



बैंक नोट पेपर मिल् इण्डिया प्रा. लिमिटेड
BANK NOTE PAPER MILL INDIA PVT LIMITED
JV of SPMCIL - A Govt. of India Enterprises & BRBNMPL - A Subsidiary of RBI

Ph no. 0821-2401174; Email: bhoodhra@bnpmindia.com

LIMITED TENDER ENQUIRY No. BNPM/LTE/SEAL KIT/1066/2019-20

Issue Date & Time: 17.01.2019 11:00 hrs.

Closing Date & Time: 23.01.2019 15:00 hrs.

A. Scope of supply: Supply of following items:

| S No | Item Description | UoM | Quantity |
|------|---|-----|----------|
| 1 | Seal kit for Briquette press C3 Cylinder Seal kit contains: 1. Piston seal Model : TPM 196133 Make : Tecnotex or equivalent 2. Seal Model : OR 211. Make : Aston seals or equivalent 3. Rod seal Model : SD 28 36 5.8 Make : Aston seals or equivalent 4. Wiper seal Model : SA 28 Make : Aston seals or equivalent 5. Seal Model : OR 830 Make : Aston seals or equivalent | Nos | 2 |
| 2 | Scrapper Seal for block C3 Cylinder, Model : WRM 629688, Make : Polypac or equivalent | Nos | 2 |

Note:

- Detailed product catalogue of the quoted product needs to be submitted along with the offer/quotation to this enquiry.
- Acceptance of offer/quotation is subject to technical clearance of the product specifications.

B. Terms & Conditions:

1. Documents to be submitted:

- Signed copy of this document (All the pages).
- Filled price details as per the format provided below in this document.
- Technical details /datasheet for the enquired product (if applicable).
- Micro / Small Enterprise (Certificate issued by MSME)/UAM/NSIC certificate (If applicable).

- Price:** Price should be inclusive of P&F, Freight, Transit Insurance and GST. Price shall remain fixed & no price variation shall be accepted till completion of contract.



- 3. Terms of Payment:** 100% payment shall be made within 30 days after receipt and acceptance of goods at BNPM Plant, Mysuru and on production of all required documents by the supplier. NEFT/RTGS details shall be furnished along with the Original Invoice.
- 4. Delivery Terms & Delivery Address:** Delivery shall be made on F.O.R Basis, Bank Note Paper Mill India Pvt. Ltd., Mysore.
Delivery Address: Engineering Stores, Bank Note Paper Mill India Pvt. Ltd., Note Mudran Nagar, Mysore - 570003. Stores contact details: 0821-2401476/486.
- 5. Taxes:** All Taxes shall be as applicable in GST regime.
Payment of CGST, SGST, IGST & UTGST: The suppliers are required to adhere the following procedure in order to honour the payment against CGST, SGST, IGST & UTGST in the invoice.
- An invoice issued by the vendor for goods or services or both as applicable should be in accordance with the provisions of Sec 31 of the CGST Act & should contain all the prescribed information's in accordance with Chapter VI of CGST rules 2017.
 - A debit note issued if any, by the vendor should be in accordance with the provisions of Sec 34 of the CGST Act.
 - The vendor should mandatorily upload the aforementioned documents in respective GSTR, details of outward supplies of goods or services as applicable within the prescribed time under GST Act.
 - The vendor should provide the relevant documents to confirm the tax charged on the invoice has been paid to the credit of government after adjusting the ITC if any.

Notwithstanding the above, the supplier should provide indemnification as follows:

In the event of non-compliances with respect to GST Act & Rules by the successful bidder, the purchaser is allowed to adjust the GST amount from retention amount (either in BG or in cash) held by the company. If no amount is available for recovery, the successful bidder will refund the GST liability within 10 days from the date of GST reversal in GSTRN.

The above requirements are mandatory to claim any GST liability, falling which, the GST liability will not be paid /reimbursed/accepted.

A. The bidder should consider the following points while quoting GST Rate in their bids:

- In case of unregistered bidders, the rate and amount of GST shall be shown as "Nil".
- In case of a compounding dealer, GST shall be quoted as "Nil" as compounded dealers cannot collect GST from the consumers. The price quoted therefore shall be construed as all inclusive.
- In case of work contracts or pure labour contracts, the bidder shall quote single GST rate for the work.
- In case of composite supplies, i.e., a supply consisting of one principal supply and other ancillary supplies, the supply will attract the GST Rate of the principal supply. For example, if Item A in the supply order is the major or principal supply and other items are ancillary supplies, the bidder shall quote the GST Rate applicable to the principal goods (i.e., Item A) being supplied.
- In case of mixed supply, i.e., a combination of two or more individual goods made together for a single price (each of these items can be supplied separately and is not



dependent on any other), the total supply will attract the GST rate of the item which has the highest rate of tax. For example, if Item A in the mixed supply attracts highest rate of tax, the bidder shall quote the GST rate applicable to item A for total mixed supply.

6. In case of supplies which are neither composite nor mixed supplies, the bidder shall quote the GST Rate applicable to each item of supply separately.
7. If there is any difference of opinion regarding classification in HSN code, the bidder should sought clarification/raise query within the given time from the date of tender and it would be clarified before submitting the bid. Once clarified then that will be final & binding and no deviation shall be granted.

B. Tender Evaluation for determination of L1 price:

a. Indigenous/Domestic Bidder

1. If the tenderer/bidder does not include the details of GST separately in the tender/quotation, the same shall be rejected
2. The HSN code of the product/services shall be determined at the tendering stage itself and mentioned in the price bid format to quote the GST rate according to the specified HSN code.
3. The evaluation of tender for three categories of GST registration is provided below:

| Particulars | Registered | Compounding | Unregistered* |
|-------------------|------------------|-------------|------------------|
| Basic Price | xxx | xxx | xxx |
| Add: GST | X | - | X |
| Add: Cess on GST | xx | - | xx |
| Less Input Credit | X | - | X |
| Total price | xxx + X + xx - X | xxx | xxx + X + xx - X |

4. If the bidders participated in a tender is unregistered, the GST shall be payable by the purchaser under reverse charge and shall be added to the quoted rate to arrive at the Gross price and input credit, if any shall be deducted from the total landed cost to arrive at the net comparable price.

C. Other instructions for the bidders to claim any GST liability, failing which, the GST liability will not be paid/reimbursed/accepted:

1. Registered/compounding Contractor/supplier should produce GST Invoice containing all the particulars stated in Rule 46 of the CGST Rules, 2017 in accordance with the provisions of Section 31 of the CGST ACT.
2. The supplier should mandatorily update the invoice details in GSTR-1, details of outward supplies of goods or services within the prescribed time under GST Act
3. The Payment shall be made net of TDS as per the provisions of CGST/SGST/IGST Act.
4. Wherever there is difference in the amount admitted, the supplier may be directed to issue a Credit Note (in case of reduction in the Invoice value)/Debit Note (in case of increase in the Invoice value), and payment shall be released only after the receipt of such Debit or Credit Note
5. Supplier should provide the relevant documents to confirm the tax charged on the invoice has been paid to the credit of Government after adjusting with ITC, if any.
6. Supplier should provide indemnification as follows: "In the event of non-compliances with respect to GST ACT and Rules by the supplier, the supplier



should refund the GST liability within 10 days from the date of GST reversal in GSTRN failing which the purchaser shall recover the GST amount from the retention amount (whether in BG or in Cash) held by the company”.

6. **Warranty:** The product supplied shall be under warranty for 12 months from the date of receipt of material at BNPM, Mysuru for any manufacturing defects & poor workmanship. If the applicable warranty period is less than 12 months then the same has to be mentioned at the appropriate place provided in this enquiry document.
7. **Liquidated Damages (LD):** Liquidated damages shall be applicable at the rate of 0.5% per week or part thereof until actual delivery or performance, subject to a maximum deduction of 10% of the delayed good's /service's contract price.
8. **Rejection Replacement:** In case of supplies, materials not meeting our specification will be rejected outright and the rejected material shall be taken back within 7 days at the cost and risk of the supplier and replacement should be made within 15 days from the date of intimation. No payment shall be made for rejected item. If the material is not taken back within the stipulate period, BNPM reserves the right to dispose off the material at the risk and expense of the vendor.
9. **Delay in supplier's performance:** Time for and the date specified in the contract or as extended for the delivery of the stores shall be deemed to be the essence of the contract and the supplier shall deliver the goods and perform the services under the contract within the time schedule specified by BNPM in the contract.

Any delay attributable to the supplier in maintaining its contractual obligations towards delivery of goods and performance of services shall render the supplier liable to any or all the following sanctions besides any administrative action such as (a) Imposition of liquidity damages; (b) Termination of contract for default.

10. **Extension of Time:** If the contract is delayed in the progress of work by changes ordered in the work, or any clause which BNPM shall decide to justify the delay, then the time of completion shall be extended by a reasonable time.

If at any time during the currency of contract, the supplier encounters conditions hindering timely delivery of the goods and performance of services, the supplier shall promptly inform BNPM in writing about the same and its likely duration and make a request to BNPM for extension of the delivery schedule accordingly. On receiving the supplier's communication, BNPM shall examine the situation as soon as possible and, at its discretion, may agree to extend the delivery schedule, with or without liquidated damages for completion of supplier's contractual obligations by issuing an amendment to the contract.

11. **Risk Purchase Clause:** If the supplier fails to abide by the terms and conditions of the contract/agreement, or fails to supply the material as per the delivery schedule or any time repudiates the contract,

Procure the tendered item / render service from other agencies at the risk and cost of the supplier. The cost difference between the alternative arrangement and existing contract value wherein default has been made will be recovered from the supplier along with the other incidental charges.



In case of procurement through alternative sources, if procurement price is lower than the existing contract value wherein default has been made, in such case no benefit on this account will be passed on to the supplier.

- 12.Settlement of Disputes through Arbitration:** All disputes and differences of any kind whatsoever arising out of or in connection with the contract, whether during the progress of the work or after their completion except accepted matters shall be settled through arbitration process as per the Arbitration & Conciliation Act, 1996. The venue of arbitration shall be Mysore, Karnataka.
- 13.Legal Jurisdiction:** The Courts of Mysore (Karnataka State) shall alone have jurisdiction to decide on any legal matter of dispute whatsoever arising out or in respect of the contract.
- 14.Force Majeure:** In the event of any unforeseen event directly interfering with the supply of stores arising during the currency of the contract, such as war, hostilities, acts of the public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes, lockouts, or acts of God, the Contractor shall, within a week from the commencement thereof, notify the same in writing to the Purchaser with reasonable evidence thereof. Unless otherwise directed by BNPM in writing, the supplier shall continue to perform its obligations under the contract as far as reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event. If the force majeure condition(s) mentioned above be in force for a period of 90 days or more at any time, either party shall have the option to terminate the contract on expiry of 90 days of commencement of such force majeure by giving 14 days' notice to the other party in writing. In case of such termination, no damages shall be claimed by either party against the other, save and except those which had occurred under any other clause of this contract prior to such termination.
- 15.Fore-Closure Clause:** If at any time during the continuation of this contract, the use of material ordered in this contract is completely banned or due to drastic change in Government policy its use as, raw material is discontinued or is declared hazardous to public health or cause rising to civil commotion, epidemics, wide-spread strikes and 21 days' notice of such eventualities is given by purchaser to the seller, the seller without any right to enforce the contract, will agree to the fore-close the performance of balance portion of this contract and in that event no claim for damages or loss will be lodged against the purchaser.
- 16.Rights of Rejection:** BNPMIPL reserves the right to reject any or all the applied bids without assigning any reason whatsoever. The enquiry can be rejected on national security grounds.



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17.Price Bid Format:

| S c h. N o | Material Description | UOM | Qty | Unit Price (INR) | P&F, Insurance & Freight Charges (INR) | GST@ _____ Amount (INR) | Unit price including P&F, Insurance, Freight & GST (INR) | Total price inclusive of P&F, Insurance, Freight & GST (F.O.R, BNPM, Mysuru) (INR) | Input GST Credit (INR) {GST amount * Total quantity} | Effective price inclusive of P&F, Insurance, Freight (F.O.R, BNPM, Mysuru) (INR) |
|----------------------------|--|-----|-----|------------------------|--|----------------------------------|---|--|--|--|
| A | B | C | D | E | F | G | H=E+F+G | I=H*D | J=G*D | K=I-J |
| 1 | Seal kit for Briquette press C3 Cylinder Seal kit contains: 1. Piston seal Model : TPM 196133 Make : Tecnotex or equivalent 2. Seal Model : OR 211. Make : Aston seals or equivalent 3. Rod seal Model : SD 28 36 5.8 Make : Aston seals or equivalent 4. Wiper seal Model : SA 28 Make : Aston seals or equivalent 5. Seal Model : OR 830 | Nos | 2 | | | | | | | |

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| | | | | | | | | | | |
|---|---|-----|---|--|--|--|--|--|--|--|
| | Make : Aston seals or equivalent | | | | | | | | | |
| 2 | Scrapper Seal for block C3 Cylinder, Model : WRM 629688, Make : Polypac or equivalent | Nos | 2 | | | | | | | |

Note: Evaluation shall be carried out basis overall price quoted by the bidders, unless any other method of evaluation is specifically provided in the enquiry.

Signature of bidder:

Name of the Firm:

Seal of the firm:

GST No.:



LIMITED TENDER ENQUIRY No. BNPM/LTE/SEAL KIT/1066/2019-20

We hereby confirm that

1. We accept all the terms & conditions mentioned in the enquiry.
2. Price quoted is inclusive of P&F, Insurance, Freight and GST on F.O.R Basis, BNPM Plant, Mysore.
3. HSN Code: Item 1) ; Item 2)
4. GST registration status: Unregistered / Compounding / Registered.
5. Delivery period: (Days / Weeks)
6. Warranty Period: Months (Time Period to be specified in case warranty period is less than 12 months / NA to mentioned in the in case warranty is not applicable)
7. Bid validity: 30 days from date of closing of tender including extensions/corrigendum's (if any).
8. Bank Details: Acc. No.; Bank Name:;
Branch name:; Branch Code:;
IFSC:
9. MSME / NSIC status: (If yes, then supporting document to be submitted along with the offer)
(Please fill above: MSI – For Micro Enterprises; SSI – For Small Enterprises; MED.SI – For Medium Enterprises; NSIC – For National Small Industries Corporation regd. firm)

Signature of bidder:

Name of the Firm:

Seal of the firm:

GST No.:



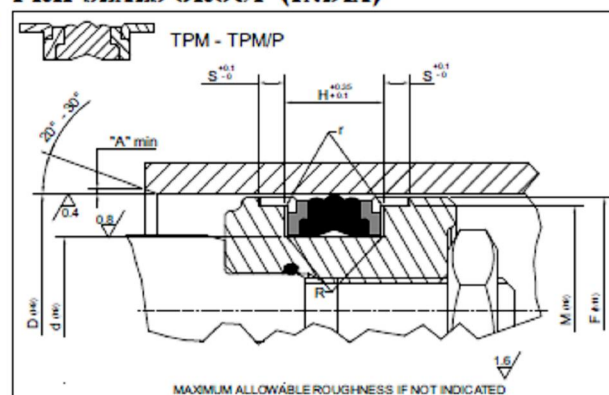
TECNOTEX

Guarnizioni per PISTONE
PISTON seals

TPM
TPM/P



PRH SEALS GROUP (INDIA)



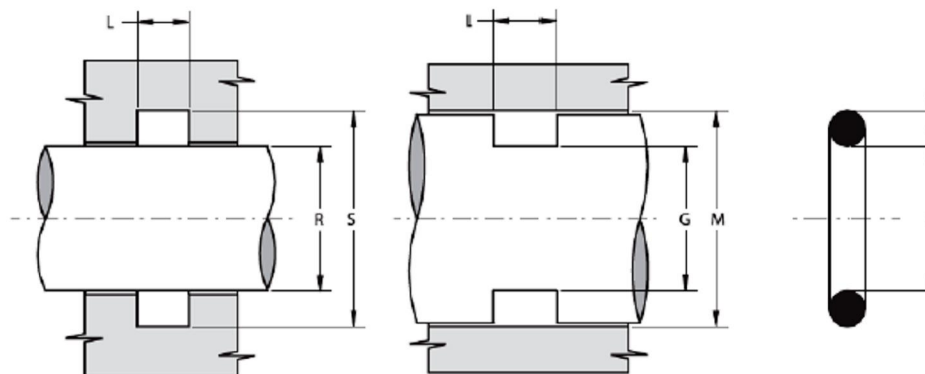
Piston Seal design guidelines

| Rack and pinion design guidelines | | | | |
|-----------------------------------|-------------|------|-------------|-----------------|
| R | d ≤ 100mm | | d > 100mm | |
| | max 0.40 mm | | max 0.80 mm | |
| r | 0.2 mm | | | |
| A | 1 mm | 2 mm | 3 mm | 3 mm < A ≤ 5 mm |

| PART NR | | DIMENSIONI SEDI / Housing dimensions | | | | | |
|------------|----------|--------------------------------------|-------|-------|------|-------|-------|
| | | D | d | H | S | M | F |
| TPM 9000 | 098059 | 25,00 | 15,00 | 12,50 | 4,00 | 22,00 | 24,00 |
| TPM 9000/1 | 098059 | 25,00 | 15,00 | 12,40 | 4,00 | 21,00 | 24,00 |
| TPM 9001 | 098059 | 25,00 | 15,00 | 16,40 | 6,35 | 21,45 | 23,50 |
| TPM 9002 | 098066 | 25,00 | 17,00 | 10,00 | 4,00 | 22,00 | 24,00 |
| TPM 9003 | 118066 | 30,00 | 17,00 | 15,40 | 6,35 | 26,50 | 28,50 |
| TPM 9004 | 125086 | 32,00 | 22,00 | 12,50 | 4,00 | 29,00 | 31,00 |
| TPM 9005 | 125086 | 32,00 | 22,00 | 16,40 | 6,35 | 28,50 | 30,50 |
| TPM 9006 | 125094 | 32,00 | 24,00 | 10,00 | 4,00 | 29,00 | 31,00 |
| TPM 9007 | 137098 | 35,00 | 25,00 | 16,40 | 6,35 | 31,40 | 33,50 |
| TPM 9008 | 157118 | 40,00 | 30,00 | 16,40 | 6,35 | 35,40 | 38,50 |
| TPM 9009 | 157118 | 40,00 | 30,00 | 12,50 | 4,00 | 37,00 | 39,00 |
| TPM 9010 | 157118 | 40,00 | 30,00 | 12,50 | 4,00 | 36,00 | 39,00 |
| TPM 9011 | 157125 | 40,00 | 32,00 | 10,00 | 4,00 | 37,00 | 39,00 |
| TPM 9012 | 157094 | 40,00 | 24,00 | 18,40 | 6,35 | 35,40 | 38,70 |
| TPM 9013 | 177114 | 45,00 | 29,00 | 18,40 | 6,35 | 40,40 | 43,70 |
| TPM 9014 | 177137 | 45,00 | 35,00 | 16,40 | 6,35 | 40,40 | 43,50 |
| TPM 9015 | 196133 | 50,00 | 34,00 | 18,40 | 6,35 | 45,41 | 48,70 |
| TPM 9016 | 196137 | 50,00 | 35,00 | 20,00 | 5,00 | 46,00 | 48,50 |
| TPM 9017 | 196157 | 50,00 | 40,00 | 12,50 | 4,00 | 47,00 | 49,00 |
| TPM 9017/1 | 196157/1 | 50,00 | 40,00 | 11,30 | 4,00 | 46,00 | 49,00 |
| TPM 9018 | 216153 | 55,00 | 39,00 | 18,40 | 6,35 | 50,37 | 53,65 |
| TPM 9019 | 216177 | 55,00 | 45,00 | 12,50 | 4,00 | 52,00 | 54,00 |
| TPM 9020 | 236173 | 60,00 | 44,00 | 18,40 | 6,35 | 55,39 | 58,65 |
| TPM 9020/1 | 236173/1 | 60,00 | 44,00 | 19,40 | 6,35 | 55,39 | 58,65 |
| TPM 9021 | 248185 | 63,00 | 47,00 | 18,40 | 6,35 | 58,39 | 61,63 |
| TPM 9021/1 | 248185/1 | 63,00 | 47,00 | 19,40 | 6,35 | 58,39 | 61,63 |
| TPM 9022 | 248188 | 63,00 | 48,00 | 20,00 | 5,00 | 59,00 | 61,50 |

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OR

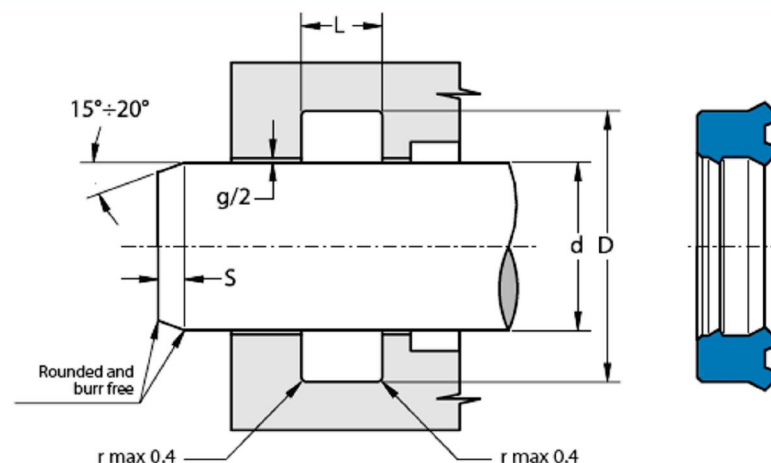


| Cod. AS* | Cod. GB | d | c | L ^{+0.2} | R ^H | S ^H | G ^H | M ^H |
|----------|---------|-------|------|-------------------|----------------|----------------|----------------|----------------|
| OR 206 | 4050 | 12.29 | 3.53 | 4.5 | 13 | 19.2 | 13.8 | 20 |
| OR 207 | 4055 | 13.87 | 3.53 | 4.5 | 14 | 20.2 | 14.8 | 21 |
| OR 208 | 4061 | 15.47 | 3.53 | 4.5 | 16 | 22.2 | 16.8 | 23 |
| OR 209 | 4067 | 17.04 | 3.53 | 4.5 | 17 | 23.2 | 18.8 | 25 |
| OR 210 | 4075 | 18.64 | 3.53 | 4.5 | 19 | 25.2 | 19.8 | 26 |
| OR 211 | 4081 | 20.22 | 3.53 | 4.5 | 20 | 26.2 | 21.8 | 28 |
| OR 212 | 4087 | 21.82 | 3.53 | 4.5 | 22 | 28.2 | 22.8 | 29 |
| OR 213 | 4093 | 23.40 | 3.53 | 4.5 | 23 | 29.2 | 23.8 | 30 |
| OR 214 | 4100 | 24.99 | 3.53 | 4.5 | 25 | 31.2 | 25.8 | 32 |
| OR 618 | 134 | 25.80 | 3.53 | 4.5 | 26 | 32.2 | 26.8 | 33 |
| OR 215 | 4106 | 26.58 | 3.53 | 4.5 | 27 | 33.2 | 27.8 | 34 |
| OR 216 | 4112 | 28.17 | 3.53 | 4.5 | 28 | 34.2 | 28.8 | 35 |
| OR 217 | 4118 | 29.75 | 3.53 | 4.5 | 30 | 36.2 | 30.8 | 37 |
| OR 218 | 4125 | 31.34 | 3.53 | 4.5 | 31 | 37.2 | 31.8 | 38 |
| OR 219 | 4131 | 32.92 | 3.53 | 4.5 | 33 | 39.2 | 33.8 | 40 |
| OR 220 | 4137 | 34.52 | 3.53 | 4.5 | 35 | 41.2 | 35.8 | 42 |
| OR 221 | 4143 | 36.09 | 3.53 | 4.5 | 36 | 42.2 | 36.8 | 43 |
| OR 222 | 4150 | 37.69 | 3.53 | 4.5 | 38 | 44.2 | 38.8 | 45 |
| OR 824 | 144 | 39.69 | 3.53 | 4.5 | 40 | 46.2 | 39.8 | 46 |
| OR 223 | 4162 | 40.87 | 3.53 | 4.5 | 42 | 48.2 | 41.8 | 48 |
| OR 825 | 146 | 41.28 | 3.53 | 4.5 | 42 | 48.2 | 41.8 | 48 |
| OR 826 | 147 | 42.86 | 3.53 | 4.5 | 43 | 49.2 | 43.8 | 50 |

| Cod. AS* | Cod. GB | d | c | L ^{+0.2} | R ^H | S ^H | G ^H | M ^H |
|----------|---------|-------|------|-------------------|----------------|----------------|----------------|----------------|
| OR 224 | 4175 | 44.04 | 3.53 | 4.5 | 45 | 51.2 | 44.8 | 51 |
| OR 827 | 149 | 44.45 | 3.53 | 4.5 | 45 | 51.2 | 44.8 | 51 |
| OR 828 | 150 | 46.04 | 3.53 | 4.5 | 46 | 52.2 | 46.8 | 53 |
| OR 225 | 4187 | 47.22 | 3.53 | 4.5 | 48 | 54.2 | 47.8 | 54 |
| OR 829 | 152 | 47.63 | 3.53 | 4.5 | 48 | 54.2 | 47.8 | 54 |
| OR 830 | 153 | 49.21 | 3.53 | 4.5 | 49 | 55.2 | 49.8 | 56 |
| OR 226 | 4200 | 50.39 | 3.53 | 4.5 | 51 | 57.2 | 51.8 | 58 |
| OR 831 | 155 | 50.80 | 3.53 | 4.5 | 51 | 57.2 | 51.8 | 58 |
| OR 832 | 156 | 52.39 | 3.53 | 4.5 | 52 | 58.2 | 53.8 | 60 |
| OR 227 | 4212 | 53.57 | 3.53 | 4.5 | 54 | 60.2 | 54.8 | 61 |
| OR 833 | 158 | 53.98 | 3.53 | 4.5 | 54 | 60.2 | 54.8 | 61 |
| OR 834 | 159 | 55.56 | 3.53 | 4.5 | 56 | 62.2 | 55.8 | 62 |
| OR 228 | 4225 | 56.74 | 3.53 | 4.5 | 57 | 63.2 | 57.8 | 64 |
| OR 835 | 161 | 57.15 | 3.53 | 4.5 | 57 | 63.2 | 57.8 | 64 |
| OR 836 | 162 | 58.74 | 3.53 | 4.5 | 59 | 65.2 | 58.8 | 65 |
| OR 229 | 4237 | 59.92 | 3.53 | 4.5 | 60 | 66.2 | 60.8 | 67 |
| OR 837 | 164 | 60.33 | 3.53 | 4.5 | 60 | 66.2 | 60.8 | 67 |
| OR 838 | 165 | 61.91 | 3.53 | 4.5 | 62 | 68.2 | 62.8 | 69 |
| OR 230 | 4250 | 63.09 | 3.53 | 4.5 | 64 | 70.2 | 63.8 | 70 |
| OR 839 | 167 | 63.50 | 3.53 | 4.5 | 64 | 70.2 | 63.8 | 70 |
| OR 840 | 168 | 65.09 | 3.53 | 4.5 | 65 | 71.2 | 65.8 | 72 |
| OR 231 | 4262 | 66.27 | 3.53 | 4.5 | 67 | 73.2 | 66.8 | 73 |

* according to AS 568 A regulation

SD

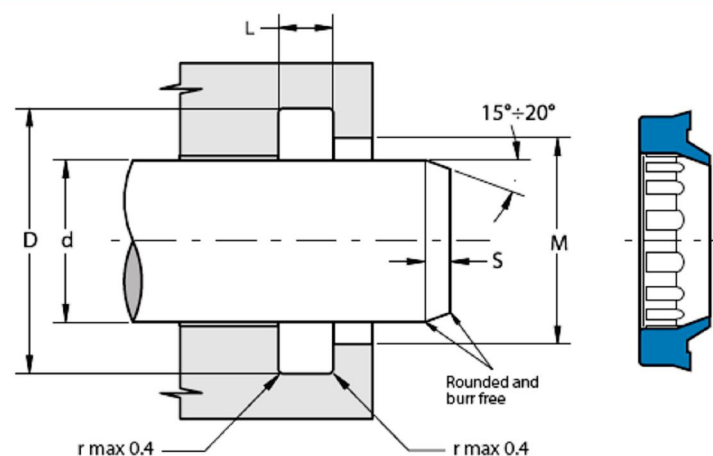


| Part. | d ^{f7} | D ^{H10} | L ^{+0.25} |
|----------------|-----------------|------------------|--------------------|
| SD 6 14 5.8 | 6 | 14.0 | 6.3 |
| SD 8 15 5.8 | 8 | 15.0 | 6.3 |
| SD 8 16 5.8 | 8 | 16.0 | 6.3 |
| SD 10 16 4.9 | 10 | 16.0 | 5.4 |
| SD 10 18 5.8 | 10 | 18.0 | 6.3 |
| SD 12 19 5.6 | 12 | 19.0 | 6.1 |
| SD 12 19 5.8 | 12 | 19.0 | 6.3 |
| SD 12 20 5.8 | 12 | 20.0 | 6.3 |
| SD 12 23 6.5 | 12 | 23.0 | 7.5 |
| SD 14 20 4.8 | 14 | 20.0 | 5.3 |
| SD 14 22 5.8 | 14 | 22.0 | 6.3 |
| SD 15 21 5.4.2 | 15 | 21.5 | 4.7 |
| SD 15 23 5.8 | 15 | 23.0 | 6.3 |
| SD 16 24 5.8 | 16 | 24.0 | 6.3 |
| SD 18 24 4.7 | 18 | 24.0 | 5.2 |
| SD 18 25 5 | 18 | 25.0 | 5.7 |
| SD 18 26 5.8 | 18 | 26.0 | 6.3 |
| SD 18 26 8 | 18 | 26.0 | 9.0 |
| SD 18 28 5.8 | 18 | 28.0 | 6.3 |
| SD 18 28 7 | 18 | 28.0 | 8.0 |
| SD 20 26 5 | 20 | 26.0 | 5.5 |
| SD 20 26 5.2 | 20 | 26.0 | 5.7 |
| SD 20 27 5.8 | 20 | 27.0 | 6.3 |
| SD 20 28 5.8 | 20 | 28.0 | 6.3 |

| Part. | d ^{f7} | D ^{H10} | L ^{+0.25} |
|--------------|-----------------|------------------|--------------------|
| SD 20 28 7 | 20 | 28.0 | 8.0 |
| SD 20 30 4.5 | 20 | 30.0 | 5.0 |
| SD 20 30 7 | 20 | 30.0 | 8.0 |
| SD 22 30 5.8 | 22 | 30.0 | 6.3 |
| SD 22 30 6 | 22 | 30.0 | 7.0 |
| SD 22 30 7 | 22 | 30.0 | 8.0 |
| SD 22 32 7 | 22 | 32.0 | 8.0 |
| SD 22 32 8 | 22 | 32.0 | 9.0 |
| SD 24 34 5.8 | 24 | 34.0 | 6.5 |
| SD 25 32 6 | 25 | 32.0 | 7.0 |
| SD 25 33 5.8 | 25 | 33.0 | 6.3 |
| SD 25 33 6.5 | 25 | 33.0 | 7.5 |
| SD 25 33 7 | 25 | 33.0 | 8.0 |
| SD 25 33 8 | 25 | 33.0 | 9.0 |
| SD 25 35 5.8 | 25 | 35.0 | 6.3 |
| SD 25 35 7 | 25 | 35.0 | 8.0 |
| SD 25 35 8 | 25 | 35.0 | 9.0 |
| SD 25 36 5 | 25 | 36.0 | 5.5 |
| SD 27 37 5.8 | 27 | 37.0 | 6.3 |
| SD 28 36 5.8 | 28 | 36.0 | 6.3 |
| SD 28 36 8 | 28 | 36.0 | 9.0 |
| SD 28 38 7 | 28 | 38.0 | 8.0 |
| SD 30 38 5.8 | 30 | 38.0 | 6.3 |
| SD 30 38 7 | 30 | 38.0 | 8.0 |

| Part. | d ^{f7} | D ^{H10} | L ^{+0.25} |
|---------------|-----------------|------------------|--------------------|
| SD 30 38 8 | 30 | 38.0 | 9.0 |
| SD 30 40 6.5 | 30 | 40.0 | 7.5 |
| SD 30 40 7 | 30 | 40.0 | 8.0 |
| SD 30 40 9 | 30 | 40.0 | 10.0 |
| SD 30 40 10 | 30 | 40.0 | 11.0 |
| SD 32 40 5.8 | 32 | 40.0 | 6.3 |
| SD 32 40 6.7 | 32 | 40.0 | 7.7 |
| SD 32 40 8 | 32 | 40.0 | 9.0 |
| SD 32 42 7 | 32 | 42.0 | 8.0 |
| SD 32 42 8 | 32 | 42.0 | 9.0 |
| SD 32 42 10 | 32 | 42.0 | 11.0 |
| SD 32 47 10 | 32 | 47.0 | 11.0 |
| SD 34 41 5 | 34 | 41.0 | 5.5 |
| SD 35 43 5.8 | 35 | 43.0 | 6.3 |
| SD 35 43 6.2 | 35 | 43.0 | 7.0 |
| SD 35 43 8 | 35 | 43.0 | 9.0 |
| SD 35 44 7 | 35 | 44.0 | 8.0 |
| SD 35 45 5.8 | 35 | 45.0 | 6.3 |
| SD 35 45 7 | 35 | 45.0 | 8.0 |
| SD 35 45 10 | 35 | 45.0 | 11.0 |
| SD 35 45 12.5 | 35 | 45.0 | 13.5 |
| SD 35 50 10 | 35 | 50.0 | 11.0 |
| SD 36 44 5.8 | 36 | 44.0 | 6.3 |
| SD 36 44 6.3 | 36 | 44.0 | 7.0 |

SA



| Part. | d ^{f7} | D ^{H10} | L ^{+0.2} | M ^{+0.2} |
|----------|-----------------|------------------|-------------------|-------------------|
| SA 4 | 4 | 12.0 | 3.0 | 9.0 |
| SA 5/S | 5 | 12.0 | 2.8 | 9.0 |
| SA 6/S | 6 | 12.0 | 3.0 | 9.0 |
| SA 8 | 8 | 14.6 | 3.8 | 11.0 |
| SA 9/S | 9 | 13.0 | 2.5 | 12.0 |
| SA 10 | 10 | 16.6 | 3.8 | 13.8 |
| SA 10/S | 10 | 15.0 | 1.0 | 13.0 |
| SA 12 | 12 | 18.6 | 3.8 | 15.0 |
| SA 13 | 13 | 19.6 | 3.8 | 16.0 |
| SA 14 | 14 | 20.6 | 3.8 | 17.0 |
| SA 14/H | 14 | 26.5 | 2.1 | 20.0 |
| SA 15 | 15 | 21.6 | 3.8 | 18.0 |
| SA 16 | 16 | 22.6 | 3.8 | 19.0 |
| SA 16/A | 16 | 22.5 | 3.0 | 19.0 |
| SA 16/B | 16 | 21.0 | 3.0 | 19.0 |
| SA 17 | 17 | 23.6 | 3.8 | 20.0 |
| SA 18 | 18 | 24.6 | 3.8 | 21.0 |
| SA 20 | 20 | 28.6 | 5.3 | 23.0 |
| SA 20/A | 20 | 26.0 | 3.4 | 23.0 |
| SA 22 | 22 | 30.6 | 5.3 | 25.0 |
| SA 22/A2 | 22 | 30.6 | 2.2 | 25.0 |
| SA 24 | 24 | 32.6 | 5.3 | 27.0 |
| SA 24/A2 | 24 | 32.6 | 2.2 | 27.0 |
| SA 25 | 25 | 33.6 | 5.3 | 28.0 |

| Part. | d ^{f7} | D ^{H10} | L ^{+0.2} | M ^{+0.2} |
|-----------|-----------------|------------------|-------------------|-------------------|
| SA 25/H | 25 | 32.5 | 1.6 | 27.9 |
| SA 28 | 28 | 36.6 | 5.3 | 31.0 |
| SA 30 | 30 | 38.6 | 5.3 | 33.0 |
| SA 30/A2 | 30 | 40.0 | 3.0 | 34.5 |
| SA 32 | 32 | 40.6 | 5.3 | 35.0 |
| SA 32/H | 32 | 39.5 | 1.6 | 34.9 |
| SA 35 | 35 | 43.6 | 5.3 | 38.0 |
| SA 35/A | 35 | 43.6 | 5.0 | 38.0 |
| SA 35/A2 | 35 | 45.0 | 4.0 | 39.0 |
| SA 36 | 36 | 44.6 | 5.3 | 39.0 |
| SA 36/A | 36 | 44.0 | 5.3 | 39.0 |
| SA 38 | 38 | 46.6 | 5.3 | 41.0 |
| SA 40 | 40 | 48.6 | 5.3 | 43.0 |
| SA 40/H | 40 | 47.5 | 1.6 | 42.9 |
| SA 42 | 42 | 50.6 | 5.3 | 45.0 |
| SA 43.7/A | 43.7 | 51.7 | 5.3 | 46.7 |
| SA 45 | 45 | 53.6 | 5.3 | 48.0 |
| SA 45/A | 45 | 55.6 | 5.3 | 48.0 |
| SA 45/A2 | 45 | 60.0 | 4.2 | 53.0 |
| SA 48 | 48 | 56.6 | 5.3 | 51.0 |
| SA 48/A | 48 | 56.0 | 5.3 | 51.0 |
| SA 50 | 50 | 58.6 | 5.3 | 53.0 |
| SA 50/A | 50 | 60.6 | 5.3 | 53.0 |
| SA 50/A2 | 50 | 65.5 | 4.2 | 58.0 |

| Part. | d ^{f7} | D ^{H10} | L ^{+0.2} | M ^{+0.2} |
|---------|-----------------|------------------|-------------------|-------------------|
| SA 52 | 52 | 60.6 | 5.3 | 55.0 |
| SA 55 | 55 | 63.6 | 5.3 | 58.0 |
| SA 55/A | 55 | 65.6 | 5.3 | 58.0 |
| SA 55/C | 55 | 66.0 | 5.0 | 61.8 |
| SA 56 | 56 | 64.6 | 5.3 | 59.0 |
| SA 56/A | 56 | 66.6 | 5.3 | 59.0 |
| SA 60 | 60 | 68.6 | 5.3 | 63.0 |
| SA 60/A | 60 | 70.6 | 5.3 | 63.0 |
| SA 60/S | 60 | 70.6 | 5.5 | 66.0 |
| SA 63 | 63 | 71.6 | 5.3 | 66.0 |
| SA 63/A | 63 | 73.6 | 5.3 | 66.0 |
| SA 65 | 65 | 73.6 | 5.3 | 68.0 |
| SA 65/A | 65 | 75.6 | 5.3 | 68.0 |
| SA 70 | 70 | 78.6 | 5.3 | 73.0 |
| SA 70/A | 70 | 82.6 | 7.1 | 76.0 |
| SA 70/B | 70 | 80.6 | 5.3 | 73.0 |
| SA 70/D | 70 | 76.0 | 5.3 | 72.0 |
| SA 73/A | 73 | 83.6 | 7.3 | 76.0 |
| SA 75 | 75 | 83.6 | 5.3 | 78.0 |
| SA 75/A | 75 | 87.2 | 7.1 | 81.0 |
| SA 78/A | 78 | 90.0 | 7.5 | 83.0 |
| SA 78/C | 78 | 88.5 | 5.0 | 84.8 |
| SA 78/S | 78 | 88.6 | 5.5 | 84.0 |
| SA 80 | 80 | 88.6 | 5.3 | 83.0 |

SA



Scraper WRM

| Rod Diameter | Groove Diameter | Groove Width | Bore Diameter | Polypac Ref. No. | Part No. |
|----------------|-----------------|---------------|---------------|------------------|-----------|
| $d_R \pm 0.05$ | $D_3 \pm 0.05$ | $L_3 \pm 0.1$ | $D_4 \pm 0.2$ | | |
| 103.0 | 117.2 | 7.1 | 111.0 | WRM 413460 | WAP001030 |
| 110.0 | 122.2 | 7.1 | 116.0 | WRM 433480 | WAP001100 |
| 115.0 | 127.2 | 7.1 | 121.0 | WRM 452500 | WAP001150 |
| 116.0 | 128.2 | 7.1 | 121.0 | WRM 456504 | WAP001160 |
| 116.0 | 130.2 | 7.1 | 123.0 | WRM 456511 | WAP101160 |
| 118.0* | 130.2 | 7.1 | 124.0 | WRM 464511 | WAP001180 |
| 120.0 | 128.6 | 5.3 | 123.0 | WRM 472504 | WAP001200 |
| 120.0 | 132.2 | 7.1 | 126.0 | WRM 472519 | WAP101200 |
| 121.0* | 131.0 | 5.3 | 125.0 | WRM 476515 | WAP001210 |
| 125.0 | 137.2 | 7.1 | 131.0 | WRM 492539 | WAP001250 |
| 127.0 | 135.6 | 5.3 | 132.0 | WRM 500531 | WAP001270 |
| 127.0 | 139.2 | 7.1 | 133.0 | WRM 500550 | WAP101270 |
| 130.0 | 142.2 | 7.1 | 136.0 | WRM 511559 | WAP001300 |
| 135.0 | 147.2 | 7.1 | 141.0 | WRM 531578 | WAP001350 |
| 135.0 | 149.2 | 7.1 | 142.0 | WRM 531582 | WAP101350 |
| 140.0 | 152.2 | 7.1 | 146.0 | WRM 551598 | WAP001400 |
| 140.0 | 155.2 | 10.1 | 147.0 | WRM 551610 | WAP101400 |
| 145.0 | 157.2 | 7.1 | 151.0 | WRM 570618 | WAP001450 |
| 146.0* | 158.0 | 6.3 | 152.0 | WRM 575622/1 | WAP001460 |
| 146.05 | 158.25 | 7.1 | 152.05 | WRM 575622 | WAP001461 |
| 150.0* | 162.2 | 7.1 | 156.0 | WRM 590637 | WAP001500 |
| 155.0 | 169.2 | 7.1 | 162.0 | WRM 610664 | WAP001550 |
| 160.0 | 168.6 | 5.3 | 163.0 | WRM 629661 | WAP001600 |
| 160.0 | 175.2 | 10.1 | 168.0 | WRM 629688 | WAP101600 |
| 165.0 | 173.6 | 5.3 | 169.0 | WRM 649681 | WAP001650 |
| 165.0 | 177.2 | 7.1 | 171.0 | WRM 649698 | WAP101650 |
| 170.0 | 180.6 | 5.3 | 174.0 | WRM 669708 | WAP001700 |
| 170.0 | 185.2 | 10.1 | 178.0 | WRM 669728 | WAP101700 |
| 171.0 | 183.0 | 6.3 | 176.0 | WRM 673720 | WAP001710 |
| 175.0 | 189.2 | 7.1 | 182.0 | WRM 688744 | WAP001750 |
| 180.0 | 195.2 | 10.1 | 188.0 | WRM 708767 | WAP001800 |
| 187.0* | 195.6 | 5.3 | 190.0 | WRM 736768 | WAP001870 |
| 196.0 | 210.2 | 7.1 | 203.0 | WRM 771826 | WAP001960 |
| 197.0 | 219.0 | 6.3 | 202.0 | WRM 775823 | WAP001970 |
| 200.0 | 215.2 | 10.1 | 207.0 | WRM 787847 | WAP002000 |
| 210.0 | 224.2 | 7.1 | 217.0 | WRM 826883 | WAP002100 |
| 210.0 | 225.0 | 7.0 | 217.0 | WRM 826885 | WAP102100 |
| 219.5 | 233.7 | 7.1 | 226.5 | WRM 860919 | WAP002195 |
| 223.0 | 235.0 | 6.3 | 228.0 | WRM 878925 | WAP002230 |
| 244.5 | 258.7 | 7.1 | 251.5 | WRM 9621017 | WAP002445 |
| 249.0 | 261.0 | 6.3 | 254.0 | WRM 9801027 | WAP002490 |
| 260.0 | 275.2 | 10.1 | 268.0 | WRM 10241078 | WAP002600 |

* Available upon request