   |   | W |   |   |   |   |    |    |    |    |
|-----|---|---|---|---|---|---|---|---|---|----|----|----|----|
|     | 2 | 3 | 4 | 6 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 15 | 20 |
| 50  | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆  | ◆  |    |    |
| 75  | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆  | ◆  |    |    |
| 100 | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆  | ◆  |    |    |
| 125 | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆  | ◆  | ◆  |    |
| 150 |   | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆  | ◆  | ◆  | ◆  |
| 175 |   | ◆ | ◆ | ◆ |   |   | ◆ | ◆ | ◆ | ◆  | ◆  | ◆  | ◆  |
| 200 |   | ◆ | ◆ | ◆ |   |   | ◆ | ◆ | ◆ | ◆  | ◆  | ◆  | ◆  |
| 225 |   | ◆ | ◆ | ◆ |   |   |   | ◆ | ◆ | ◆  | ◆  | ◆  | ◆  |
| 250 |   | ◆ | ◆ | ◆ |   |   |   | ◆ | ◆ | ◆  | ◆  | ◆  | ◆  |
| 300 |   | ◆ | ◆ | ◆ |   |   |   |   |   | ◆  | ◆  | ◆  | ◆  |

STD 1L1 = DIAMOND

STB 1L1 = CBN

R=0.5



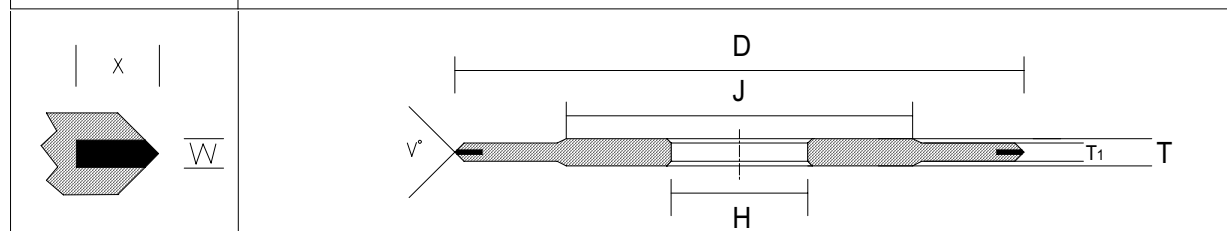
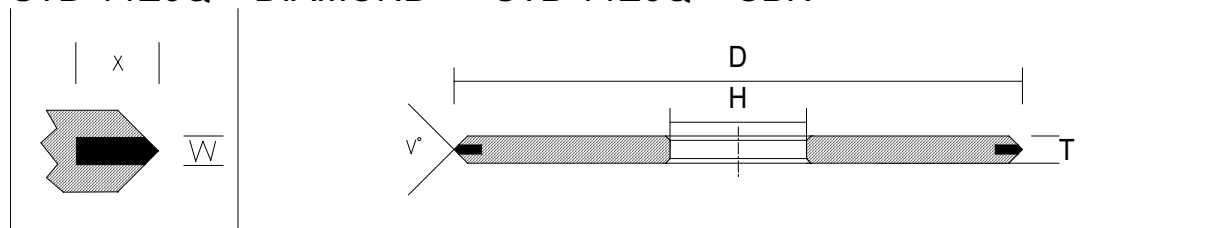
| D   | X |   |   |   | W |   |   |   |
|-----|---|---|---|---|---|---|---|---|
|     | 3 | 4 | 5 | 6 | 3 | 4 | 5 | 6 |
| 75  | ◆ | ◆ | ◆ |   | ◆ | ◆ | ◆ |   |
| 100 | ◆ | ◆ | ◆ |   | ◆ | ◆ | ◆ |   |
| 125 | ◆ | ◆ | ◆ |   | ◆ | ◆ | ◆ | ◆ |
| 150 | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ |

STD 1E6Q = DIAMOND

STB 1E6Q = CBN

STD 14E6Q = DIAMOND

STB 14E6Q = CBN

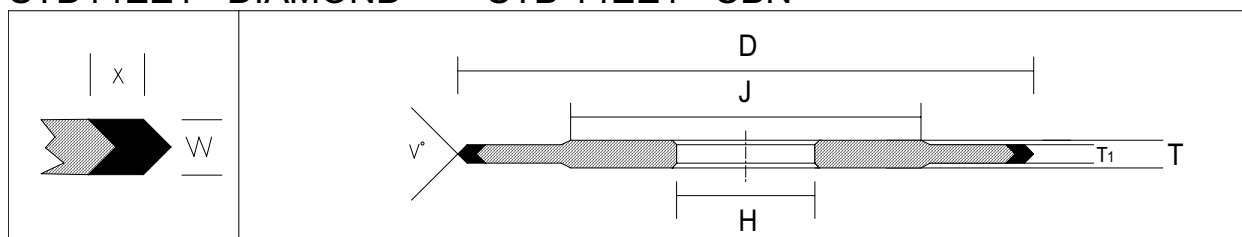


| D   | U |   | T |   |    | T1 |   | J   | V  |    |    |    |
|-----|---|---|---|---|----|----|---|-----|----|----|----|----|
|     | 1 | 2 | 6 | 8 | 12 | 4  | 5 |     | 35 | 45 | 60 | 90 |
| 40  | ◆ | ◆ | ◆ |   |    | ◆  |   | 22  | ◆  | ◆  | ◆  | ◆  |
| 50  | ◆ | ◆ | ◆ |   |    | ◆  |   | 32  | ◆  | ◆  | ◆  | ◆  |
| 75  | ◆ | ◆ | ◆ |   |    | ◆  |   | 50  | ◆  | ◆  | ◆  | ◆  |
| 100 | ◆ | ◆ | ◆ |   |    | ◆  |   | 70  | ◆  | ◆  | ◆  | ◆  |
| 125 | ◆ | ◆ |   | ◆ |    |    | ◆ | 100 | ◆  | ◆  | ◆  | ◆  |
| 150 | ◆ | ◆ |   | ◆ |    |    | ◆ | 120 | ◆  | ◆  | ◆  | ◆  |
| 220 | ◆ | ◆ |   |   | ◆  |    | ◆ | 180 | ◆  | ◆  | ◆  | ◆  |



STD14EE1= DIAMOND

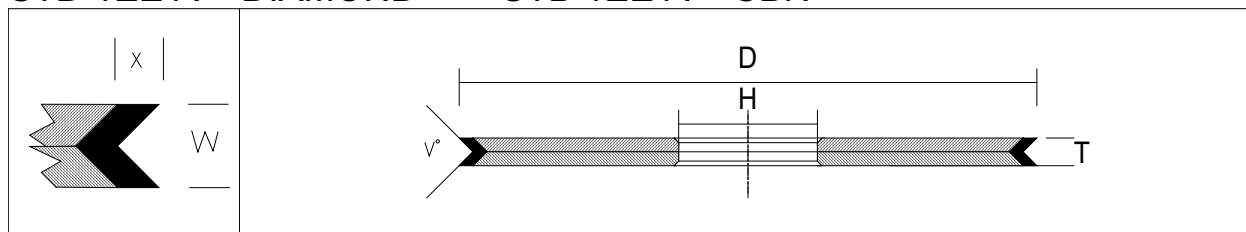
STB 14EE1= CBN



| ØD  | U   |     |     | T   |   |    |    | ØJ  | V°  |     |     |     |
|-----|-----|-----|-----|-----|---|----|----|-----|-----|-----|-----|-----|
|     | 3   | 4   | 5   | 6   | 8 | 10 | 15 |     | 35° | 45° | 60° | 90° |
| 100 | ♦   | ♦   |     | ♦   |   |    |    | 70  | ♦   | ♦   | ♦   | ♦   |
| 125 | ♦   | ♦   |     | ♦   |   |    |    | 100 | ♦   | ♦   | ♦   | ♦   |
| 150 | ♦   | ♦   |     | ♦   |   |    |    | 120 | ♦   | ♦   | ♦   | ♦   |
| 175 |     | ♦   | ♦   |     | ♦ |    |    | 140 | ♦   | ♦   | ♦   | ♦   |
| 200 |     | ♦   | ♦   |     |   | ♦  |    | 160 | ♦   | ♦   | ♦   | ♦   |
| 250 |     | ♦   | ♦   |     |   |    | ♦  | 200 | ♦   | ♦   | ♦   | ♦   |
| V°  | 35° | 45° | 60° | 90° |   |    |    |     |     |     |     |     |
| X   | 3.0 | 2.5 | 2.0 | 1.5 |   |    |    |     |     |     |     |     |
| X   | 6.0 | 5.0 | 4.0 | 3.0 |   |    |    |     |     |     |     |     |

STD 1EE1V= DIAMOND

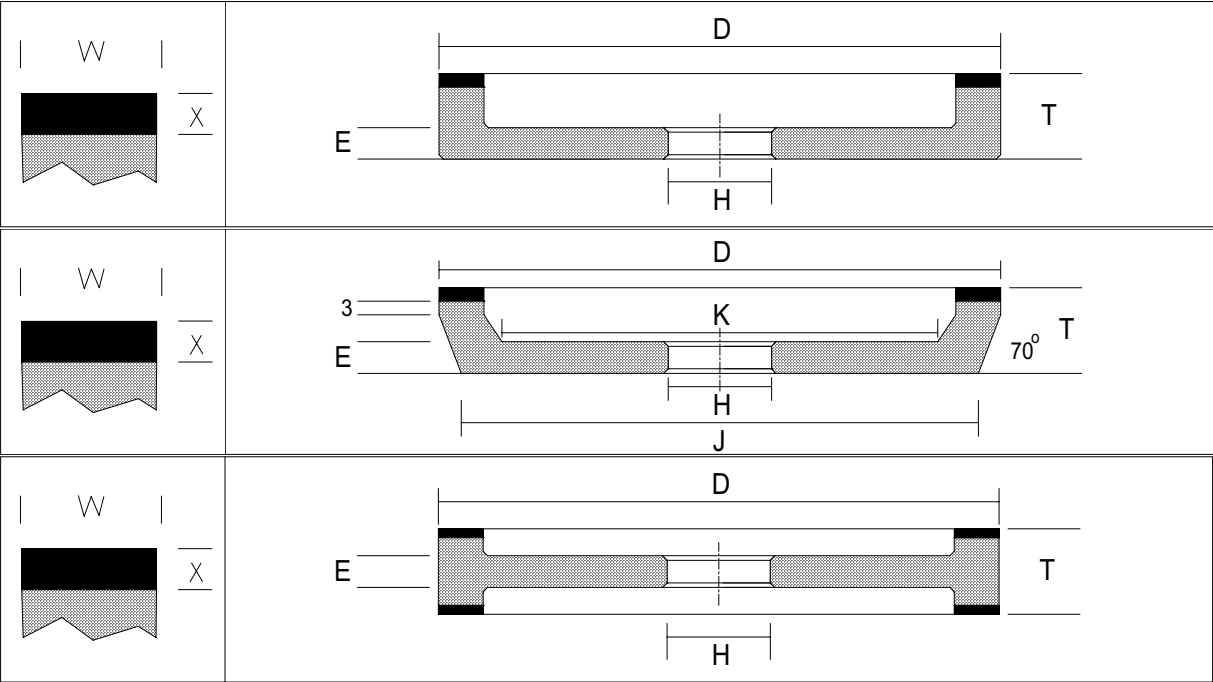
STB 1EE1V= CBN



| ØD  | T |    |    |    | V°  |     |     |
|-----|---|----|----|----|-----|-----|-----|
|     | 7 | 10 | 12 | 15 | 120 | 125 | 135 |
| 100 | ♦ |    |    |    | ♦   |     |     |
| 110 | ♦ |    |    |    | ♦   |     |     |
| 150 |   | ♦  | ♦  |    |     | ♦   | ♦   |
| 150 |   |    |    | ♦  |     |     | ♦   |

STD 6A2 = DIAMOND  
 STD11A2 = DIAMOND  
 STD 9A3 = DIAMOND

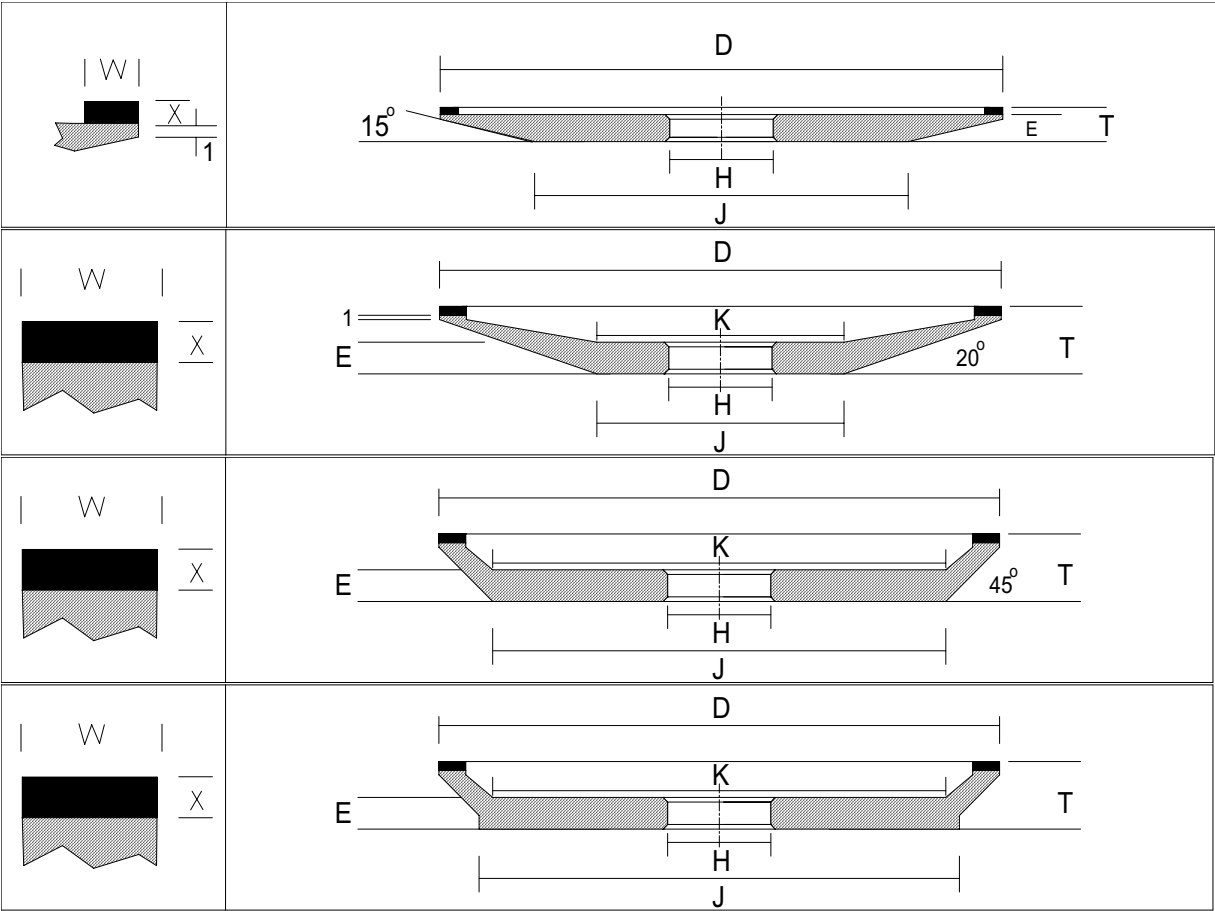
STB 6A2 = CBN  
 STB 11A2 = DIAMOND  
 STB 9A3 = CBN



| D   | X |   |   |   | W |   |   |    |    |    |    |    |
|-----|---|---|---|---|---|---|---|----|----|----|----|----|
|     | 2 | 3 | 4 | 6 | 3 | 5 | 6 | 10 | 12 | 15 | 20 | 25 |
| 50  | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ |   |    |    |    |    |    |
| 75  | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ |   | ◆  |    |    |    |    |
| 100 | ◆ | ◆ | ◆ | ◆ |   | ◆ | ◆ | ◆  |    |    |    |    |
| 125 | ◆ | ◆ | ◆ | ◆ |   | ◆ | ◆ | ◆  | ◆  | ◆  | ◆  |    |
| 150 | ◆ | ◆ | ◆ | ◆ |   | ◆ | ◆ | ◆  | ◆  | ◆  | ◆  | ◆  |
| 175 | ◆ | ◆ | ◆ | ◆ |   | ◆ | ◆ | ◆  | ◆  | ◆  | ◆  | ◆  |
| 200 | ◆ | ◆ | ◆ | ◆ |   | ◆ | ◆ | ◆  | ◆  | ◆  | ◆  | ◆  |
| 250 | ◆ | ◆ | ◆ | ◆ |   |   |   | ◆  | ◆  | ◆  | ◆  | ◆  |
| 300 | ◆ | ◆ | ◆ | ◆ |   |   |   |    |    |    | ◆  | ◆  |

STD 4A2/15 = DIAMOND  
 STD 12A2/20= DIAMOND  
 STD 12A2/45= DIAMOND  
 STD 13A2 = DIAMOND

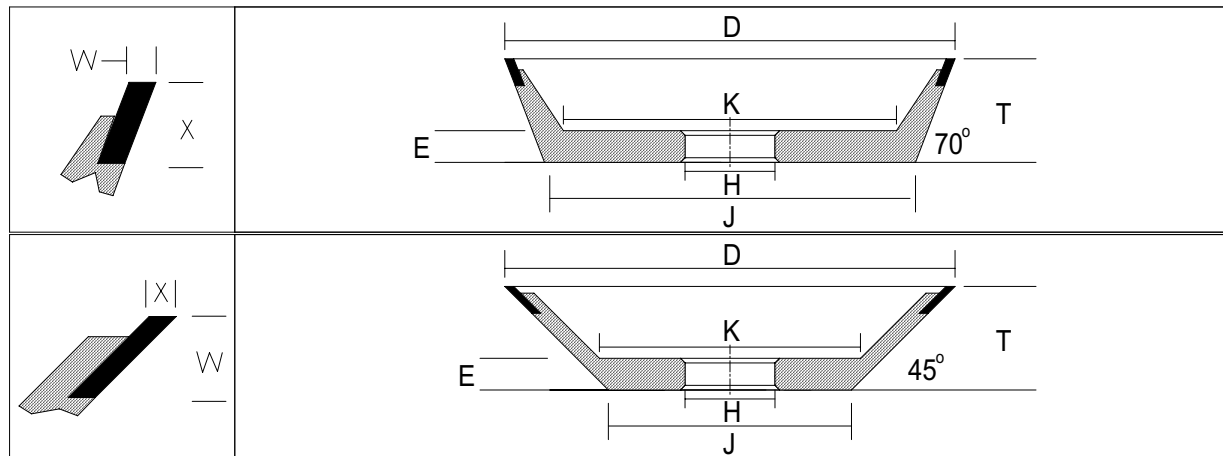
STB 4A2/15 = CBN  
 STB 12A2/20 = CBN  
 STB 12A2/45 = CBN  
 STB 13A2 = CBN



| D   | X   |   |   |   | W |   |   |   |    |
|-----|-----|---|---|---|---|---|---|---|----|
|     | 1.6 | 2 | 3 | 4 | 3 | 5 | 6 | 8 | 10 |
| 75  | ◆   | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ |   |    |
| 100 | ◆   | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ |   | ◆  |
| 125 | ◆   | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ |   | ◆  |
| 150 | ◆   | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆  |
| 175 | ◆   | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆  |
| 200 | ◆   | ◆ | ◆ | ◆ |   | ◆ | ◆ | ◆ | ◆  |
| 250 | ◆   | ◆ | ◆ | ◆ |   |   |   | ◆ | ◆  |

STD 11V9/70 = DIAMOND  
 STD 12V9/45 = DIAMOND

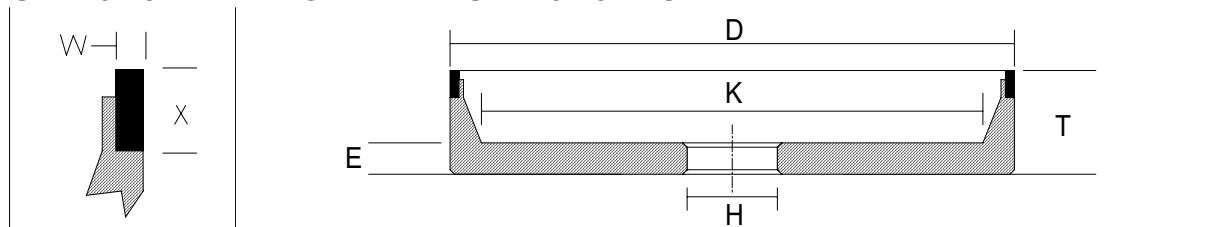
STB 11V9/70 = CBN  
 STB 12V9/45 = CBN



| D   | X |   | W |    |
|-----|---|---|---|----|
|     | 2 | 3 | 6 | 10 |
| 75  | ♦ | ♦ | ♦ | ♦  |
| 90  | ♦ | ♦ | ♦ | ♦  |
| 100 | ♦ | ♦ | ♦ | ♦  |
| 125 | ♦ | ♦ | ♦ | ♦  |
| 150 | ♦ | ♦ | ♦ | ♦  |

STD 6A9 = DIAMOND

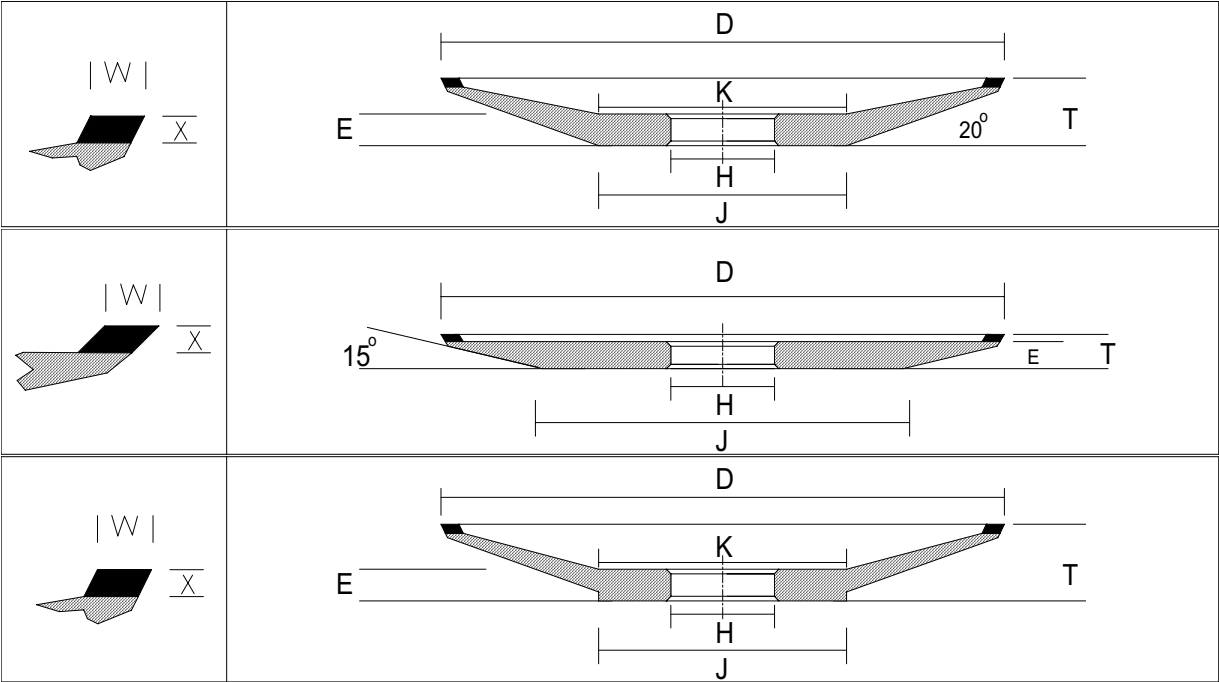
STB 6A9 = CBN



| D   | X |   | W |    |
|-----|---|---|---|----|
|     | 2 | 3 | 6 | 10 |
| 75  | ♦ | ♦ | ♦ | ♦  |
| 100 | ♦ | ♦ | ♦ | ♦  |
| 125 | ♦ | ♦ | ♦ | ♦  |
| 150 | ♦ | ♦ | ♦ | ♦  |
| 175 |   | ♦ | ♦ | ♦  |
| 200 |   | ♦ | ♦ | ♦  |
| 250 |   | ♦ | ♦ | ♦  |
| 300 |   | ♦ | ♦ | ♦  |

STD 12V2= DIAMOND  
 STD 4V2 = DIAMOND  
 STD 13V2= DIAMOND

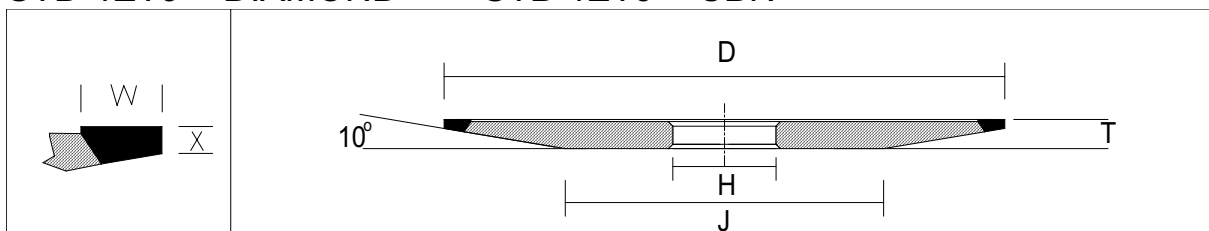
STB 12V2 = CBN  
 STB 4V2 = CBN  
 STB 13V2 = CBN



| D   | X | W |
|-----|---|---|
|     | 2 | 4 |
| 100 | ◆ | ◆ |
| 125 | ◆ | ◆ |
| 150 | ◆ | ◆ |
| 175 | ◆ | ◆ |
| 200 | ◆ | ◆ |

STD 4ET9 = DIAMOND

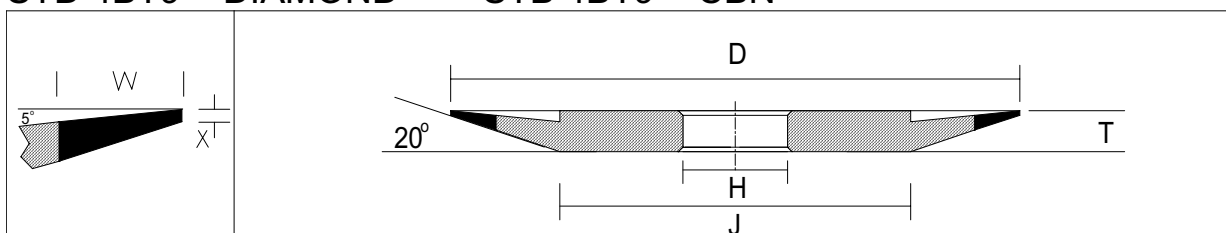
STB 4ET9 = CBN



| D   | X |   | W |   |    |
|-----|---|---|---|---|----|
|     | 1 | 2 | 4 | 6 | 10 |
| 50  | ◆ |   | ◆ | ◆ |    |
| 75  | ◆ |   | ◆ | ◆ |    |
| 100 | ◆ |   | ◆ | ◆ |    |
| 125 |   | ◆ |   | ◆ | ◆  |
| 150 |   | ◆ |   | ◆ | ◆  |
| 175 |   | ◆ |   | ◆ | ◆  |

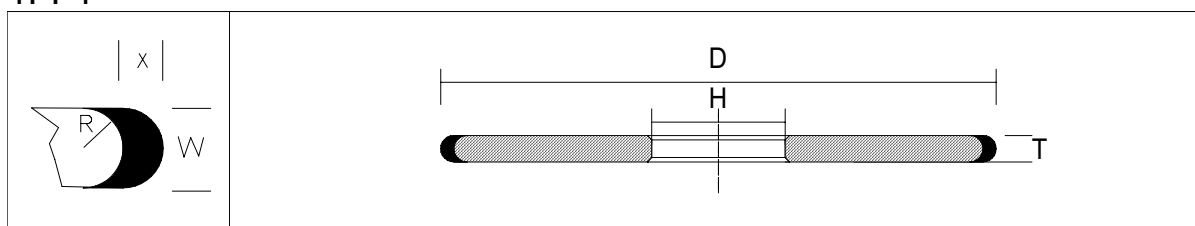
STD 4BT9 = DIAMOND

STB 4BT9 = CBN



| D   | X | W  |
|-----|---|----|
|     | 1 | 10 |
| 75  | ◆ | ◆  |
| 100 | ◆ | ◆  |
| 125 | ◆ | ◆  |

# 1FF1



| ØD  | R |    | T  |
|-----|---|----|----|
|     | 2 | 10 | 2R |
| 50  |   |    |    |
| 75  |   |    |    |
| 100 | ◆ | ◆  | ◆  |
| 125 |   |    |    |
| 150 |   |    |    |

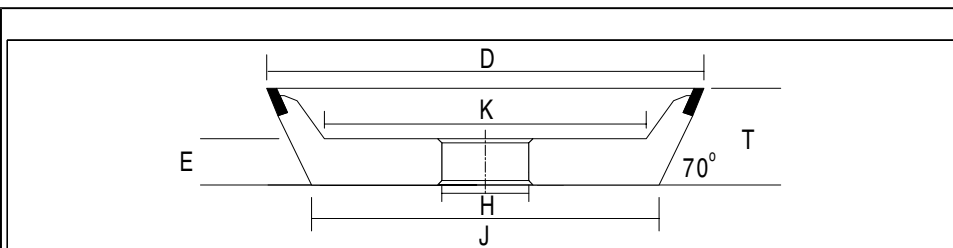
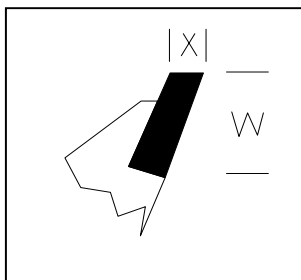
DIAMOND & CBN  
GRINDING MACHINE WHEELS  
FOR CNC MACHINES  
INCLUDING:

Anca  
Cincinnati  
M Deckel  
EWAG  
Griffo  
Haas  
HaRo  
Hawema  
Huffmann  
Jungner  
PeTeWe  
Tempo

Saacke Gebr  
Safag  
Schneeberger  
Schutte  
Sorencor  
Straussak  
Stream  
Tacchella  
Viking  
Walter  
Watkins  
Loroch



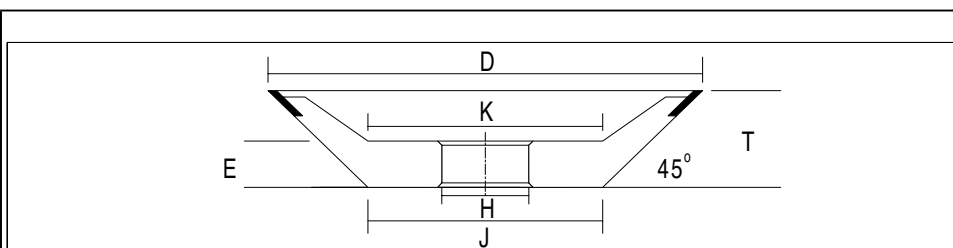
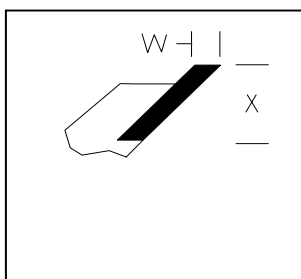
## 11V9



CNC D11V9 75-2-10-20 D64-C100  
 CNC D11V9 75-3-10-20 D64-C100  
 CNC D11V9 100-2-10-20 D64-C100  
 CNC D11V9 100-2-10-20 D126-C100  
 CNC D11V9 100-3-10-20 D46-C100  
 CNC D11V9 100-3-10-20 D64-C100  
 CNC D11V9 125-3-10-20 D46-C100  
 CNC D11V9 125-3-10-20 D64-C100

CNC B11V9 75-2-10-20 B107-V240  
 CNC B11V9 75-3-10-20 B107-V240  
 CNC B11V9 100-2-10-20 B107-V240  
 CNC B11V9 100-2-10-20 B151-V240  
 CNC B11V9 100-3-10-20 B107-V240  
 CNC B11V9 125-3-10-20 B107-V240

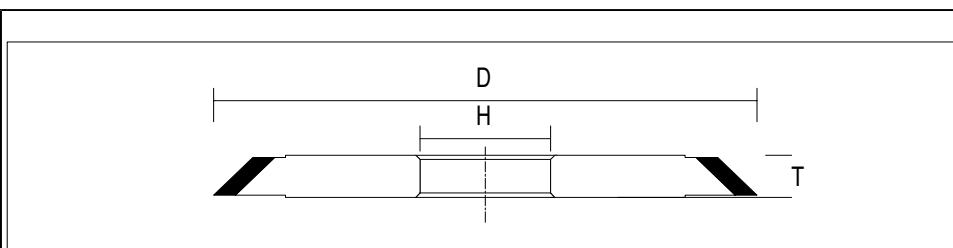
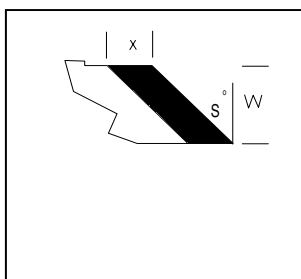
## 12V9/45



CNC D12V9/45 75-2-10-20 D64-C100  
 CNC D12V9/45 75-3-10-20 D64-C100  
 CNC D12V9/45 100-2-10-20 D64-C100  
 CNC D12V9/45 100-3-10-20 D64-C100  
 CNC D12V9/45 100-3-10-20 D126-C100  
 CNC D12V9/45 125-3-10-20 D64-C100  
 CNC D12V9/45 150-3-10-20 D64-C100

CNC B12V9/45 75-2-10-20 B107-V240  
 CNC B12V9/45 100-2-10-20 B107-V240  
 CNC B12V9/45 100-3-15-20 B107-V240  
 CNC B12V9/45 100-3-15-20 B151-V240  
 CNC B12V9/45 125-3-15-20 B107-V240  
 CNC B12V9/45 125-3-15-20 B151-V240  
 CNC B12V9/45 150-3-10-20 B107-V240

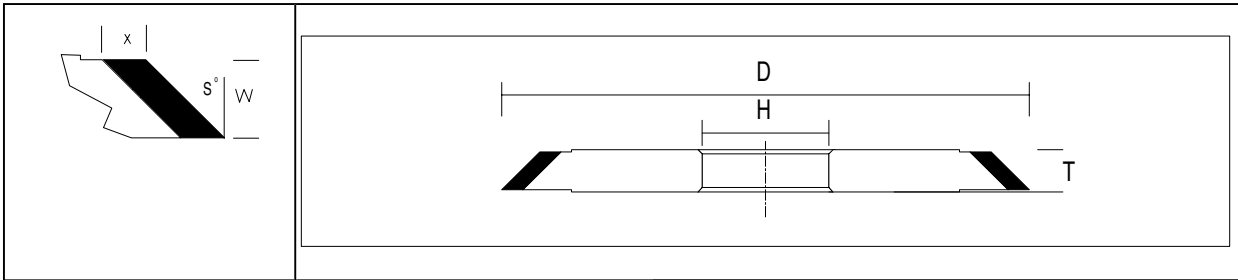
## 1V1



CNC D1V1/10 75-10-5-20 D64-C100  
 CNC D1V1/10 100-10-5-20 D64-C100  
 CNC D1V1/10 100-15-5-20 D64-C100  
 CNC D1V1/20 100-15-5-20 D64-C100  
 CNC D1V1/30 100-15-5-20 D64-C100  
 CNC D1V1/45 100-15-5-20 D64-C100  
 CNC D14V1/45 125-4-6-20 D64-C100  
 CNC D1V1/20 125-6-5-20 D64-C100  
 CNC D1V1/10 125-10-5-20 D64-C100  
 CNC D1V1/20 125-10-5-20 D64-C100

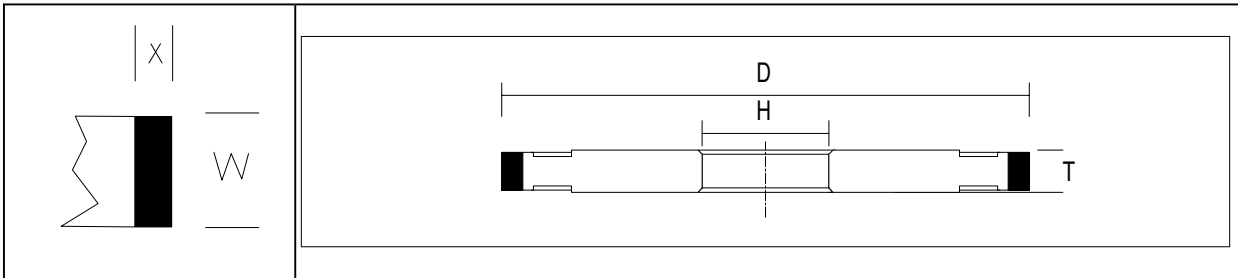
CNC B1V1/10 75-10-5-20 B107-V240  
 CNC B1V1/10 100-10-5-20 B107-V240  
 CNC B1V1/10 100-15-5-20 B107-V240  
 CNC B1V1/20 100-15-5-20 B107-V240  
 CNC B1V1/30 100-15-5-20 B107-V240  
 CNC B1V1/45 100-15-5-20 B107-V240  
 CNC B1V1/10 125-12-5-20 B107-V240  
 CNC B1V1/45 125-12-5-20 B107-V240  
 CNC B1V1/15 150-12-5-20 B107-V240

## 1V1



CNC D1V1/30 125-10-5-20 D64-C100  
 CNC D1V1/45 125-10-5-20 D64-C100  
 CNC D1V1/10 125-15-5-20 D64-C100  
 CNC D1V1/20 125-15-5-20 D64-C100  
 CNC D1V1/30 125-15-5-20 D64-C100  
 CNC D1V1/45 125-15-5-20 D64-C100  
 CNC D1V1/15 150-12-5-20 D64-C100

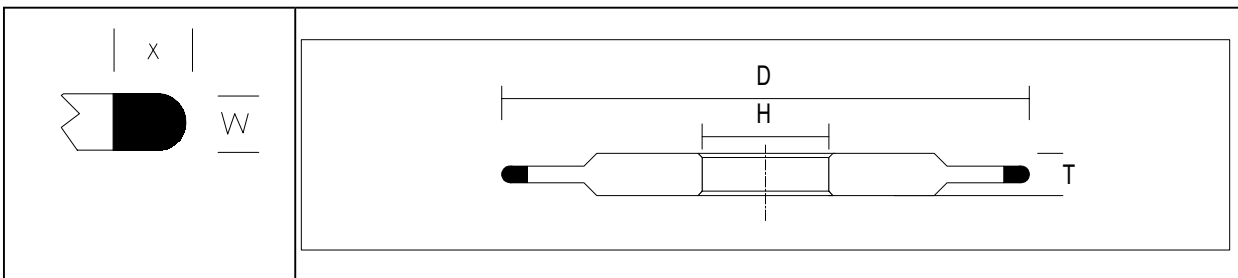
## 1A1



CNC D1A1 75-10-5-20 D64-C100  
 CNC D1A1 100-10-5-20 D64-C100  
 CNC D1A1 100-15-5-20 D64-C100  
 CNC D1A1 100-15-5-20 D64-C100  
 CNC D1A1 125-5-10-20 D64-C100  
 CNC D1A1 125-10-10-20 D64-C100  
 CNC D1A1 125-12-10-20 D64-C100  
 CNC D1A1 125-16-10-20 D64-C100  
 CNC D1A1 150-12-10-20 D64-C100

CNC B1A1 75-10-5-20 B107-V240  
 CNC B1A1 100-10-5-20 B107-V240  
 CNC B1A1 100-15-5-20 B107-V240  
 CNC B1A1 125-10-5-20 B107-V240  
 CNC B1A1 150-12-5-20 B107-V240

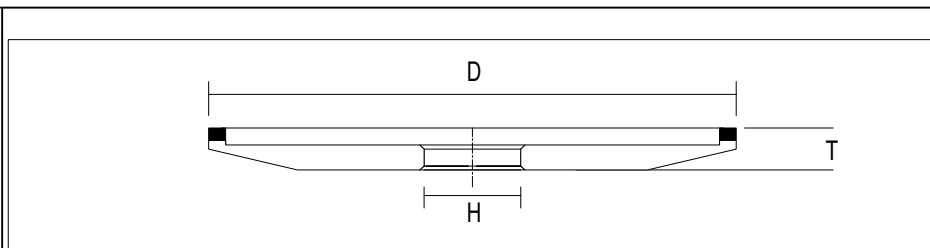
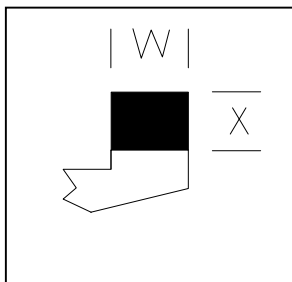
## 14F1



CNC D14F1 100-4-6-20-2R D64-C100  
 CNC D14F1 125-4-6-20-2R D64-C100  
 CNC D14F1 150-1.2-5-20-0.6R D46-C100  
 CNC D14F1 150-2-5-20-1R D64-C100  
 CNC D14F1 150-4-5-20-2R D64-C100  
 CNC D14F1 150-5-7-20-2.5R D64-C100  
 CNC D14F1 150-8-7-20-4R D64-C100

CNC B14F1 100-3-5-20-1.5R B107-V240  
 CNC B14F1 100-4-5-20-2R B107-V240  
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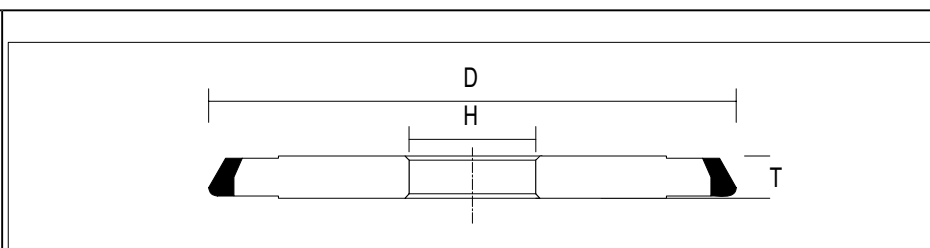
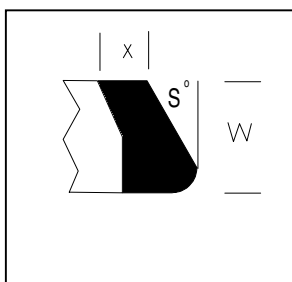


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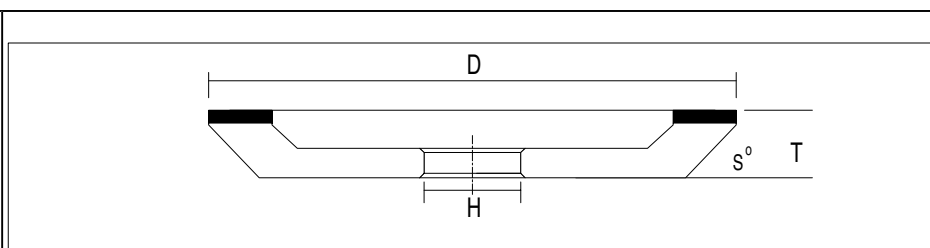
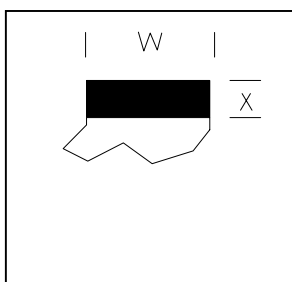


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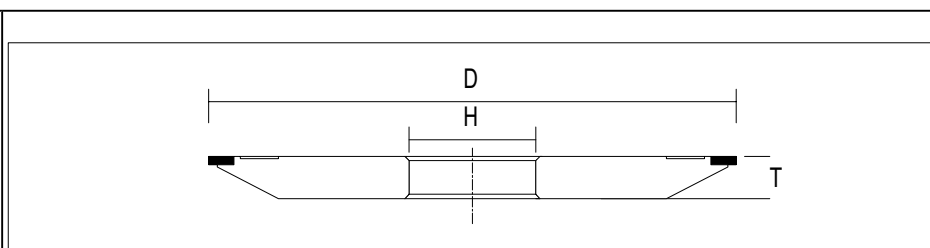
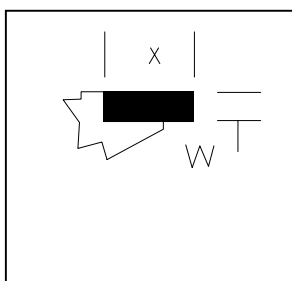
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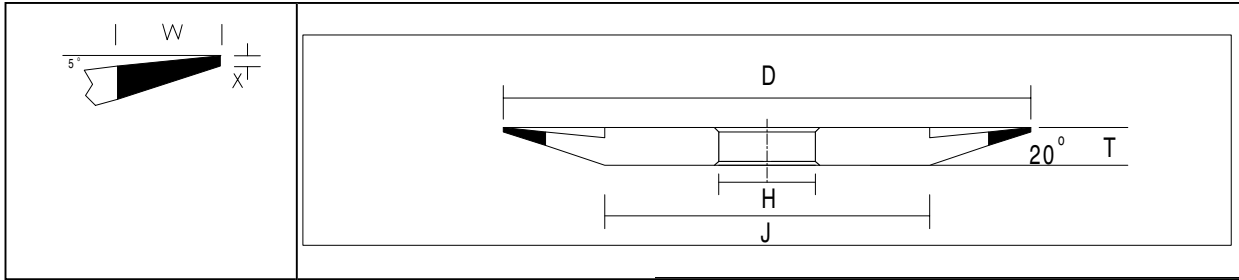
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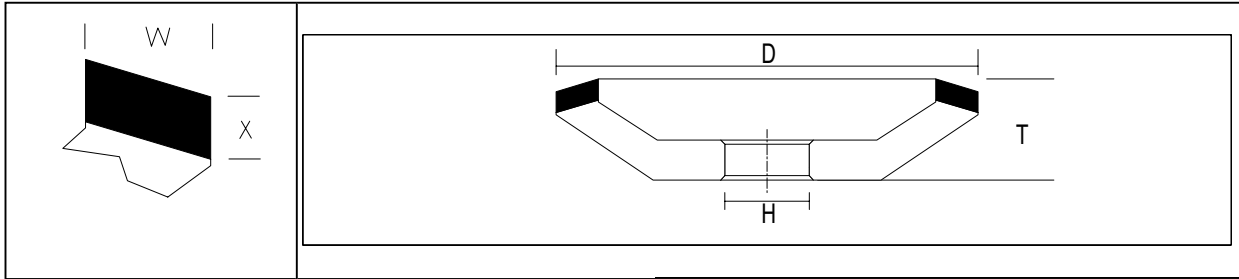
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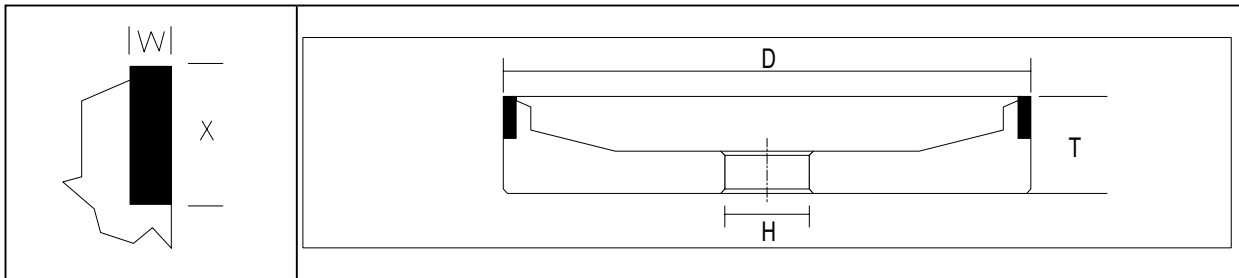
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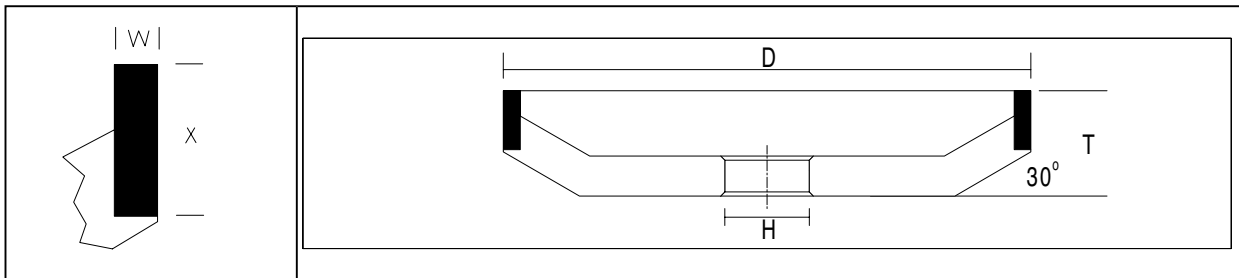
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CNC D6A9 125-3-10-20 D126-C100

## 12A9



CNC D12A9 150-4-14-20 D46-C100

# TERMS OF BUSINESS

## 1 DEFINITIONS

"Buyer" means the person or entity whom accepts a quotation of the Seller for the sale of the Goods or whose order is accepted by the Seller.

"Goods" means the Goods on the relevant order form supplied by the Seller.

"Services" means all and any Services including but not limited to consultancy and technology transfer advice requested off and provided by the Seller.

"Seller" means Harlequin International Ltd, LINHAY PARK, ASHBURTON, DEVON, ENGLAND, TQ13 7UP.

"Conditions" means the standard terms and conditions of sale set out in this document and includes any special terms and conditions agreed in writing between the Buyer and the Seller.

"Writing" includes Telex, Cable, Facsimile, Email, Post and comparable means of communication.

"The Work" means the installation (if agreed) of the Goods at the Premises.

"The Premises" means the Buyer's property at which the work is to be carried out.

## 2 PRICE

2.1 The price of the Goods shall be the price quoted by the Seller.

2.2 The price for Services or mixed supply of Goods and Services shall be individually quoted and agreed.

2.3 If no price has been quoted, the price shall be the price given for the Goods in the Seller's price list in force at the time of delivery.

2.4 Unless otherwise stated, prices in any quotation or given in the Seller's price list are exclusive of value added tax and delivery charges.

2.5 Unless other terms are agreed in writing, the price shall be paid in full in sterling without any deductions whatsoever and payable in the United Kingdom. Any arrangement made to pay in any other currency and place shall be at the Buyer's risk as to exchange rate and remittance of funds.

## 3 PAYMENT

3.1 The Seller is entitled to send an invoice to the Buyer for the price of the Goods on, or at any time after delivery.

3.2 The Buyer must pay the price on delivery unless delivery terms are agreed in writing.

3.3 If the Buyer has failed to pay the invoice in full on time, the Seller may

3.3.1 terminate the contract, recover the Goods; and

3.3.2 charge interest at 2 per cent per annum above Barclays Bank base rate on any unpaid amount, calculated daily.

## 4 CANCELLATION

4.1 The Buyer is not permitted to cancel this contract except with the written consent of the Seller.

4.2 Where there is an agreed cancellation of the contract under clause 4.1, the Buyer shall pay to the Seller a sum being a minimum sum of 50 per cent of the contract price, in respect of liquidated damages, to compensate the Seller for expenses, costs and losses caused as a result of the cancellation.

## 5 DELIVERY

5.1 Delivery of the Goods shall be made by the Buyer collecting the Goods from the Seller's Premises within 7 days after the Seller has notified the Buyer that the Goods are ready for collection. If the Buyer has not collected the Goods within 7 days after being given such notification, delivery is deemed to have taken place on the 7th day after the giving of notification. Alternative to the Buyer's request, delivery of the Goods shall be made by the Seller delivering the Goods at the Buyer's address and the Buyer shall pay the Seller's reasonable delivery charges, unless otherwise agreed in writing.

5.2 In the case of services, or mixed supply of Goods and Services, delivery shall be the earlier of either an event per 5.1 hereof or the issue by the Seller of an invoice.

5.3 The risk in the Goods shall pass to the Buyer once the Goods leave the Seller's premises.

5.4 The Seller reserves the right to make delivery by instalments, and to tender a separate invoice in respect of each instalment. If the Seller exercises this right, each delivery shall constitute a separate contract.

5.5 If the Seller delivers one or more instalment late, or delivers one or more instalments which do not correspond with the terms of the Contract, the Buyer may not treat it as a reason to terminate the contract as a whole.

## 6 INSTALLATION AND ACCESS

6.1 If required by the Buyer the Seller will install the Goods or carry out the services at the premises in a good and workmanlike manner. The Seller accepts no responsibility for any damage resulting from structure or other defects in the premises or machinery at which the installation is carried out.

6.2 The Buyer shall grant the Seller and the Seller's employees and contractors access to the Premises at all reasonable times for the purpose of surveying the site and carrying out such works of installation as shall have been agreed between the Seller and the Buyer.

6.3 The Buyer shall make available for the Seller's use such facilities as it requires, including running water and electricity free of charge.

6.4 If installation is required by the Buyer this will be separately charged and invoiced by the Seller to the Buyer.

## 7 TITLE

Until the Seller is paid in full all sums owing by the Buyer in respect of the Goods which form part of this contract, or any other Goods:

7.1 The property in the Goods shall remain with the Seller who shall retain full legal and beneficial ownership of the Goods.

7.2 The Seller is entitled to recover possession of the Goods at any time and without giving notice and the Buyer gives irrevocable consent for the Seller to enter the Buyer's land or premises to recover the Goods.

7.4 The Goods are to be kept separate from any other similar Goods and clearly marked as belonging to the Seller. If the Buyer re-sells the Goods, the proceeds of re-sale shall be held by the Buyer as trustee in a separate account and paid forthwith to the Seller who will account to that Buyer for any credit balance remaining after discharge of the Buyer's debts to the Seller.

7.5 All drawings supplied by the Seller cannot be used or reproduced without the Seller's permission.

## 8 WARRANTIES AND EXCLUSIONS

8.1 The Seller's liability in respect of the Goods and/or Services shall be limited to the contract sale price of the Goods.

8.2 The Buyer covenants that he has had a reasonable opportunity to inspect the Goods and the Seller shall not be liable to the Buyer for any defects which were reasonably discoverable upon such inspection within 24 hours of delivery.

8.3 The Seller shall not be under any further liability whatsoever arising and all Conditions and warranties expressed or implied by or under statute, custom or trade usage are excluded to the fullest extent permitted by law.

8.4 The Seller shall not be liable for any loss arising directly or indirectly from late delivery or non-delivery by the seller.

8.5 The Seller shall not be liable for any other consequential loss, howsoever caused.

## 9 INSOLVENCY OF BUYER

If :

9.1 the Buyer ceases, or threatens to cease, to carry on business;

9.2 the Buyer makes any voluntary arrangement with its creditors or becomes subject to an administration order;

9.3 an encumbrancer takes possession, or a receiver is appointed, of any of the property or assets of the Buyer;

9.4 the Buyer (being an individual or firm) becomes bankrupt;

9.5 the Buyer (being a company) goes into liquidation;

9.6 the Seller reasonably apprehends that any of the events mentioned in 9.1 to 9.5 is about to occur in relation to the Buyer and notifies the Buyer accordingly;

then the Seller, without prejudice to any other right or remedy available to the Seller, shall be entitled to cancel the contract or suspend any further deliveries without liability to the Buyer, and if the Goods have been delivered but not paid for the price shall become immediately due and payable notwithstanding any previous agreement or arrangement to the contrary.

## 10 FORCE MAJEURE

10.1 The Seller shall not be liable for any failure to deliver the Goods and/or perform Services arising from circumstances outside the Seller's control.

10.2 Non-exhaustive illustrations include act of God, wars, riots, terrorism, explosion, abnormal weather conditions, fire, flood, government action, strikes, lockouts, delays by suppliers, accidents and shortage of materials, labour or manufacturing facilities.

10.3 If the Seller is prevented from delivering the Goods or performing the Services in the above circumstances it may notify the Buyer of the fact in writing when it has become apparent to the Seller within 14 days.

10.4 If circumstances preventing delivery are still continuing 4 months after service of the above notice, then either party may give written notice, whilst the circumstances are still continuing, to the other, cancelling the contract.

## 11 GENERAL

11.1 Unless otherwise agreed in writing by the Seller, this contract shall be governed by the laws of England.

11.2 All drawings and descriptions supplied in relation to the Goods by either the Buyer or the Seller shall be regarded as a guide only and shall not form part of the contract. These drawings and all technical information belong to the Seller and cannot be reproduced without the Seller's written consent.

11.3 The headings in these Conditions are for convenience only and shall not affect their interpretation.

11.4 Any notice required or permitted to be given by either the Buyer or the Seller under these Conditions shall be in writing to the other party at its registered office or principal place of business.

11.5 If any provision of these Conditions is held by any competent authority to be invalid or unenforceable in whole or in part the validity of the other provisions of these Conditions and the remainder of the provision in question shall not be affected hereby.

11.6 The Buyer and the Seller both declare that each individual clause of these Conditions has been agreed upon following negotiation or details of the terms in writing.

11.7 The Buyer acknowledges that all intellectual property rights in respect of the Goods vests in the Seller and any use by the Buyer of Goods or services shall be as bare licensee only.

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Sales to European, North American and Scandinavian markets have given the company a reputation for high quality service products at realistic prices.

Harlequin International's relationship with grinding machine manufacturers, together with constant research and development enable the company to consistently improve

performance levels, thus offering its clients the latest state of the art tooling.

Harlequin International's highly competitive price structure enables customers to reduce unit costs by improving performance and efficiency.

Harlequin International will develop and manufacture special products exclusively for customers particular applications. Total commitment to quality and service ensures that customers will receive the same quality of product and service that has been the basis of the company's success.



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